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Volume VII 2004

National Stock Exchange of India Limited

Indian Securities Market

A Review

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Contents

Abbreviations

ADB	Asian Development Bank
ADRs	American Depository Receipts
AIFIs	All India Financial Institutions
ALBM	Automated Lending and Borrowing Mechanism
AMC	Asset Management Company
AMFI	Association of Mutual Funds in India
ASC	Accounting Standards Committee
ATM	At-The-Money
ATSs	Alternative Trading Systems
B2B	Business-to-Business
BIFR	Board for Industrial and Financial Reconstruction
BIS	Bank for International Settlement
BMC	Base Minimum Capital
BSE	The Stock Exchange, Mumbai
CBDT	Central Board of Direct Taxes
CC	Clearing Corporation
CDs	Certificate of Deposits
CH	Clearing House
CCIL	Clearing Corporation of India Limited
CDSL	Central Depository Services (India) Limited
CIMC	Collective Investment Management Company
CISs	Collective Investment Schemes
CIVs	Collective Investment Vehicles
CLA	Central Listing Authority
CLF	Collateralised Lending Facility
CM	Clearing Member
CM Segment	Capital Market Segment of NSE
CMIE	Centre for Monitoring Indian Economy
COSI	Committee on Settlement Issues
COTI	Committee of Trade Issues
CP	Custodial Participant
CPs	Commercial Papers

CPSS	Committee on Payment and Settlement Issues
CRAs	Credit Rating Agencies
CRISIL	The Credit Rating Information Services of India Limited
CRR	Cash Reserve Ratio
CSD	Collateral Security Deposit
CSE	Calcutta Stock Exchange
DCA	Department of Company Affairs
DDBs	Deep Discount Bonds
DEA	Department of Economic Affairs
DFIs	Development Financial Institutions
DIP	Disclosure and Investor Protection
DNS	Deferred Net Settlement
DPs	Depository Participants
DRR	Debenture Redemption Reserve
DSCE	Debt Securities Convertible into Equity
D*v*P	Delivery *versus* Payment
ECBs	External Commercial Bodies
ECNS	Electronic Communication Networks
EDGAR	Electronic Data Gathering, Analysis and Retrieval
EDIFAR	Electronic Data Information Filing and Retrieval
EFT	Eletronic Fund Transfer
ELN	Equity Linked Notes
ELSS	Equity Linked Saving Schemes
EPS	Earning Per Share
ETFs	Exchange Traded Funds
FIA	Futures Industry Association
F&O	Futures and Options
FCCBs	Foreign Currency Convertible Bonds
FCDs	Fully Convertible Debentures
FDI	Foreign Direct Investment
FDRs	Foreign Deposit Receipts
FDs	Fixed Deposits
FEMA	Foreign Exchange Management Act
FIBV	International World Federation of Stock Exchanges
FIIs	Foreign Institutional Investors
FIMMDA	Fixed Income Money Markets and Derivatives Association
FIs	Financial Institutions
FMPs	Fixed Maturity Plans
FoFs	Fund of Funds
FRAs	Forward Rate Agreements

FSAP	Financial Sector Assesment Program
FVCIs	Foreign Venture Capital Investors
GDP	Gross Domestic Product
GDRs	Global Deposit Receipts
GDRs	Gross Domestic Savings
GNP	Gross National Product
GOI	Government of India
G-Sec	Government Securities
GSO	Green Shoe Option
i-BEX	ICICI Securities Bond Index
ICAI	Institute of Chartered Accountants of India
ICICI	Industrial Credit and Investment Corporation of India Limited.
ICSE	Inter-Connected Stock Exchange of India Limited
IBRD	International Bank for Reconstruction and Development
IDBI	Industrial Development Bank of India
IDRs	Indian Depository Receipts
IEPF	Investors Education and Protection Fund
IFC	International Finance Corporation
IFSD	Interest Free Security Deposit
IIM	Indian Institute of Management
IISL	India Index Services and Products Limited
IMF	International Monetary Fund
IOSCO	International Organisation of Securities Commission
IDFC	Infrastructure Development Finance Corporation
IPF	Investor Protection Fund
IPOs	Initial Public Offers
IRDA	Insurance Regulatory and Development Authority
IRS	Interest Rate Swap
ISIN	International Securities Identification Number
ISSA	International Securities Services Association
IT	Information Technology
ITM	In-The-Money
JPC	Joint Parliamentary Committee
LAF	Liquidity Adjustment Facility
LIC	Life Insurance Corporation of India Limited
MFs	Mutual Funds
MFSS	Mutual Fund Service System
MIBID	Mumbai Inter-bank Bid Rate
MIBOR	Mumbai Inter-bank Offer Rate
MMMF	Money Market Mutual Fund

MNCs	Multi National Companies
MOU	Memorandum of Understanding
MoF	Ministry of Finance
MTM	Mark-To-Market
NASDAQ	National Association of Securities Dealers Automated Quotation System
NAV	Net Asset Value
NBFCs	Non-Banking Financial Companies
NCAER	National Council for Applied Economic Research
NCDs	Non-Convertible Debentures
NCDS	Non-Convertible Debt Securities
NCFM	NSE's Certification in Financial Markets
NDS	Negotiated Dealing System
NEAT	National Exchange for Automated Trading
NGOs	Non-Government Organisations
NIBIS	NSE's Internet-based Information System
NIC	National Informatics Centre
NPAs	Non-Performing Assets
NRIs	Non-Resident Indians
NSCCL	National Securities Clearing Corporation of India Limited
NSDL	National Securities Depository Limited
NSE	National Stock Exchange of India Limited
OCBs	Overseas Corporate Bodies
OECLOB	Open Electronic Consolidated Limit Order Book
OLTL	On-line Trade Loading
OPMS	On-line Position Monitoring System
ORS	Order Routing System
OSL	Open Strata Link
OTC	Over the Counter
OTCEI	Over the Counter Exchange of India Limited
OTM	Out-of the-Money
P/E	Price Earning Ratio
PAN	Permanent Account Number
PCDs	Partly Convertible Debentures
PCM	Professional Clearing Member
PDAI	Primary Dealers Association of India
PDO	Public Debt Office
PDs	Primary Dealers
PFI	Public Finance Institution
PFRDA	Pension Fund Regulatory Development Authority
PRI	Principal Return Index

PRISM	Parallel Risk Management System
PSUs	Public Sector Undertakings
PV	Present Value
QIBs	Qualified Institutional Buyers
RBI	Reserve Bank of India
ROCs	Registrar of Companies
RTGS	Real Time Gross Settlement
SA	Stabilising Agent
SBTS	Screen Based Trading System
SCMRD	Society for Capital Market Research and Development
S&P	Standard and Poor's
SAT	Securities Appellate Tribunal
SC(R)A	Securities Contracts (Regulation) Act, 1956
SC(R)R	Securities Contracts (Regulation) Rules, 1957
SCBs	Scheduled Commercial Banks
SDs	Satellite Dealers
SEBI	Securities and Exchange Board of India
SEC	Securities Exchange Commission
SGF	Settlement Guarantee Fund
SGL	Subsidiary General Ledger
SGX-DT	The Singapore Exchange Derivatives Trading Limited
SIPC	Securities Investor Protection Corporation
SLB	Securities Lending and Borrowing
SLR	Statutory Liquidity Ratio
SPAN	Standard Portfolio Analysis of Risks
SDL	State Development Loans
SPICE	Sensex Prudential ICICI Exchange Traded Fund
SPV	Special Purpose Vehicle
SROs	Self Regulatory Orgaisations
SSS	Securities Settlement System
STA	Share Transfer Agent
STP	Straight Through Processing
STRIPS	Separate Trading of Registered Interest and Principal of Securities
SUS 99	Special Unit Scheme 99
T-Bills	Treasury Bills
TDS	Tax Deducted at Source
TM	Trading Member
TRI	Total Return Index
UIN	Unique Identification Number
UTI	Unit Trust of India

VaR	Value at Risk
VCFs	Venture Capital Funds
VCUs	Venture Capital Undertakings
VSAT	Very Small Aperture Terminal
WAN	Wide Area Network
WAP	Wireless Application Protocol
WDM	Wholesale Debt Market Segment of NSE
YTM	Yield to Maturity
ZCYC	Zero Coupon Yield Curve

Securities Market in India – An Overview

Introduction

This publication reviews the reforms and other market developments in the securities market in India during April 2003 to June 2004. As a result of the reforms/initiatives taken by the Government and the Regulators, the market microstructure has been refined and modernized. The investment choices for the investors have also broadened. The securities market moved from T+3 settlement period to T+2 rolling settlement with effect from April 1, 2003. Further, straight through processing has been made mandatory for all institutional trades executed on the stock exchange. Real time gross settlement has also been introduced by RBI to settle inter-bank transactions online at real time mode. These reforms along with other market developments have been discussed in detail in the following chapters. This chapter, however, takes a general review of the stock market developments. These developments in the securities market provide the necessary impetus for growth and development, and thereby strengthen the emerging market economy in India.

Products and Participants

Mobilization of savings from surplus savers to deficit savers is most efficiently carried out by the securities market through a range of complex products called "securities". The definition of securities as per the SCRA, 1956 includes shares, bonds, scrips, stocks or other marketable securities of like nature in or of any incorporate company or body corporate, government securities, derivatives of securities, units of collective investment scheme, interest and rights in securities, security receipt or any other instruments so declared by the central government.

The securities market has essentially three categories of participants, *viz.*, the issuer of securities, investors in securities and the intermediaries. The issuers are the borrowers or deficit savers, who issue securities to raise funds. The investors, who are surplus savers, deploy their savings by subscribing to these securities. The intermediaries are the agents who match the needs of users and suppliers of funds for a commission. These intermediaries pack and unpack securities to help both the issuers and investors to achieve their respective goals. There are a large variety and number of intermediaries providing various services in the Indian securities market (Table 1-1).

This process of mobilization of resources is carried out under the supervision and overview of the regulators. The regulators develop fair market practices and regulate the conduct of issuers of securities and the intermediaries. They are also in charge of protecting the interests of the investors. The regulator ensures a high service standard from the intermediaries and supply of quality securities and non-manipulated demand for them in the market.

Table 1-1: Market Participants in Securities Market

Market Participants	Number as on March 31	
	2003	2004
Securities Appellate Tribunal	1	1
Regulators*	4	4
Depositories	2	2
Stock Exchanges		
With Equities Trading	23	23
With Debt Market Segment	1	1
With Derivative Trading	2	2
Brokers	9,519	9,368
Corporate Brokers	3,835	3,746
Sub-brokers	13,291	12,815
FIIs	502	540
Portfolio Managers	54	60
Custodians	11	11
Share Transfer Agents	143	78
Primary Dealers	19	18
Merchant Bankers	124	123
Bankers to an Issue	67	55
Debenture Trustees	35	34
Underwriters	43	47
Venture Capital Funds	43	45
Foreign Venture Capital Investors	6	9
Mutual Funds	38	37
Collective Investment Schemes	5	–

* DCA, DEA, RBI & SEBI.
Source: SEBI Bulletin.

Market Segments

The securities market has two interdependent segments: the primary and the secondary market. The primary market is the channel for creation of new securities. These securities are issued by public limited companies or by government agencies. In the primary market the resources are mobilized either through the public issue or through private placement route. It is a public issue if anybody and everybody can subscribe for it, whereas if the issue is made available to a selected group of persons it is termed as private placement. There are two major types of issuers of securities, the corporate entities who issue mainly debt and equity instruments and the government (central as well as state) who issue debt securities.

These new securities issued in the primary market are traded in the secondary market. The secondary market enables participants who hold securities to adjust their holdings in response to changes in their assessment of risks and returns. The secondary market operates through two mediums, namely, the over-the-counter (OTC) market and the exchange-traded market. OTC markets are informal markets where trades are negotiated. Most of the trades in the government securities are in the OTC market. All the spot trades where securities are traded for immediate delivery and payment take place in the OTC market. The other option is to trade using the infrastructure provided by the stock exchanges. There are 23 exchanges in India and all of them follow a systematic settlement period. All the trades taking place over a trading cycle (day=T) are settled together after a certain time (T+2 day).

The trades executed on the National Stock Exchange (NSE) are cleared and settled by a clearing corporation. The clearing corporation acts as a counterparty and guarantees settlement. Nearly 100% of the trades in capital market segment are settled through demat delivery. NSE also provides a formal trading platform for trading of a wide range of debt securities, including government securities. A variant of the secondary market is the forward market, where securities are traded for future delivery and payment. A variant of the forward market is Futures and Options market. Presently only two exchanges *viz.*, NSE and Stock Exchange, Mumbai (BSE) provides trading in the derivatives of securities.

International Scenario

Following the implementation of reforms in the securities industry during the last decade, Indian stock markets have graduated to a better position vis-à-vis the securities market in developed and emerging markets. As may be seen from Table 1-2, India has a turnover ratio, which is comparable to the other developed market, and also one of the highest in the emerging markets. At the end of 2003, Standard and Poor's (S&P) ranked India 17th in terms of market capitalization (19th in 2002), 16th in terms of total value traded in stock exchanges (17th in 2002) and 6th in terms of turnover ratio (7th in 2002). India has the number one ranking in terms of listed securities on the Exchanges followed by the USA. These data, though quite impressive, do not reflect the full Indian market, as S&P (even other international publications) does not cover the whole market. For example, India has more than 9000 listed companies at the end of March 2004, while S&P considers only 5,644 companies. If whole market were taken into consideration, India's position vis-à-vis other countries would be much better.

Table 1-2: International Comparison: end December 2003

Particulars	USA	UK	Japan	Germany	Singapore	Hongkong	China	India
No. of listed Companies	5,295	2,311	3,116	684	475	1,029	1,296	5,644
Market Capitalisation ($ Bn.)	14,266	2,412	3,041	1,079	145	715	681	279
Market Capitalisation Ratio (%)	139.8	159.7	70.3	57.5	168.4	426.4	55.2	56.4
Turnover ($ Mn.)	15,547	2,151	2,273	1,147	88	332	477	285
Turnover Ratio (%)	122.8	100.6	88.0	130.0	71.1	56.3	83.3	138.5

Source: S&P Emerging Stock Market Factbook, 2004

A comparative study of concentration of market indices and indices stocks in different world markets is presented in the table below. It is seen that the index stocks' share of total market capitalisation in India is 75.0% whereas US index accounted for 93.8%. The ten largest index stocks share of total market capitalisation is 36.5% in India and 16.4% in case of US.

Market Concentration in the World Index as on End 2003

(In Percent)

Market	Index Stocks Share of Total Market Capitalization	10 largest Index Stocks' Share of Total Market Capitalization
Japan	99.2	20.4
Singapore	91.2	57.9
France	89.5	42.2
Germany	83.6	44.6
Italy	95.5	55.9
United Kingdom	94.3	43.6
United States	93.8	16.4
India	75.0	36.5

The stock markets worldwide have grown in size as well as depth over last one decade. As can be observed from Table 1-3, the turnover on all markets taken together have grown from US $ 5.5 trillion in 1990 to $ 38 trillion in 2002 when it reached a peak. Thereafter, it has witnessed a decline and stood at US $ 29.6 trillion in 2003. It is significant to note that US alone accounted for about 52.4% of worldwide turnover in 2003. Despite having a large number of companies listed on its stock exchanges, India accounted for a meagre 0.96% in total world turnover in 2003. The market capitalization of all listed companies taken together on all markets stood at US $ 31 trillion in 2003 ($ 23 trillion in 2002). The share of US in worldwide market capitalisation decreased from 47.24% as at end-2002 to 44.66% in end-2003, while Indian listed companies accounted for 0.87% of total market capitalisation in 2003.

Table 1-3: Market Capitalisation and Turnover for Major Markets

(US $ million)

Country/Region	Market Capitalisation (end of period)			Turnover		
	2001	2002	2003	2001	2002	2003
Developed Markets	25,242,989	20,957,836	28,290,981	39,676,018	36,098,731	26,743,153
Australia	374,269	380,969	585,475	240,667	294,658	369,845
Japan	2,251,814	2,126,075	3,040,665	1,826,230	1,573,279	2,272,989
UK	2,217,324	1,864,134	2,412,434	1,871,894	2,721,342	2,150,753
USA	13,810,429	11,052,403	14,266,266	29,040,739	25,371,270	15,547,431
All Emerging Markets	2,556,979	2,439,080	3,656,722	2,404,321	2,499,768	2,896,144
China	523,952	463,080	681,204	448,928	333,369	476,813
India	110,396	131,011	279,093	249,298	197,118	284,802
Indonesia	23,006	29,991	54,659	9,667	13,042	14,774
Korea	220,046	249,639	329,616	711,192	826,620	682,706
Malaysia	120,007	123,872	168,376	20,772	27,623	50,135
Philippines	41,523	39,021	23,565	3,148	3,103	2,635
Taiwan	292,621	261,474	379,023	544,808	631,931	592,012
World Total	27,799,968	23,396,916	31,947,703	42,080,339	38,598,498	29,639,297
US as % of World	49.68	47.24	44.66	69.01	65.73	52.46
India as % of World	0.40	0.56	0.87	0.59	0.51	0.96

Source: S&P Emerging Stock Market Factbook, 2004

There has also been an increase in market capitalisation as a per cent of GDP in some of the major country groups as is evident from Table 1-4. The increase, however, has not been uniform across countries. The market capitalization as a per cent of GDP was the highest at 83.4% for high-income countries as at end-2002 and lowest for low-income countries at 22.6%. Market capitalization as a per cent of GDP for India stood at 25.7% as at end-2002. The turnover ratio, which is a measure of liquidity, however was approximately same for both the high-income countries and low-income countries which stood at 137.9% and 139.6%, respectively. The total number of listed companies stood at 26,947 for high-income countries, 13,307 for middle-income countries and 7,322 for low-income countries as at end-2003.

Table 1-4: Select Stock Market Indicators

Markets	Market Capitalisation as % of GDP			Turnover Ratio (%)			Listed Domestic Companies		
	1990	2001	2002	1990	2002	2003	1990	2002	2003
High Income	51.6	103.9	83.4	59.4	138.5	137.9	17,747	26,035	26,947
Middle Income	20.0	35.7	35.3	78.3	44.4	44.1	4,231	9,442	13,307
Low & Middle Income	18.8	33.1	33.3	70.7	58.0	57.8	7,677	17,284	20,629
East Asia & Pacific	16.4	45.8	40.4	117.2	72.5	72.7	774	2,886	3,132
Europe & Central Asia	2.2	19.3	22.7	–	54.2	53.6	110	2,759	6,781
Latin America & Caribbean	7.7	33.4	27.4	29.8	21.6	21.7	1,734	1,570	1,381
Middle East & N. Africa	27.4	26.3	26.1	–	19.8	19.6	817	2,020	1,585
South Asia	10.8	19.7	22.7	54.0	180.3	180.3	3,231	7,010	6,839
Sub-Saharan Africa	52.2	103.9	47.3	–	23.8	23.7	1,011	1,039	911
Low Income	9.8	18.3	22.6	53.8	53.8	139.6	3,446	7,842	7,322
India	12.2	23.1	25.7	65.9	225.8	14.1	2,435	5,650	5,644
World	48.0	90.7	74.6	57.2	57.2	123.0	25,424	43,319	47,576

Source: World Development Indicators 2004, World Bank.

Dependence on Securities Market

Corporate Sector

The 1990s witnessed the emergence of the securities market as a major source of finance for trade and industry in India. A growing number of companies have been accessing the securities market rather than depending on loans from financial institutions (FIs)/banks. The corporate sector is increasingly depending on external sources (domestic market borrowings and loans) for meeting its funding requirements. According to CMIE data (Table 1-5), the share of capital market based instruments in resources raised externally had been quite significant in the 1990s, however it declined to 21% in 2001-02. However, the year 2002-03 witnessed the erosion of the corporates to raise money from capital market, which was mainly because of the subdued conditions prevalent in the primary and secondary market

Table 1-6 presents sector-wise shareholding pattern of companies listed on NSE. It is observed that on an average the promoters hold more than 55% of total shares. Though the non-promoter holding is about 44.9%, the public held only 17.7% and the institutional holdings (by FIIs, MFs, FIs) accounted for 16.4%. There is not much significant difference in the shareholding pattern of companies in different sectors. About 56% of shares in companies in

Petrochemicals sector are held by Indian promoters. The promoter holding is not strikingly high in respect of companies in the IT sectors.

Table 1-5: Dependence on Securities Market

Year	Share (%) of Securities Market in			
	External Finance of Corporates	Fiscal Deficit of Central Government	Fiscal Deficit of State Government	Financial Savings of Households
1990-91	19.35	17.9	13.6	14.4
1991-92	19.17	20.7	17.5	22.9
1992-93	33.38	9.2	16.8	17.2
1993-94	53.23	48.0	17.6	14.0
1994-95	44.99	35.2	14.7	12.1
1995-96	21.67	54.9	18.7	7.7
1996-97	22.12	30.0	17.5	6.9
1997-98	28.16	36.5	16.5	4.5
1998-99	27.05	60.9	14.1	4.2
1999-00	33.58	67.1	13.9	7.3
2000-01	31.39	61.4	13.8	4.3
2001-02	20.60	69.4	15.2	8.0
2002-03	(17.98)	77.6	19.9	5.9
2003-04	N. A.	64.9	32.1	N. A.

Source: CMIE & RBI.

Table 1-6 : Shareholding Pattern at the end of March 2004 of Companies Listed on NSE

(In per cent)

Sectors	Non-Pomoters' Holding							Promoters' Holding		
	Institutional Investors			Non-Institutional Investors						
	FIs	FIIs	MFs	Indian Public	NRIs/ OCBs	Private Corporate Bodies	Others	Indian Promoters	Foreign Promoters	Persons Acting in Concert
Finance	7.61	10.41	2.04	19.06	0.90	3.97	5.80	46.96	0.10	3.05
FMCG	11.18	10.58	1.12	20.75	0.43	1.42	0.14	13.82	40.43	0.14
Infrastructure	5.62	4.36	1.10	24.27	1.59	5.79	3.72	42.31	4.81	6.42
IT	3.07	10.94	2.16	27.57	2.04	13.34	7.89	28.27	2.69	2.03
Manufacturing	6.22	5.73	3.57	15.45	1.28	4.25	2.83	51.45	5.47	3.75
Media & Entertainment	5.45	11.06	2.77	17.62	0.57	5.49	0.74	51.77	3.96	0.56
Petrochemicals	6.42	2.91	2.75	18.45	0.98	4.42	4.00	56.62	1.33	2.13
Pharmaceuticals	5.40	7.86	2.17	26.93	3.92	5.00	3.48	37.83	5.67	1.75
Services	8.28	5.57	4.03	20.25	1.30	4.48	2.75	45.89	4.51	2.95
Telecommunication	4.42	8.69	2.32	5.09	0.86	1.67	24.51	48.56	3.03	0.86
Misc	9.55	2.62	3.53	20.08	2.47	7.74	5.86	37.35	6.70	4.10
All Companies	6.58	7.06	2.83	17.72	1.27	4.67	4.80	46.85	5.36	2.86

Governments

Due to the increase in fiscal deficits of the Governments, their dependence on market borrowings to finance fiscal deficits has also increased over the years (Table 1-5). During the year 1990-91, the state governments and the central government financed nearly 14% and 18%, respectively, of their fiscal deficit by market borrowing. In percentage terms, dependence of the state governments on market borrowing did not increase much during the decade as it ranged between 13.8% and 32.1%. In 2003-04, the state and the central government market borrowings financed 32.1% and 64.9% of the fiscal deficit respectively.

Households

According to the RBI data, household sector accounted for 85.6% of gross domestic savings during 2002-03. They invested 41.5% of financial savings in deposits, 29.8% in insurance/ provident funds, 14.3% on small savings, and 5.9% in securities (out of which the investment in Gilts has been 4.3%), including government securities and units of mutual funds during 2002-03 (Table 1-7). Thus the fixed income bearing instruments are the most preferred assets of the household sector.

Table 1-7: Savings of Household Sector in Financial Assets

(In per cent)

Financial Assets	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 (P)
Currency	10.6	12.0	8.2	12.2	10.9	13.3	8.6	7.4	10.4	8.6	6.4	9.5	8.5
Fixed Income Investments	74.9	65.1	74.6	73.9	77.0	79.1	84.5	88.0	85.3	84.2	89.4	82.4	85.6
Deposits	33.3	28.9	42.5	42.6	45.5	42.5	48.1	46.6	39.2	39.2	44.3	37.9	41.5
Insurance/ Provident/ Pension Funds	28.4	28.6	27.2	25.4	22.5	29.2	29.4	30.1	33.3	34.0	33.5	33.4	29.8
Small Savings	13.2	7.6	4.9	5.9	9.0	7.4	7.0	11.3	12.8	11	11.6	11.1	14.3
Securities Market	14.4	22.9	17.2	14.0	12.1	7.7	6.9	4.5	4.2	7.3	4.3	8.0	5.9
Mutual Funds	9.1	16.4	8.6	5.5	3.8	0.5	2.7	1.4	1.9	4.9	1.3	1.7	1.3
Government Securities	0.2	-0.4	0	0.4	0.1	0.4	0.4	1.6	0.6	0.9	1.6	5.7	4.3
Other Securities	5.1	6.9	8.6	8.1	8.2	6.8	3.8	1.5	1.7	1.5	1.4	0.6	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: RBI Annual Report

P: Provisional Figures.

Investor Population and Perception

SEBI in association with National Council of Applied Economic Research (NCAER) conducted a Survey of Indian Investors in 1998-99 and then followed it up in 2000-01. The survey of 2000-01 was based on a sample of 288,081 geographically dispersed rural and urban areas. The findings of this survey were released in September 2003. The survey estimated that a total of 13.1 million or 7.4 per cent of all Indian households totaling 21 million individuals directly invested in equity shares or debentures or both during 2000-01. The other findings are as listed below:

1. The number of debenture owning households and individual debenture holders far exceeds household and individual equity investors. Of the total 13.1 million investor households, 9.6 million households owned bonds or debentures, whereas only 6.5 million investor households owned equity shares.
2. The percentage of households investing in equity or debentures is more in urban areas than in rural areas. This divergence is more in case of equities compared to debentures.

Of the 51 million urban households, 7.8 million households representing more than 12 million urban individual investors owned equity shares or debentures or both. Whereas, of the 125 million rural households, only 5.3 million households representing more than 8 million individual investors shows a definite migration of investors from equity market to bond market during the period between the two surveys.

3. The survey results also clearly reveal that number of non-investor households have increased from about 156 million in 1998-99 to nearly 164 million in 2001-02 constituting nearly 92.6 per cent of all households.

4. It was also observed that the investor population and town size are directly proportional. The largest city with more than 50 lakh population accounted for about 17 per cent of investor households and the next higher segment, more than 31 per cent investor households were in towns with population between 10 and 50 lakh.

Primary Market

An aggregate of Rs. 2,676,600 million were raised by the government and corporate sector during 2003-04 as against Rs. 2,572,201 million during the preceding year. Government raised about two third of the total resources, with central government alone raising nearly Rs. 1,476,360 million.

Corporate Securities

The average annual capital mobilisation from the primary market has grown manifold since the last two-three decades. It received a further boost during the first half of 1990s with the capital raised by non-government public companies rising sharply from Rs. 43,120 million in 1990-91 to Rs. 264,170 million in 1994-95. Thereafter, there has been a decline due to conditions prevailing in the secondary market. However, the year 2003-04 took a turnaround in its performance as compared to the previous year by mobilising Rs. 32,100 million. The capital raised, which used to be less than 1% of gross domestic saving (GDS) in the 1970s increased to about 13% in 1992-93 but thereafter witnessed declines. Though there has been a considerable increase in the amount mobilised in 2003-04, when seen as a percentage of GDS, it is 1.20% (Table 1-8). Data in Table 1-9 shows that there is a high preference for raising resources in the primary market through private placement route. Private placements accounted for 89% of total resources mobilised through domestic issues by corporate sector during 2003-04.

As may be seen from the Table 1-9, Indian market is getting integrated with the global market, though in a limited way through Euro Issues. Since they were permitted access in 1992, Indian companies have raised about Rs. 30,980 million through American Depository Receipts (ADRs)/Global Depository Receipts (GDRs).

FIIs have invested heavily in Indian market in 2003-04. They had net cumulative investments of US$ 25.75 billion as at end of March 2004. There were 540 FIIs registered with SEBI as of end March 2004.

It appears that more and more people prefer mutual funds (MFs) as their investment vehicle. This change in investor behavior is induced by the evolution of a regulatory framework for MFs, tax concessions offered by Government and preference of investors for passive investing. Starting with an asset base of Rs. 250 million in 1964, the total assets under management at the end of March 2004 has risen to Rs. 1,396,160 million. During the last one decade, the resources mobilized by the MFs are increased from Rs. 112,440 million in 1993-94 to Rs. 476,840 million in 2003-04.

Table 1-8: Resources Mobilised through Public Issues

(Amount in Rs. million)

Year	Resources raised by non-government companies	% of GDS	% of disbursements by FIs	Mobilisation by mutual funds
1990-91	43,120	3.32	33.66	750,800
1991-92	61,930	4.38	38.08	112,530
1992-93	198,030	12.76	85.54	130,210
1993-94	193,300	9.98	74.85	112,430
1994-95	264,170	10.48	78.69	112,750
1995-96	160,750	5.34	41.59	–583,30
1996-97	104,100	3.28	24.40	–203,70
1997-98	31,380	0.84	5.85	40,640
1998-99	50,130	1.27	8.59	36,110
1999-00	51,530	1.11	7.51	199,532
2000-01	49,490	1.01	6.89	111,350
2001-02	56,924	1.17	10.18	71,370
2002-03	18,777	0.74	18.37	45,830
2003-04	32,100	1.20	15.08	476,840

Government Securities

The primary issues of the Central Government have increased manifold during the decade of 1990s from Rs. 89,890 million in 1990-91 to Rs. 1,476,360 million in 2003-04 (Table 1-9). The issues by state governments have also increased over this period from Rs. 25,690 million to Rs. 505,210 million. The Central Government mobilised Rs. 1,215,000 million through issue of dated securities and Rs. 261,360 million through issue of T-bills. After meeting repayment liabilities of Rs. 326,930 million for dated securities, and redemption of T-bills of Rs. 261,260 million, net market borrowing of Central Government amounted to Rs. 888,160 million for the year 2003-04. The State Governments collectively raised Rs. 505,210 million during 2003-04 as against Rs. 308,530 million in the preceding year. The net borrowings of State Governments in 2003-04 amounted to Rs. 463,760 million.

Along with growth of the market, the investor base has also widened. In addition to banks and insurance companies, corporates and individual investors are also investing in government securities. Due to the soft interest rate policy pursued by the RBI, the coupon rates offered on government borrowings have fallen sharply. The weighted average cost of its borrowing have declined to 5.71% in 2003-04. The maturity structure of government debt is also changing. About 77% of primary issues were raised through securities with maturities above 5 years and up to 10 years. As a result the weighted average maturity of dated securities increased to 14.94 years in 2003-04.

Table 1-9: Resource Mobilisation from the Primary Market

(Rs. mn.)

Issues	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	2003-04
Corporate Securities	142,190	163,660	235,370	444,980	480,840	366,890	371,470	421,250	601,920	724,500	783,956	744,032	752,411	695,030
Domestic Issues	142,190	163,660	232,860	370,440	419,740	361,930	338,720	377,380	590,440	689,630	741,986	720,612	718,147	664,050
Non-Govt. Public Companies	43,120	61,930	198,030	193,300	264,170	160,750	104,100	31,380	50,130	51,530	48,900	56,920	18,777	32,100
PSU Bonds	56,630	57,100	10,620	55,860	30,700	22,920	33,940	29,820	–	–	–	–	–	–
Govt. Companies	–	–	4,300	8,190	8,880	10,000	6,500	430	–	–	–	3,500	–	1,000
Banks & FIs	–	–	3,560	38,430	4,250	34,650	43,520	14,760	43,520	25,510	14,720	10,700	29,890	38,800
Private Placement	42,440	44,630	16,350	74,660	111,740	133,610	150,660	300,990	496,790	612,590	678,360	649,500	669,480	592,150
Euro Issues	–	–	7,020	78,980	67,430	12,970	55,940	40,090	11,480	34,870	41,970	23,420	34,264	30,980
Government Securities	115,580	122,840	176,900	545,330	432,310	467,830	426,880	673,860	1,060,670	1,133,360	1,284,830	1,525,080	1,819,790	1,981,570
Central Government	89,890	89,190	138,850	503,880	381,080	405,090	361,520	596,370	939,530	996,300	1,151,830	1,338,010	1,511,260	1,476,360
State Governments	25,690	33,640	38,050	41,450	51,230	62,740	65,360	77,490	121,140	137,060	133,000	187,070	308,530	505,210
Total	257,770	286,500	412,270	990,310	913,150	834,720	798,350	1,095,110	1,662,590	1,857,860	2,068,786	2,269,112	2,572,201	2,676,600

Source: RBI.

Table 1-10: Secondary Market - Selected Indicators

(Amount in Rs. mn.)

At the End of Financial Year	Capital Market Segment of Stock Exchanges								Turnover of Non-Repo Govt. Securities		Turnover of Derivatives Segment of Exchanges
	No. of Brokers	No. of Listed Companies	S&P CNX Nifty	Sensex	Market Capitalisation	Market Capitalisation Ratio (%)	Turnover	Turnover Ratio (%)	On WDM Segment of NSE	On SGL	
1990-91	–	6,229	366.45	1167.97	1,102,790	20.6	–	–	–	–	–
1991-92	–	6,480	1261.65	4285.00	3,541,060	57.4	–	–	–	–	–
1992-93	–	6,925	660.51	2280.52	2,287,800	32.4	–	–	–	–	–
1993-94	–	7,811	1177.11	3778.99	4,000,770	45.6	2,037,030	50.9	–	–	–
1994-95	6,711	9,077	990.24	3260.96	4,733,490	45.6	1,629,050	34.4	–	–	–
1995-96	8,476	9,100	985.30	3366.61	5,722,570	47.0	2,273,680	39.7	92,433	295,300	–
1996-97	8,867	9,890	968.85	3360.89	4,883,320	34.6	6,461,160	132.3	381,023	939,210	–
1997-98	9,005	9,833	1116.65	3892.75	5,898,160	37.7	9,086,810	154.1	975,152	1,610,900	–
1998-99	9,069	9,877	1078.05	3739.96	5,740,640	34.1	10,233,820	178.3	904,158	1,875,310	–
1999-00	9,192	9,871	1528.45	5001.28	11,926,300	84.7	20,670,310	173.3	2,915,915	4,564,910	–
2000-01	9,782	9,954	1148.20	3604.38	7,688,630	54.5	28,809,900	374.7	4,124,958	5,721,456	40,180
2001-02	9,687	9,644	1129.55	3469.35	7,492,480	36.4	8,958,180	119.6	9,269,955	12,119,658	1,038,480
2002-03	9,519	9,413	978.20	3048.72	6,319,212	28.5	9,689,093	153.3	10,305,497	13,923,834	4,423,333
2003-04	9,368	–	1771.90	5590.60	13,187,953	52.3	16,204,977	122.9	12,741,190	17,013,632	21,422,690

Note: Turnover figures for the respective year. – Not Available.
Source: SEBI & NSE

Secondary Market

Corporate Securities

There are 23 exchanges in the country, which offer screen based trading system. The trading system is connected using the VSAT technology from over 357 cities. There were 9,368 trading members registered with SEBI as at end March 2004 (Table 1-10).

The market capitalization has grown over the period indicating more companies using the trading platform of the stock exchange. The all India market capitalization is estimated at Rs. 13,187,953 million at the end of March 2004. The market capitalization ratio defined as the value of listed stocks divided by GDP is used as a measure of stock market size. It is of economic significance since market is positively correlated with the ability to mobilize capital and diversify risk. It increased sharply to 52.3% in 2003-04 against 28.5% in the previous year.

The trading volumes on exchanges have been witnessing phenomenal growth over the past decade. The trading volume, which peaked at Rs. 28,809,900 million in 2000-01, fell substantially to Rs. 9,689,093 million in 2002-03. However, the year 2003-04 saw a turnaround in the total trading volumes on the exchanges. It registered a volume of Rs. 16,204,977 million. The turnover ratio, which reflects the volume of trading in relation to the size of the market, has been increasing by leaps and bounds after the advent of screen based trading system by the NSE. The turnover ratio for the year 2003-04 accounted at 122.9%.

The relative importance of various stock exchanges in the market has undergone dramatic change during this decade. The increase in turnover took place mostly at the big exchanges. The NSE yet again registered as the market leader with more 85% of total turnover (volumes on all segments) in 2003-04. Top 5 stock exchanges accounted for 99.88% of turnover, while the rest 18 exchange for less than 0.12% during 2003-04 (Table 1-11). About ten exchanges reported nil trading volume during the year.

Table 1-11: Growth and Distribution of Turnover on Stock Exchanges

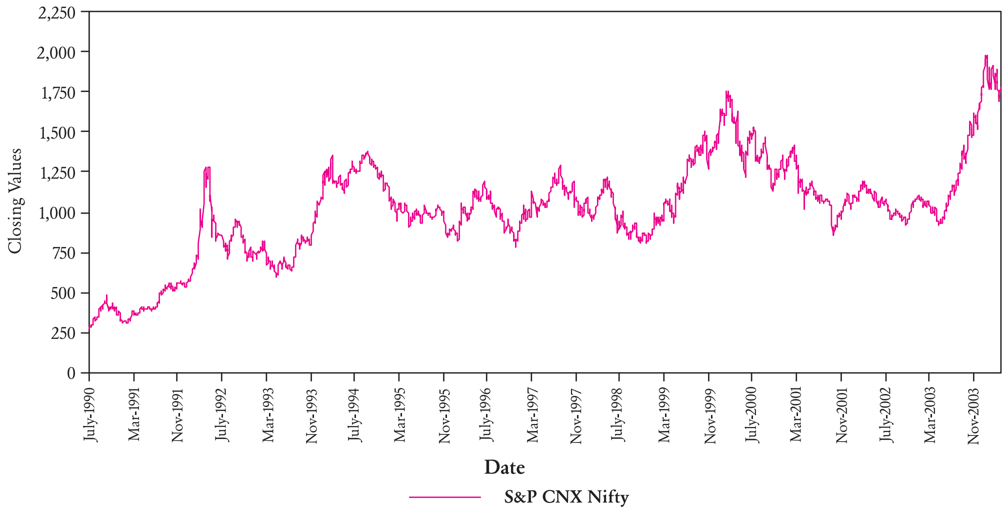
(Rs. mn.)

	Stock Exchanges	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
1.	NSE	85,090	800,090	3,367,820	4,811,970	5,198,520	11,432,680	17,704,580	15,622,830	21,265,445	45,462,793
2.	Mumbai	677,480	500,640	1,242,840	2,073,830	3,119,990	6,850,282	10,016,190	3,093,156	3,165,516	5,146,730
3.	Calcutta	528,720	621,280	1,056,640	1,787,780	1,717,804	3,571,655	3,550,354	270,747	65,399	19,275
4.	Delhi	90,827	100,760	486,310	678,400	517,593	932,889	838,711	58,280	111	34
5.	Ahmedabad	56,508	87,860	205,330	307,710	297,342	375,656	540,352	148,435	154,586	45,445
6.	Uttar Pradesh	78,230	23,730	160,700	153,900	186,267	240,478	247,467	252,373	147,634	117,510
7.	Ludhiana	24,880	48,490	52,740	83,150	59,779	77,405	97,322	8,566	–	–
8.	Pune	36,720	70,710	99,030	86,240	74,528	60,868	61,705	11,710	18	–
9.	Bangalore	7,120	8,900	43,980	86,360	67,790	111,474	60,328	703	–	1
10.	Hyderabad	13,752	12,850	4,800	18,600	12,759	12,365	9,778	413	46	20
11.	ICSE	–	–	–	–	7	5,452	2,331	554	648	1
12.	Cochin	5,970	18,030	14,010	17,830	7,730	–	1,866	–	–	–
13.	OCTEI	3,650	2,180	2,210	1,250	1,422	35,879	1,259	38	1	158
14.	Madras	30,327		23,150	12,280	3,696	2,502	1,092	241	–	1,009
15.	Madhya Pradesh	1,182	2,040	120	10	9	97	24	235	–	–
16.	Magadh	7,968	16,290	27,550	3,230	–	80	16	–	5	1
17.	Vadodara	16,210	12,590	42,680	45,760	17,491	1,593	9	101	25	1
18.	Gauhati	2,853	6,190	4,840	200	302	–	–	1	1	–
19.	Bhubaneshwar	1,434	2,260	2,310	2,020	770	701	–	–	–	–
20.	Coimbatore	13,095	25,030	23,980	21,360	3,947	388	–	266	–	–
21.	Jaipur	8,786	10,470	15,190	4,310	648	21	–	–	–	–
22.	Mangalore	615	390	3,730	3,080	112	1	–	–	–	–
23.	SKSE	5,447	5,640	3,980	170	–	–	–	–	–	–
	Total	1,696,864	2,376,420	6,883,940	10,199,440	11,288,506	23,712,466	33,133,385	19,468,650	24,799,434	50,792,977

Note: Turnover means total value of transactions of securities in all market segments of an Exchange. For NSE, all three segments *viz.*, CM, F&O and WDM and BSE, two segments *viz.*, CM and F&O are included.

The movement of the S&P CNX Nifty, the most widely used indicator of the market, is presented in Chart 1-1. The index movement have been responding to changes in the government's economic policies, the increase in FIIs inflows, etc. However, the year 2003-04 witnessed a favorable movement in the Nifty, wherein it registered its all time high in January 2004 of 2014.65. The point-to-point return of Nifty was 80.14% for 2003-04.

Chart 1-1: Movement of S&P CNX Nifty



Government Securities

The trading in government securities exceeded the combined trading in equity segments of all the exchanges in the country during 2003-04. The aggregate trading in central and state government dated securities, including treasury bills, increased by manifold over a period of time. During 2003-04 it reached a level of Rs. 26,792,090 million. The share of WDM segment of NSE in total turnover for government securities decreased marginally from 52% in 2002-03 to 47.6% in 2003-04. However, the share of WDM segment of NSE in the total of Non-repo government securities increased marginally from 74.01% in 2002-03 to 74.89% in 2003-04 (Table 1-10).

Derivatives Market

The number of instruments available in derivatives has been expanded. To begin with, SEBI only approved trading in index futures contracts based on S&P CNX Nifty Index and BSE-30 (Sensex) Index. This was followed by approval for trading in options based on these two indices and options on individual securities and also futures on interest rates derivative instruments (*91-day Notional T-Bills and 10-year Notional 6% coupon bearing as well as zero coupon bonds)*. Now, there are futures and options based on benchmark index S&P CNX Nifty and CNX IT Index as well as options and futures on single stocks (51 stocks).

The total exchange traded derivatives witnessed a value of Rs. 21,422,690 million during 2003-04 as against Rs. 4,423,333 million during the preceding year. While NSE accounted for about 99.5% of total turnover, BSE accounted for less than 1% in 2003-04. NSE has created a niche for itself in terms of derivatives trading in the global market.

Regulatory Framework

The four main legislations governing the securities market are (a) the SEBI Act, 1992 (b) the Companies Act, 1956 (c) the Securities Contracts (Regulation) Act, 1956, and (d) the Depositories Act, 1996. A brief about these legislations are as given below:

- *SEBI Act, 1992:* The SEBI Act, 1992 was enacted to empower SEBI with statutory powers for (a) protecting the interests of investors in securities, (b) promoting the development of the securities market, and (c) regulating the securities market. Its regulatory jurisdiction extends over corporates in the issuing capital and all intermediaries and persons associated with securities market. It can conduct enquiries, audits and inspection of all concerned participants and adjudicate offences under this Act. It has powers to register and regulate all the market intermediaries. Further it can also penalize them in case of violations of the provisions of the Act, Rules and Regulations made thereunder. SEBI has full autonomy and authority to regulate and develop an orderly securities market.

- *Securities Contracts (Regulation) Act, 1956:* It provides for direct and indirect control of virtually all aspects of the securities trading including the running of stock exchanges with an aim to prevent undesirable transactions in securities. It gives the Central Government regulatory jurisdiction over (a) stock exchanges through a process of recognition and continued supervision, (b) contracts in securities, and (c) listing of securities on stock exchanges. As a condition of recognition, a stock exchange complies with the requirements prescribed by the Central Government. The stock exchanges frame their own listing regulations in consonance with the minimum listing criteria set out in the Rules.

- *Depositories Act, 1996:* The Depositories Act, 1996 provides for the establishment of depositories for securities to ensure transferability of securities with speed, accuracy and security. For this, these provisions have been made: (a) making securities of public limited companies freely transferable subject to certain exceptions; (b) dematerialising the securities in the depository mode; and (c) providing for maintenance of ownership records in a book entry form. In order to streamline the settlement process, the Act envisages transfer of ownership of securities electronically by book entry without moving the securities from persons to persons. The Act has made the securities of all public limited companies freely transferable, restricting the company's right to use discretion in effecting the transfer of securities, and the transfer deed and other procedural requirements under the Companies Act have been dispensed with.

- *Companies Act, 1956:* It deals with issue, allotment and transfer of securities and various aspects relating to company management. It provides for standards of disclosure in the public issues, particularly in the fields of company management and projects, information about other listed companies under the same management, and management perception of risk factors. It also regulates underwriting, the use of premium and discounts on issues, rights and bonus issues, payment of interest and dividends, supply of annual report and other information.

Rules, Regulations & Regulators

The Government has framed rules under the SCRA, the SEBI Act and the Depositories Act. The SEBI has framed regulations under these acts for registration and regulation of the market intermediaries and for prevention of unfair trade practices. Under these Acts, the Government and the SEBI issue notifications, guidelines and circulars, which the market participants comply with. The SROs like the stock exchanges have also laid down their rules and regulations.

The regulator has to ensure that the market participants behave in a desired manner so that securities market continue to be a major source of finance for corporate and government while protecting the interest of investors.

The responsibility for regulating the securities market is shared jointly by Department of Economic Affairs (DEA), Department of Company Affairs (DCA), Reserve Bank of India (RBI) and SEBI. The activities of all these agencies are coordinated by a High Level Committee on Capital Markets.

Most of the powers under the SCRA are exercisable by DEA while a few others by SEBI and some are concurrently by them. The regulation of the contracts for sale and purchase of securities, gold related securities, money market securities and securities derived from these securities and ready forward contracts in debt securities are exercised concurrently with the RBI. The SEBI Act and the Depositories Act are mostly administered by SEBI. While the rules under the securities laws are framed by government, regulations are framed by SEBI. The powers under the Companies Act relating to issue and transfer of securities and non-payment of dividend are administered by SEBI in case of listed public companies and public companies proposing to get their securities listed. The SROs ensure compliance of market participants with their own rules as well as with the rules relevant for them under the securities laws.

Reforms in Indian Securities Markets

Corporate Securities Market

During the last decade, there have been substantial regulatory, structural, institutional and operational changes in the securities industry. These have been carried out with the objective of improving market efficiency, enhancing transparency, preventing unfair trade practices and bringing the Indian market up to international standards. The following paragraphs list the principal reform measures undertaken in the last decade.

Establishment of SEBI: The Securities and Exchange Board of India (SEBI) was set up as an administrative body in April 1988. It was given statutory status on November 1992 by promulgation of the SEBI Ordinance. The objective of setting up SEBI is to protect the interest of investors in securities and to promote the development and to regulate the security market. Its regulatory jurisdiction extends over corporates in the issuance of capital and transfer of securities, in addition to all the intermediaries and persons associated with securities market. The market participants are also required to appoint a compliance officer who is responsible for monitoring compliance with all the securities laws and for redressal of investor grievances. The courts have upheld the powers of SEBI to impose monetary penalties and to levy fees from market intermediaries. In a recent amendment to the SEBI Act, the regulator has also been given search and seizure powers.

DIP Guidelines: With the repeal of the Capital Issues (Control) Act, 1947 in May 1992, Government's control over issue of capital, pricing of the issues, fixing of premia and rates of interest on debentures etc. ceased. Thereafter, the market has been allowed to allocate resources among the competing uses. In the interest of investors, SEBI issued the Disclosure and Investor Protection (DIP) guidelines. These guidelines contain a slew of requirements for issuers/ intermediaries with a broad intention to ensure that all concerned observe high standards of integrity and fair dealing. The guidelines also aim to secure fuller disclosure of relevant information about the issuer and the nature of the securities to be issued. This enables the investors to take informed decisions. For example, issuers are required to disclose any material 'risk factors' and give justification for pricing in their prospectus. The guidelines cast a responsibility on the lead managers to issue a due diligence certificate, stating that they have examined the prospectus and that it brings out all the facts and does not contain anything wrong or misleading. Issuers are now required to comply with the guidelines and then access the market. The companies can access the market only if they fulfill minimum eligibility norms in terms of their track record of distributable profits and net worth.

Screen Based Trading: Prior to 1990s, the trading on stock exchanges in India used to take place through an open outcry system. This system did not allow immediate matching or recording of trades. This was time consuming and imposed limits on trading. In order to provide efficiency, liquidity and transparency, NSE introduced a nation-wide on-line fully-automated screen based trading system (SBTS). In this system a member can punch into the computer quantities of securities and the prices at which he desires to transact and the transaction is executed as soon as it finds a matching sale or buy order from a counter party. SBTS electronically matches orders on price/time priority and hence it cuts down on time and cost. It enables market participants to see the full market on real-time, making the market transparent. It allows a large number of participants, irrespective of their geographical locations, to trade with one another simultaneously, improving the depth and liquidity of the market. Given the efficiency and cost effectiveness delivered by the NSE's trading system, it became the leading stock exchange in the country in its very first year of operation. This forced the other stock exchanges to adopt SBTS. As a result, open outcry system has disappeared from India.

Trading Cycle: Initially, the trading cycle varied from 14 days for specified securities to 30 days for others and settlement took another fortnight. Often this cycle was not adhered to and on several occasions led to defaults and risks in settlement. In order to reduce large open positions, the trading cycle was reduced over a period of time to a week. The exchanges, however, continued to have different weekly trading cycles, which enabled shifting of positions from one exchange to another. Rolling settlement on T+5 basis was introduced in respect of specified scrips reducing the trading cycle to one day. It was made mandatory for all exchanges to follow a uniform weekly trading cycle in respect of scrips not under rolling settlement. All scrips moved to rolling settlement from December 2001. The settlement period has been reduced progressively from T+5 to T+3 days. Currently T+2 day settlement cycle is being followed.

Derivatives Trading: To assist market participants to manage risks better through hedging, speculation and arbitrage, SC(R)A was amended in 1995 to lift the ban on options in securities. However, trading in derivatives took off much later after the suitable legal and regulatory framework was out in place. Derivatives trading commenced in June 2000 in the Indian securities market on NSE and BSE only. The market presently offers index futures and index options on three indices and stock options and stock futures on individual stocks (presently 51 stocks on NSE) and futures in interest rate products like notional 91-day T-Bills and notional 10-year bonds.

Demutualisation: Historically, brokers owned, controlled and managed the stock exchanges. In case of disputes, integrity of the exchange suffered. Therefore regulators focused on reducing the dominance of trading members in the management of stock exchanges. They advised them to reconstitute their governing councils to provide for at least 50% non-broker representation. However, this did not materially alter the situation. In face of extreme volatility in the securities market in 2000, the Government proposed to corporatise the stock exchanges by which ownership, management and trading membership would be segregated from one another. A few exchanges have already initiated demutualisation process. NSE, however, adopted a pure demutualised governance structure where ownership, management and trading are with three different sets of people. This completely eliminates any conflict of interest and helped NSE to aggressively pursue policies.

Depositories Act: The earlier settlement system gave rise to settlement risk. This was due to the time taken for settlement and due to the physical movement of paper. Further, the transfer of shares in favour of the purchaser by the company also consumed considerable amount of time. To obviate these problems, the Depositories Act, 1996 was passed to provide for the establishment of depositories in securities. The objective was of ensuring free transferability of securities with speed and accuracy. This act brought in changes by (a) making securities of public limited companies freely transferable subject to certain exceptions; (b) dematerialising of securities in the depository mode; and (c) providing for maintenance of ownership records in a book entry form. In order to streamline both the stages of the settlement process, the Act envisages transfer of ownership of securities electronically by book entry without making the securities move from person to person. In order to promote dematerialisation, the regulator has been promoting settlement in demat form in a phased manner in an ever-increasing number of securities. The stamp duty on transfer of demat securities has been waived. There are two depositories in India, *viz.* NSDL and CDSL. They have been set up to provide instantaneous electronic transfer of securities. At the end of March 2004, the number of companies connected to NSDL and CDSL were 5,212 and 4,720, respectively. The number of dematerialised securities increased to 97.7 billion at the end of March 2004 from 76.9 billion as of end March 2003. As on the same date, the value of dematerialsied securities was Rs. 10,701 billion and the number of investor accounts was 5,832,552. All actively traded scrips are held, traded and settled in demat form. Demat settlement accounts for over 99% of turnover settled by delivery. This has almost eliminated the bad deliveries and associated problems.

To prevent physical certificates from sneaking into circulation, it has been mandatory that all new securities issued should be compulsorily traded in dematerialised form. The admission to a depository for dematerialisation of securities has been made a prerequisite for making a public or rights issue or an offer for sale. It has also been made compulsory for public listed companies making IPO of any security for Rs. 10 crore or more only in dematerialised form.

Risk Management: With a view to avoid any kind of market failures, the regulator/ exchanges have developed a comprehensive risk management system, which is constantly monitored and upgraded. It encompasses capital adequacy of members, adequate margin requirements, limits on exposure and turnover, indemnity insurance, on-line position monitoring and automatic disablement, etc. They also administer an efficient market surveillance system to detect and prevent price manipulations. The clearing corporation has also put in place a system which tracks online real time client level portfolio based upfront margining. Exchanges have set up trade/settlement guarantee funds for meeting shortages arising out of non-fulfillment/partial fulfillment of funds obligations by the members in a settlement. As a part of the risk management system, index based market wide circuit breakers have also been put in place.

The anonymous electronic order book ushered in by the NSE did not permit members to assess credit risk of the counter-party necessitated some innovation in this area. To address this concern, NSE had set up the first clearing corporation, *viz*. National Securities Clearing Corporation Ltd. (NSCCL), which commenced its operations in April 1996. The NSCCL assured the counterparty risk of each member and guaranteed financial settlement. NSCCL established a Settlement Guarantee Fund (SGF). The SGF provides a cushion for any residual risk and operates like a self-insurance mechanism wherein members contribute to the Fund. In event of failure of a trading member to meet his obligations, the fund is utilized to the extent required for successful completion of the settlement. This has eliminated counter-party risk of trading on the Exchange.

Investor Protection: The SEBI Act established SEBI with the primary objective of protecting the interests of investors in securities and empowers it to achieve this objective. SEBI specifies that the critical data should be disclosed in the specified formats regarding all the concerned market participants. The Central Government has established a fund called Investor Education and Protection Fund (IEPF) in October 2001 for the promotion of awareness amongst investors and protection of the interest of investors.

DEA, DCA, the SEBI and the stock exchanges have set up investor grievance cells for redressal of investor grievance. The exchanges maintain investor protection funds to take care of investor claims. The DCA has also set up an investor education and protection fund for the promotion of investors' awareness and protection of interest of investors. All these agencies and investor associations are organising investor education and awareness programmes. In January 2003, SEBI launched a nation-wide Securities Market Awareness Campaign that aims at educating investors about the risks associated with the market as well as the rights and obligations of investors.

Globalisation: Indian securities market is getting increasingly integrated with the rest of the world. Indian companies have been permitted to raise resources from abroad through issue of ADRs, GDRs, FCCBs and ECBs. Further, foreign companies are allowed to tap the domestic stock markets.

Indian companies are permitted to list their securities on foreign stock exchanges by sponsoring ADR/GDR issues against block shareholding. NRIs and OCBs are allowed to invest in Indian companies. FIIs have been permitted to invest in all types of securities, including government securities. The investments by FIIs enjoy full capital account convertibility. They can invest in a company under portfolio investment route upto 24% of the paid-up capital of the company. This can be increased up to the sectoral cap/statutory ceiling, as applicable. The Indian Stock Exchanges have been permitted to set up trading terminals abroad. The trading platform of Indian exchanges is now accessed through the Internet from anywhere in the world.

The two-way fungibility for ADRs/GDRs has been permitted by RBI, which meant that the investors (foreign institutional or domestic) in any company that has issued ADRs/ GDRs can freely convert the ADRs/GDRs into underlying domestic shares. They could also reconvert the domestic shares into ADRs/GDRs, depending on the direction of price change in the stock. This is expected to bring about an improvement in the liquidity in ADR/GDR market and elimination of arbitrage opportunity. This will better align ADR/GDR prices and domestic share prices of companies that have floated ADRs/GDRs.

Government Securities Market

The Government securities market has witnessed significant transformation in the 1990s. There have been major institutional and operational changes in the government securities market. In the primary market, securities are issued through the auction system at market related rates. They are issued across maturities to develop a yield curve from short to long end, which is used as a benchmark. Also, the types of bonds issued have diversified include floating rate bonds, capital index bonds, zero coupon bonds. Further, non-competitive bids are accepted from retail investors in order to widen investor base. The reforms in the secondary market include setting up a system of primary dealers, who provide with two way quotes for transactions in securities, setting up of Clearing Corporation of India as the central clearing agency wherein Delivery versus Payment system is used for settlement, and negotiated dealing screen for reporting of all the trades. Further, to facilitate retail investors to invest in Government securities, RBI permitted select entities to provide custody (Constituent SGL) accounts. Other measures include abolition of TDS on government securities and stamp duty on transfer of demat debt securities.

Market Infrastructure: As part of the ongoing efforts to build debt market infrastructure, two new systems/set-up have been made operational the Negotiated Dealing System (NDS) and the Clearing Corporation of India Limited (CCIL). NDS, interalia, facilitates screen based negotiated dealing for secondary market transactions in government securities and money market instruments, online reporting of transactions and dissemination of trade information to the market. Government Securities (including T-bills), call money, notice/ term money, repos in eligible securities, Commercial Papers and Certificate of Deposits are available for negotiated dealing through NDS among the members. Initially, the settlement of trades was carried out on individually, that is, irrespective of couterparties each trade was settled separately. Further, there was no central agency to guarantee the trades. Therefore, the CCIL was set up to facilitate settlement using the higher versions of Delivery versus Payment mechanism. It began by settling the securities on gross basis and settlement of funds on net basis. Subsequently, both the securities and funds are settled on net basis. It, also, acts as a central counterparty for clearing and settlement of government securities transactions done on NDS.

The major reforms planned include strengthening and modernising legislative framework through a Government Securities Act and switching over to order-driven screen based trading in Government securities on the stock exchanges.

Research in Securities Market

In order to deepen the understanding and to assist in policy-making, SEBI has been promoting high quality research in the Indian capital market. Its monthly bulletin carries research articles pertaining to issues in the capital market. In order to improve market efficiency further and to set international benchmarks in the securities industry, NSE administers a scheme called the NSE Research Initiative. The objective of this initiative is to foster research to better design market microstructure. The NSE Research Initiative has so far come out with 32 Working Papers.

Testing and Certification

With a view to improve the quality of intermediation, a system of testing and certification has been used in some of the developed and developing markets. This ensures that a person dealing with financial products has a minimum knowledge about them, the markets and regulations. As a result, not only the intermediaries benefit due to the improvement in the quality of their services, but also the career prospectus of the certified professionals is better. Thus, the confidence of the investors in the market increases.

NSE has evolved a testing and certification mechanism known as the National Stock Exchange's Certification in Financial Markets (NCFM). It is an on-line fully automated nation-wide testing and certification system. The entire process in NCFM from generation of question paper, invigilation, testing, assessing, scores reporting and certifying is fully automated. It tests practical knowledge and skills, that are required to operate in financial markets. A certificate is awarded to those personnel who qualify the tests, which indicates that they have a proper understanding of the market and skills to service different constituents of the market. It offers nine securities market related modules.

As such, the reforms in the securities market are far from complete. At the same time, the reforms undertaken so far have aimed at improving the operational and informational efficiency in the market by enabling the participants to carry out transactions in a cost effective manner and providing them with full, relevant and accurate information in time. A number of checks and balances have been set up to protect investors, enhance their confidence and avoid systemic failure of the market. As a result of these reforms, the market design has changed drastically. Today the Indian securities market bears a look which is absolutely different from what they were 10 years ago or what they will be 10 years hence.

International Initiatives

As a result of the reforms pursued during the past decade, there have been substantial changes in the operations of the securities market, institutions and the regulatory framework. However, there is still scope for improving the system as a whole. While charting the agenda for future, it would be worthwhile to review the international initiatives in the form of standards/guidelines/recommendations.

Principles of Securities Regulation

In February 2002, IOSCO released a new version of the *Objectives and Principles of Securities Regulation*, and a technical document titled "Assessment methodology for Recommendations for Securities Settlement Systems". These provided advice and a yardstick against which the progress made towards effective regulation would be measured. IOSCO members, including SEBI, have endorsed these principles and within their jurisdiction intend to adhere to these principles. The principles are listed below:

Regulator

1. The responsibilities of the regulator should be clear and objectively stated. This requires a clear definition of responsibilities, preferably set out by law; strong cooperation among responsible authorities through appropriate channels. In addition, there should be adequate legal protection for the regulators and their staff acting in bona fide discharge of their functions and powers. Any division of responsibility should avoid gaps and inequities in regulation.

2. The regulator should be operationally independent and accountable in the exercise of its functions and powers. Independence is enhanced by a stable source of funding for the regulator. The regulator should operate independent of sectoral interests. Nevertheless, a system of public accountability of the regulator and a system permitting the judicial review of decisions of the regulator should be in place.

3. The regulator should have adequate powers, proper resources and the capacity to perform its function and exercise its powers. The regulator should have powers of licensing, supervision, inspection, investigation and enforcement and also access to adequate funding.

4. The regulator should adopt clear and consistent regulatory processes. The regulator should have a process for consultation with the public by openly disclosing its policies. It should observe standards of procedural fairness and have regard to the cost of compliance with the regulations. It should also play an active role in the education of investors and other participants in the capital market.

5. The staff of the regulator should observe the highest professional standards, including appropriate standards of confidentiality. They should be given clear guidance on conduct relating to conflict of interest, appropriate use of information obtained in the course of duty, observance of confidentiality and secrecy provisions, observance of procedural fairness, etc.

Self-Regulation

6. The regulatory regime should make appropriate use of self-regulatory organisations (SROs) that exercise some direct oversight responsibility in their areas of competence. SROs should undertake those regulatory responsibilities to the extent of their size and complexity of the markets.

7. SROs should be subject to the oversight of the regulator and should observe standards of fairness and confidentiality while exercising powers and responsibilities. The regulator must ensure that no conflict of interest arises because of SRO's access to valuable information about market participants. The conflict may be acute when SRO is responsible both for supervision of its members and regulation of the market sector. If the powers of a SRO are inadequate to address a particular misconduct or conflict of interest, then

the regulator should take over the responsibility. SROs should also follow similar professional standards as expected of the regulator.

Enforcement of Securities Regulation

8. The regulator should have comprehensive inspection, investigation and surveillance powers. It should have the power to seek information, or to carry out inspections of business operations to ensure compliance with relevant standards.

9. The regulator should have comprehensive enforcement powers, including regulatory and investigative powers. It should be able to obtain data/information, to impose administrative sanctions and/or seek orders from court, to initiate or refer matters for criminal prosecution, to suspend trading in securities, to enter into enforceable settlements etc. It is, however, not necessary that all aspects of enforcement of securities law be given to a single body.

10. The regulatory system should ensure that an effective and credible use of inspection, investigation, surveillance and enforcement powers is made. The powers of regulator should be sufficient to ensure its effectiveness in cases of cross border misconduct. The regulator should require market intermediaries to have in place policies and procedures to prevent use of their business as a vehicle for money laundering.

Co-operation in Regulation

11. The regulator should have authority to share both public and non-public information with domestic and foreign counterparts.

12. Regulators should establish information sharing mechanisms that set out when and how they will share both public and non-public information with their domestic and foreign counterparts.

13. The regulatory system should allow for assistance to be provided to foreign regulators, who need to make inquiries in the discharge of their functions and exercise of their powers. There should be arrangements, which identifies the circumstances under which such assistance may be sought, identification of the types of information and assistance that can be provided, safeguards of confidentiality of information transmitted, and a description of permitted uses of information.

Issuers

14. There should be full, timely and accurate disclosure of financial results and other information, which may impact the investors' decisions. Disclosures should be clear, reasonably specific and timely.

15. Holders of securities in a company should be treated in a fair and equitable manner.

16. Accounting and auditing standards should be of a high and internationally acceptable quality.

Collective Investment Schemes

17. The regulatory system should set standards for the eligibility for those who wish to market or operate a collective investment scheme. The criteria may include honesty and integrity of the operator, competence to carry out the functions and duties of a scheme operator, financial capacity, internal management procedures, etc.

18. The regulatory system should provide for rules governing the legal form, structure of collective investment schemes and protection of client assets.

19. Regulation should require disclosure, which is necessary to evaluate the suitability of a collective investment scheme for a particular investor and the value of the investor's interest in the scheme.

20. Regulation should ensure that there is a proper and disclosed basis for assets valuation, the pricing and the redemption of units in a collective investment scheme.

Market Intermediaries

21. Regulation should provide for minimum entry standards for market intermediaries. It should reduce the risk to investors caused by negligent or illegal behaviour or inadequate capital. The licensing process should require a comprehensive assessment of the applicant and the licensing authority should have the power to withdraw or suspend the license. The regulator should ensure that the public has access to relevant information concerning the licensee.

22. There should be initial and on going capital and prudential requirements for market intermediaries to cover the risks that the intermediaries undertake. The regulations should provide for inspection, investigation, enforcement, discipline and revocation of license.

23. Market intermediaries should be required to comply with the standards. They should conduct their operations with the aim to protect the interest of clients by undertaking proper risk management.

24. There should be a procedure for dealing with the failure of a market intermediary in order to minimise damage and loss to investors and to contain systemic risk.

Secondary Market

25. The establishment of trading systems should be subject to regulatory authorisation and oversight. The relevant factors for authorisation could be operator's competence, admission of products to trading, admission of participants to trading, provision of trading information, etc.

26. There should be ongoing regulatory supervision of exchanges and trading systems, which should aim to ensure that the integrity is maintained through fair and equitable rules that strike an appropriate balance between the demands of different market participants. Approval of trading system should be re-examined or withdrawn by the regulator when considered necessary.

27. Regulation should promote transparency of trading.

28. Regulation should be designed to detect and deter market manipulation and other unfair trading practices. The regulation should prohibit misleading conduct, insider trading and other fraudulent or deceptive conduct which may distort price discovery system, distort prices and unfairly disadvantage investors. These may be addressed by direct surveillance, inspection, reporting, product design requirements, position limits, market halts, etc.

29. Regulation should aim to ensure the proper management of large exposures, default risk and market disruption.

30. Systems for clearing and settlement of securities should be subject to regulatory oversight. They should be designed in a fair, effective and efficient manner and reduce systemic risk.

A comparison of these principles and the regulations in the Indian Securities Market indicates that India has almost complied with all thirty principles.

Recommendations for Securities Settlement Systems

The 19 recommendations of BIS-IOSCO cover legal risk, pre-settlement risk, settlement risk, operational risk and other issues relating to securities settlement system. India's readiness vis-à-vis BIS-IOSCO principles have been discussed in detail in Chapter 5. The 19 recommendations are discussed below:

Legal risk

1. *Legal framework:* Securities settlement systems should have a well-founded, clear and transparent legal basis in the relevant jurisdictions.

Pre-settlement risk

2. *Trade confirmation:* Confirmation of trades between direct market participants should occur as soon as possible after trade execution, but no later than trade date (T+0). If confirmation of trades by indirect market participants (such as institutional investors) is required, then it should occur as soon as possible after trade execution, preferably on T+0, but no later than T+1.

3. *Settlement cycles:* Rolling settlement should be adopted in all the securities markets. Final settlement should occur no later than T+3. The benefits and costs of a settlement cycle shorter than T+3 should be evaluated.

4. *Central counterparties (CCPs):* The benefits and costs of a CCP should be evaluated. Where such a mechanism is introduced, the CCP should rigorously control the risks it assumes.

5. *Securities lending:* Securities lending and borrowing (or repurchase agreements and other economically equivalent transactions) should be encouraged as a method for expediting the settlement of securities transactions.

Settlement risk

6. *Central securities depositories (CSDs):* Securities should be immobilised or dematerialised and transferred by book entry in CSDs to the greatest extent possible.

7. *Delivery versus payment (DVP):* CSDs should eliminate principal risk by linking securities transfers to funds transfers in a way that achieves delivery versus payment.

8. *Timing of settlement finality:* Final settlement should occur not later than the end of the settlement day. Intraday or real-time finality should be provided where necessary to reduce risks.

9. *CSD risk control system to address participants' failures to settle:* CSDs that extend intraday credit to participants and that operate net settlement systems, should institute risk controls. To ensure that timely settlement is made even if the participant with the largest payment obligation is unable to settle. The most reliable set of controls is a combination of collateral requirements and limits.

10. *Cash settlement assets:* Assets used to settle the ultimate payment obligations arising from securities transactions should carry little or no credit or liquidity risk. Efforts must be taken to protect CSD members from potential losses and liquidity pressures which may arise due to faulty assets used for that purpose.

Operational risk

11. *Operational reliability:* the sources of operational risk in the clearing and settlement process should be identified and minimised through an appropriate systems of controls and procedures. Systems should be reliable and secure. Contingency plans and backup facilities should be established to allow for timely recovery of operations and completion of the settlement process.

Custody risk

12. *Protection of customers' securities:* Entities holding securities in custody should employ accounting practices and safekeeping procedures that fully protect customers' securities. It is essential that customers' securities be protected against the claims of a custodian's creditors.

Other issues

13. *Governance:* Governance arrangements for CSDs and CCPs should be designed to fulfill public interest requirements and to promote the objectives of owners and users.

14. *Access:* CSDs and CCPs should have objective and publicly disclosed criteria for participation that permit fair and open access.

15. *Efficiency:* While maintaining safe and secure operations, securities settlement systems should be cost-effective in meeting the requirements of users.

16. *Communication procedures and standards:* Securities settlement systems should use or accommodate the relevant international communication procedures and standards in order to facilitate efficient settlement of cross-border transactions.

17. *Transparency:* CSDs and CCPs should provide market participants with sufficient information for them to identify and evaluate accurately the risks and costs associated with using their services.

18. *Regulation and oversight:* Securities settlement systems should be subject to transparent and effective regulation and oversight. Central banks and securities regulators should cooperate with each other and with other relevant authorities.

19. *Risks in cross-border links:* CSDs that establish links to settle cross-border trades should design and operate such links to reduce effectively the risks associated with cross-border settlements.

World Federation of Exchanges Trading Survey 2002

The World Federation of Exchanges conducted a survey in 2002 on trading practices at major stock exchanges. This survey was conducted by Professor Maureen O'Hara of Cornell University. The report was released in March 2003. The survey covered 42 Exchanges and focussed on 6 operational areas: trading platform, traded products, orders and order routing mechanism, execution, transparency, information.

Trading Platform: The study found that electronic systems prevail and are typically order driven. 32 Exchanges have order driven system and only 2 stock exchanges have a floor system. 14 Exchanges have introduced new trading platform in the past 12 months and 15 are planning to do so in next 12 months. About 86% of Exchanges have platforms that include stock watch or real time error alerts. About 88% of Exchanges have backup systems in place that are fully redundant.

Trading Products: The study found that 33 exchanges reported negative to flat value growth over the last year but the growth of derivatives has been stronger. The study also found a significant growth in Exchange Traded Funds.

Order and Order Routing: The study found that 12% of the Exchanges have the system that gives direct access for order routing and straight through processing is in place (55%).

Execution: The execution quality has generally improved with the electronic system in place in most of the Exchanges. The study found that 49% of exchanges offer automatic execution of small orders and 71% offer opportunities for price improvement. The time taken to process the order is typically less than a second.

Transparency and Information: The survey indicated that global markets are becoming more and more transparent. The majority of exchanges disclose substantial market information and disseminate them through a variety of ways: 90% through data feed, 74% through internet, 69% through trading system, 36% through special information system and 7% through satellite. The depths of all prices is displayed by 57% of exchanges, another 26% display depth for specific price levels and 17% allow indicative quotes to be disclosed.

Other Issues: The survey finds that 76% of the Exchanges reported operating within a self-regulatory framework. The regulatory functions are handled internally in 40% of exchanges, by a separate non-governmental entity for 14%. While Government regulator handles 21%, 38% are handled jointly with a regulatory agency.

Primary Market

Introduction

The primary market plays an important role in the securities market by forming a link between the savings and investments. It is through this market that the borrower's *viz.*, the Government and the corporates issue securities in which the investors deploy their savings. The primary market comprises, the public issues and the private placement market. A public issue consists of a company entering the market to raise funds from all types of investors; its debut is known as the initial public offer (IPO). In case of private placement, there are only a few select subscribers to the issue. The securities can be issued at a face value, or at a discount/premium; they may take a variety of forms such as equity, debt or some hybrid instrument. Apart from raising funds in domestic markets, resources are mobilized in international markets through the issuance of American Depository Receipts (ADRs)/Global Depository Receipts (GDRs) and External Commercial Borrowing (ECB) route. This chapter presents developments in primary market for corporate securities in India, both equity and debt, while the primary market for government securities is discussed separately in Chapter 6.

After a long period of subdued activity, there were signs of revival in the public issues in 2003-04. This was due to the offers made by quality issuers evoking buoyant investors' interest (Table 2-1). In the private placement market, the SEBI, for the first time, imposed

Table 2-1: Resource Mobilisation by Government and Corporate Sector

(Rs. mn.)

Issues	2002-03	2003-04
Corporate Securities	**752,411**	**695,030**
Domestic Issues	718,147	664,050
Public Issues	48,667	71,900
Non-Govt. Public Companies	18,777	32,100
PSU Bonds	—	—
Govt. Companies	—	1,000
Banks & FIs	29,890	38,800
Private Placement	669,480	592,150
Euro Issues	34,264	30,980
Government Securities	**1,819,790**	**1,981,570**
Central Government	1,511,260	1,476,360
State Governments	308,530	505,210
Total	**2,572,201**	**2,676,600**

Source: RBI Annual Report.

stringent disclosure norms in September 2003. As a result, the resources mobilised by non-government entities fell from 88% in 2002-03 to 85% in 2003-04. The public issues mobilised

Rs. 71,900 million during this year. Further, the resources raised by Indian corporates from the international capital market through the issuance of FCCBs, GDRs and ADRs have declined marginally during 2003-04. With a view to integrate the Indian capital market, the foreign companies have been allowed to access the Indian capital market through Indian Depository Receipts (IDR) (discussed in detail in chapter 4).

Policy Developments

In order to refine the primary market design and boost the waning investors' confidence, various measures have been taken by the Government, RBI and SEBI. This section throws light on the policy measures initiated during the financial year 2003-04 and till June 2004.

I. DIP Guidelines

Given the SEBI's commitment to protect the investors' interests and to increase the transparency and efficiency of the primary market, stringent disclosure and eligibility norms have been issued. Further, various operational procedures for the issuers have been simplified to facilitate smooth mobilization of resources. In this regard, SEBI has set up various committees, which constantly review the guidelines; subsequently, SEBI has amended the SEBI (Disclosure and Investor Protection) Guidelines, 2000 as enumerated below:

Eligibility Norms

- An unlisted company may make an initial public offering (IPO) of equity shares or any other security, which may be converted into or exchanged with equity shares at a later date. Provided, it has a track record of profitability, and meets the conditions of net worth, net tangible assets etc. as specified in the guidelines.
- An unlisted company not complying with any of the above conditions may still make an IPO, if it meets the conditions: (a)(i) The issue is made through the book-building process, with at least 50% of the issue size being allotted to the Qualified Institutional Buyers (QIBs). Failing which the full subscription money have to be refunded OR (a)(ii) The "project" has at least 15% participation by Financial Institutions/Scheduled Commercial Banks, of which at least 10% comes from the appraiser(s). In addition, at least 10% of the issue size is to be allotted to QIBs, otherwise, the full subscription monies is to be refunded *AND* (b)(i) The minimum post-issue face value capital of the company has to be Rs. 10 crore OR (b)(ii) There should be a compulsory market-making for at least 2 years from the date of listing of the shares subject to certain conditions as specified in the guidelines.
- A listed company is eligible to make a public offer of equity shares or any other security which is convertible into equity shares. But, the aggregate issue size of the proposed issue along with all the previous issues made during the same financial year should not exceed 5 times its pre-issue net worth as per the audited balance sheet of the last financial year. If the name of the company has been changed in the last one year, then the revenue accounted for by the activity suggested by the new name should not be less than 50% of its total revenue in the preceding one full-year period.
- No company can make a public or rights issue of debt instruments (whether convertible or not), unless the following conditions are satisfied: (i) Credit rating of not less than investment grade is obtained from not less than two SEBI registered credit rating agencies.

(ii) Company should not be in the list of willful defaulters of RBI. They should not have defaulted payment of interest or repayment of principal, if any, for a period of more than 6 months.

- An issuer company should not allot non-convertible debt instrument pursuant to a public issue, if the proposed allottees are less than fifty. In such a case, the company should forthwith refund the entire subscription amount received, a delay beyond 8 days attracts a penal charge of 15% per annum.

Promoters Contribution and Lock-in

- Prior to an IPO, the shares held by the persons other than the promoters, which are locked in may be transferred to any other person holding shares. This should be subjected to continuation of lock-in in the hands of transferees for the remaining period and compliance with the SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 1997.
- Shares held by promoter(s), which are locked-in, may be transferred to and amongst promoter/promoter group or to a new promoter or persons in control of the company. Provided the lock-in of shares in the hands of transferees for the remaining period remains. They should also comply with the SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 1997.

Preferential Issues

- As in case of equity shares, the transfer of the locked in preference shares/instruments is subject to the same norms and comply with SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 1997.
- The lock-in period in respect of the shares issued on preferential basis pursuant to a scheme approved under Corporate Debt Restructuring framework should commence from the date of allotment. The lock-in period should continue for a period of one year. In case of partly paid up shares the lock-in period should commence from the date of allotment and continue for a period of one year from the date when shares become fully paid up.
- Unless the entire shareholding is held in dematerialized form, no listed company is permitted to make preferential issue of equity shares, warrants, Partly Convertible Debentures (PCDs), Fully Convertible Debentures (FCDs) or any other financial instruments convertible into or exchanged with equity shares at a later date.
- In case of the shares, warrants, PCDs, FCDs or any other financial instruments convertible into equity shares, which are issued on preferential basis, the entire pre-preferential allotment shareholding should be under lock-in. The lock-in period shall start from the relevant date up to a period of six months from the date of preferential allotment. In addition, the shareholders, who have sold their shares during the six months period prior to the relevant date, would not be eligible for allotment of shares on preferential basis.

Designated Stock Exchange

Following the withdrawal of the concept of a regional stock exchange, companies have to choose one stock exchanges as a designated stock exchange for the purpose of finalization of the basis of allotment.

Book Building Guidelines

- The issuer company should enter into an agreement with one or more stock exchange(s), which have the requisite system to offer on-line securities. The agreement should specify the rights, duties, responsibilities and obligations of the company and the stock exchange(s). The agreement should also provide for a dispute resolution mechanism between them.
- The freedom is given to the issuer company to list the securities on any other exchange and not necessarily on the exchange through which the company has offered the securities.
- The book runner(s)/syndicate members should appoint SEBI registered brokers to accept bids, applications and placing orders with the company. The appointed brokers should be financially capable of honouring their commitments arising out of defaults of their clients/ investors, if any.
- The company should pay the broker/s a commission/fee for the services rendered. The brokers' are not allowed to levy a service fee on his clients/investors for his services.
- If the offer is through 100% book building process, then the following rules apply: (a) not less than 25% of the net offer should be made to retail individual investors; (b) not less than 25% of the net offer to non-institutional investors i.e. other than retail individual investors and QIBs; (c) not more than 50% of the net offer for QIBs.
- If 75% of the net offer is through book building process and 25% at the price determined through book building, then — (a) in the book built portion, not less than 25% and not more than 50% of the net offer should be available for allocation to non QIBs; (b) the balance 25%, offered at a price determined through book building, should be available only to retail individual investors. They will be either those who have not participated or have not received any allocation, in the book built portion. It is mandatory that 50% of the issue size is allotted to the QIBs.

Pricing of Issues

For an IPO by an unlisted company, if the issue price is Rs. 500 or more, the issuer company has the discretion to fix the face value below Rs. 10 per share subject to a lower limit of not less than Re. 1 per share. In case the issue price is below Rs. 500 per share, the face value ought to be Rs. 10 per share. The face value of shares should be disclosed in the advertisements and offer documents.

Post Issue Obligations

The allotment of shares should be on a proportionate basis within the specified categories, rounded off to the nearest integer. This will be subject to a minimum allotment being equal to the minimum application size as fixed and disclosed in the offer document.

Green Shoe Option

An issuer company making a public offer of equity shares can avail of the Green Shoe Option (GSO) for stabilising post listing of its shares, subject to certain provisions in the guidelines such as:

- A company desirous of availing the option should seek authorization in the general meeting for allotment of the additional shares to the 'stabilising agent' (SA) at the end of the stabilisation period.

- The company should appoint one of the merchant bankers or book runners, as the SA. They will be responsible for the price stabilisation process, if required. Prior to filing of offer document with SEBI, the SA should enter into an agreement with the issuer company clearly stating all the terms and conditions relating to this option including fees charged/expenses to be incurred.
- The SA should also enter into an agreement with the promoter(s) or pre-issue shareholders who will lend their shares. The agreement should specify the maximum number of shares that may be borrowed from the promoters or the shareholders which should not be in excess of 15% of the total issue size.
- The allocation of these shares should be on pro-rata basis to all the applicants. The stabilisation mechanism should be available for not more than 30 days from the date when trading is permitted on the exchange(s).
- The promoters and pre-issue shareholders, of both unlisted and listed company, holding more than 5% shares should lend the shares for the purpose of GSO.

Contents of Offer Document

The draft offer document and the final offer document should be approved by the Board of Directors and signed by all the Directors (including the managing director), Chief Executive Officer and Chief Financial Officer. They should also certify that all the disclosures made in the offer document are true and correct.

- Some of the pertinent information have to be disclosed irrespective of the issue prices *viz.*, Earnings per share, EPS pre-issue for the last three years, P/E pre-issue, average return on net worth in the last 3 years, minimum return on increased net worth required to maintain pre-issue EPS, NAV per share based on last balance sheet, NAV per share after issue and comparison thereof with the issue price, comparison of all the accounting ratios of the issuer company. However, the projected earnings should not be used as a justification for the issue price in the offer document. Further, the accounting ratios disclosed in the offer documents in support of the issue price should be calculated after giving effect to the consequent increase in capital on account of compulsory conversions outstanding as well as on the assumption that the options outstanding, if any, to subscribe for additional capital will be exercised.

Guidelines for Issue of Advertisements

Every time the issue is advertised on television screen, the risk factors should not be scrolled on the screen, but the advertisement should advise the viewers to refer to the red herring prospectus or other offer document for details.

Miscellaneous

- The Board should provide exemptions regarding any particular provision(s) of these guidelines *viz.*, (i) on an application made by any listed company or intermediary connected with the issue, (ii) of a technical violation or a possible violation, or (iii) on being satisfied that the violation was caused or may be caused due to factors beyond the control of the applicant.
- The minimum application value should be within the range of Rs. 5,000 to Rs. 7,000 and in multiples thereof.

- In a public issue by a listed company, the reservations can be made for the shareholders, who hold shares worth up to Rs. 50,000 on the record date, for allotment on proportionate basis as in case of allotment in public category.

II. Debenture Trustees Regulations, 2003

SEBI amended the SEBI (Debenture Trustees) Regulations, 2003 to include the following:

(a) The capital adequacy should not be less than the networth of Rs. 1 crore, provided that a debenture trustee, who already is registered, should fulfill the networth requirements within two years from that date.

(b) The net worth should be monitored by the debenture trustee on a continuous basis and inform SEBI for any shortfall in it. In such a case, they would not be entitled to undertake new assignments until they restore the net worth to the required level within a specified time.

(c) Debenture trustee should not relinquish its assignments unless and until another debenture trustee is appointed in its place.

(d) No debenture trustee should act as such for any issue of debentures in case it has lent and the loan is not yet fully repaid or is proposing to lend money to the body corporate. However, this requirement is not applicable in respect of debentures issued prior to the commencement of the Companies (Amendment) Act, 2000, where (i) recovery proceedings in respect of the assets charged against security has been initiated, or (ii) the body corporate has been referred to BIFR under the Sick Industrial Companies (Special Provisions) Act, 1985, prior to commencement of the SEBI (Debenture Trustees) (Amendment) Regulations, 2003.

III. Unlisted Public Companies (Preferential Allotment) Rules, 2003

The Unlisted Public Companies (Preferential Allotment) Rules, 2003, which came into force w.e.f. December 4, 2003, are applicable to all unlisted public companies issuing equity shares, FCDs, PCDs or any other financial instruments, which would be convertible or exchanged with equity shares. It states that no issue of shares on a preferential basis can be made by a company unless authorized by its articles of association and unless a special resolution is passed by the members in a General Meeting. The special resolution should be acted upon within a period of 12 months. In case, if warrants are issued on preferential basis with an option to apply for and get the shares allotted, then the issuing company should determine in advance the price of the resultant shares. In case of every issue of shares/warrants or any other financial instrument with a conversion option, the statutory auditor has to certify that the issue of securities has been done in accordance to the Rules.

Market Design

The primary market is governed by the provisions of the Companies Act, 1956, which deals with issues, listing and allotment of securities. Additionally the SEBI (Disclosure and Investor Protection) guidelines issued under the securities law prescribes a series of eligibility and disclosure norms to be complied by the issuer, promoter for accessing the market. However, in this section we discuss the market design as stipulated in the SEBI (DIP) guidelines.

DIP Guidelines, 2000

Disclosure and Investor Protection (DIP) Guidelines of SEBI, issued in June 1992, governs the issues of capital by Indian companies. SEBI has since then been issuing clarifications/ amendments to these guidelines from time to time, in order to streamline the public issue process. In January 2000, a comprehensive coverage of all DIP guidelines has been made available through a series of compendium 'SEBI (DIP) Guidelines, 2000'. The guidelines provide norms relating to the eligibility for companies issuing securities, pricing of issues, listing requirements, disclosure norms, lock-in period for promoters' contribution, contents of offer documents, pre and post-issue obligations, among others. The guidelines apply to all public issues, offer for sale, and rights issues by listed and unlisted companies. This section attempts to highlight some of the important clauses in the guideline in a precise manner.

Eligibility Norms

Any company issuing securities has to satisfy the following conditions at the time of filing the draft offer document and the final offer document with SEBI and Registrar of Companies (ROCs)/Designated Stock Exchange respectively.

- A company making a public issue of securities has to file a draft prospectus with SEBI, through an eligible merchant banker, at least 21 days prior to the filing of prospectus with the ROCs. For a rights issue, filing of offer document is mandatory where the aggregate value of securities, including premium, if any, exceeds Rs. 50 lakh. An application for listing of those securities with stock exchange(s) is also to be made. Further, the company must enter into an agreement with the depository for dematerialisation of its securities and should give an option to subscribers/shareholders/ investors to receive the security certificates either in physical or in dematerialised form. A company cannot make an issue if the company has been prohibited from accessing the capital market under any order or discretion passed by SEBI.
- An unlisted company can make an IPO of equity shares or any other security, which may be converted into equity shares, only if it has a track record of profitability and required net worth and net tangible assets. Some of the conditions are specified hereunder: (i) it has net tangible assets of at least Rs. 3 crore in each of the preceding 3 full years, of which not more than 50% is held in monetary assets; (ii) it has a net worth of at least Rs. 1 crore in each of the preceding 3 full years; (iii) it has a track record of distributable profits in terms of section 205 of the Companies Act, 1956, for at least 3 out of the immediately preceding 5 years; (iv) the aggregate of the proposed issue and all previous issues made in the same financial year in terms of size (offer through offer document plus firm allotment plus promoters contribution through the offer document) does not exceed five times its pre-issue net worth and (v) in case the company has changed its name within the last one year, at least 50% of the revenue for the preceding one full year is earned by the company from the activity suggested by the new name.
- Even if the above mentioned conditions are not satisfied, an unlisted company can still make an IPO on compliance of the guidelines as specified: (a)(i) issue should be made through the book building process with at least 50% of the issue size being allotted to the QIBs, if not, then the full subscription monies has to be refunded, OR (a)(ii) the project should have at least 15% participation by FIs/SCBs of which at least 10% should

come from the appraiser. In addition, at least 10% of the issue size should be allotted to QIBs, otherwise, the full subscription monies would be refunded; *AND* (b)(i) minimum post-issue face value capital of the company should be Rs. 10 crore, OR (b)(ii) there should be compulsory market making for at least 2 years from the date of listing subject to certain conditions as specified in the guidelines.

- For a listed company the aggregate of the proposed issue and all previous issues made in the same financial year in terms of issue size should not exceed 5 times its pre-issue net worth. In case of the change in name of the issuer company within the last 1 year, the revenue accounted for by the activity suggested by the new name should not be less than 50% of its total revenue in the preceding one full year period.
- Infrastructure companies are exempt from the requirement of eligibility norms if their project has been appraised by a public financial institution (PFI) or Infrastructure Development Finance Corporation (IDFC) or Infrastructure Leasing and Financing Services Ltd. (ILFS) or a bank which was earlier a PFI and not less than 5% of the project cost is financed by any of the institutions referred above, jointly or individually, by way of loan and/or subscription to equity or a combination of both.
- No public issue or rights issue of debt instruments (whether convertible or not) can be made unless (a) it has a credit rating of not less than investment grade from not less than two credit rating agencies registered with SEBI, all the credit ratings, including the rejected ones, needs to be disclosed. All the credit ratings obtained during the 3 years preceding the public or rights issue of debt instrument for any listed security of the issuer company should also be disclosed in the offer document. (b) the company should not feature in the list of willful defaulters of RBI (c) company has not defaulted on payment of interest or repayment of principal of debentures issued to the public, if any for a period more than 6 months.

Pricing of Issues

The companies, including the eligible infrastructure companies, have the freedom to price their equity shares or any security convertible into equity in public or rights issues as the case may be. The banks, however, can price their shares subject to the approval by the RBI. A company (listed or unlisted) should issue shares to applicants in the firm allotment category at a different price from the one at which the net offer to the public is made. That is, at a higher price than at which the securities are offered to the public. A listed company making a composite issue of capital may issue securities at differential prices in its public and rights issue. Further, an eligible company is free to make public/rights issue of equity shares in any denomination determined by it in accordance with sub-section (4) of section 13 of the Companies Act, 1956 and norms as specified by SEBI from time to time.

Contribution of Promoters and lock-in

The promoters' contribution in case of public issues by unlisted companies should not be less than 20% of the post issue capital. In case of public issues by listed companies, promoters should contribute to the extent of 20% of the proposed issue or should ensure post-issue share holding to the extent of 20% of the post-issue capital. For a composite issue, the promoters' contribution should either be 20% of the proposed public issue or 20% of the post-issue capital. At least one day prior to the opening of the issue, the promoters should bring in the full amount of the promoters contribution including premium. Except for (i) public issue of securities which have been listed for at least 3 years and has a track record of dividend payment for at least 3 immediate preceding years, (ii) companies wherein no identifiable promoter or promoter group exists, and (iii) rights issues.

The minimum promoters' contribution should be locked in for a period of 3 years in case of all types of issues. However, if the promoters' contribution exceeds the required minimum, then the excess is locked in for a period of one year. The lock-in period starts from the date of allotment in the proposed public issue and the last date of the lock-in is to be reckoned as three years from the date of commencement of commercial production or the date of allotment in the public issue whichever is later. In case of pre-issue share capital of unlisted company, the entire pre-issue share capital, other than that locked in as promoters contribution, is locked for a period of one year from the date of commencement of commercial production or the date of allotment in the public issue, whichever is later. Securities allotted in firm allotment basis are also locked in for a period of one year. The locked-in securities held by promoters may be pledged only with banks or FIs as collateral security for loans granted by such banks or FIs.

Issue Obligations

Each company issuing securities has to enter into a Memorandum of Understanding with the lead merchant banker, which specifies their mutual rights, liabilities and obligations. The lead merchant banker has to exercise due diligence and satisfies himself about all aspects of offering, veracity and adequacy of disclosures in the offer document. All the other formalities like, allotment, refund and despatch of certificates are also taken care by the lead merchant banker. The lead manager should also ensure that the issuer company has entered into agreements with all the depositories for dematerialization of securities. Also, the investors should be given an option to receive securities in dematerialized form through any of the depositories. In case of under-subscription of an issue, the lead merchant banker invokes underwriting obligations and ensures that the underwriters pay the amount devolved. The merchant banker has to appoint a compliance officer who will directly liaise between the Board and the issuer company with regard to compliance of various laws, rules, regulations and other directives issued by the Board. Twenty-one days after the draft offer document has been made public, the lead merchant banker should file a statement with the SEBI giving a list of complaints received, a statement as to whether it is proposed to amend the draft offer document or not, and highlighting those amendments.

Subsequent to the post issue, the lead merchant banker should ensure that the post-issue monitoring reports are submitted irrespective of the level of subscription. Also, the merchant banker should be associated with allotment, refund and dispatch and also monitor the redressal of investor grievances arising therefrom. In a public-issue, the Managing Director of the Designated Stock Exchange along with the post issue Lead Merchant Banker and the Registrars to the Issue would be responsible for the finalization of allotment in a fair and proper manner. Allotment should be on proportionate basis within the specified categories rounded off to the nearest integer subject to the minimum allotment being equal to the minimum application size as fixed and disclosed by the issuer.

Book Building

Book building is a price discovery mechanism. Based on the bids received at various prices from the investors, demand is assessed and then the price of the securities is discovered.

The issuer proposing to issue capital through book building has two options, *viz.*, 75% book building route and 100% book building route. In case of issue of securities through the first route, 75% of the net offer is made through book building process and 25% at the price determined by book building. In this case not more than 50% should be available for allocation to QIBs and not less than 25% to non-QIBs. The balance 25% should be made to the public at the price determined through book building. In case a company makes a issue of 100% of the net offer to public through 100% book building process, then not less than 25% should be available for allocation to retail individual investors, not less than 25% to non-institutional investors and not more than 50% for QIBs. Allotment to retail individual investors and non-institutional investors are made on the basis of the proportionate allotment system within 15 days of the closure of the issue; failing of which attracts a penal charge of 15% which is paid to the investors. In case of under subscription in any category, the unsubscribed portions can be allocated to the bidders in other categories.

Besides, book building also requires that: issuer should provide indicative floor price and no ceiling price, bids to remain open for at least 5 days, only electronic bidding is permitted, bids are submitted through syndicate members, investors can bid at any price, retail investors have option to bid at cut off price, bidding demand is displayed at the end of every day, the lead manager analyses the demand generated and determines the issue price in consultation with the issuer, etc.

e-IPOs

A company proposing to issue capital to public through the on-line system of the stock exchanges has to enter into an agreement with the stock exchange(s). SEBI registered brokers should be appointed for the purpose of accepting applications and placing orders with the company. The issuer company should also appoint a Registrar to the Issue having electronic connectivity with the Exchanges. The issuer company can apply for listing of its securities on any Exchange other than the Exchange through which it has offered its securities. The lead manager co-ordinates all the activities amongst various intermediaries connected in the issue/system.

Credit Rating

Credit Rating Agencies (CRA) can be promoted by public financial institutions, scheduled commercial banks, foreign banks operating in India, and by any body corporate having continuous minimum net worth of Rs. 100 crore for the previous five years. Further, foreign credit rating agencies having at least five years experience in rating can also operate in the country. The SEBI (Credit Rating Agencies) Regulations, 1999 cover the rating of the securities listed and not fixed deposits, foreign exchange, country ratings and real estates. The applicant/ promoters of a CRA should have professional competence, financial soundness and general reputation of fairness and integrity in business transaction; they should not be involved in any legal proceedings connected with the securities market. The CRAs are required to have a minimum net worth of Rs. 5 crore. A CRA can not rate (i) a security issued by its promoter, (ii) securities issued by any borrower, subsidiary, an associate promoter of CRA, if there are common Chairman, Directors and Employees between the CRA or its rating committee and these entities (iii) a security issued by its associate or subsidiary if the CRA or its rating committee share a common Chairman, Director or Employee.

For debt securities with issue size greater than or equal to Rs. 100 crore, two ratings from different CRAs are required. The issuer should disclose in the offer documents all the ratings it has got during the previous 3 years for any of its listed securities, irrespective of whether it has been accepted or not. CRAs should continuously monitor the securities rated by them and disseminate any changes in its ratings, along with its history through websites, press releases etc.

Merchant Banking

The merchant banking activity in India is governed by SEBI (Merchant Bankers) Regulations, 1992. Consequently, all the merchant bankers have to be registered with SEBI. The details about them are presented in the table below:

Category of Merchant Banker	Permitted Activity	Net worth (Rs. Crore)
Category I	To carry on activity of the issue management, to act as adviser, consultant, manager, underwriter, portfolio manager	5.00
Category II	To act as adviser, consultant, co-manager, underwriter, portfolio manager	0.50
Category III	To act as underwriter, adviser, consultant to an issue	0.20
Category IV	To act only as adviser or consultant to an issue	Nil

Only a corporate body other than a non-banking financial company having necessary infrastructure, with at least two experienced persons employed can apply for registration as a merchant banker. The applicant has to fulfill the capital adequacy requirements, with prescribed minimum net worth. The regulations cover the code of conduct to be followed by merchant bankers, responsibilities of lead managers, payments of fees and disclosures to SEBI. They are required to appoint a Compliance Officer, who monitors compliance requirements of the securities laws and is responsible for redressal of investor grievance.

Demat issues

SEBI has mandated that all new IPOs compulsorily should be traded in dematerialised form only. Further, the section 68B of the Companies Act, 1956, requires that every listed public company making IPO of any security for Rs. 10 crore or more should issue the same only in dematerialised form. The investors, however, would have the option of either subscribing to securities in physical or dematerialised form.

Private Placement

The private placement involves issue of securities, debt or equity, to selected subscribers, such as banks, FIs, MFs and high net worth individuals. It is arranged through a merchant/ investment banker, who acts as an agent of the issuer and brings together the issuer and the investor(s). Since these securities are allotted to a few sophisticated and experienced investors, the stringent public disclosure regulations and registration requirements are relaxed. The Companies Act, 1956, states that an offer of securities to more than 50 persons is deemed to be public issue.

Market Outcome

Public Issues

The year 2003-04 witnessed an upsurge in the primary market activity induced by a buoyant secondary market, sharp economic recovery, and political stability. The resource mobilisation by way of IPOs and new issues by listed companies leaped to Rs. 200,592 million in 2003-04 from Rs. 40,703 million in 2002-03. As compared with 52 total schemes in 2003-04, there were only 26 in the previous year (Table 2-2). The share of public issues in the total resources mobilized rose from 89% in 2002-03 to 92% in 2003-04. The mobilisation by rights issues also witnessed a manifold increase as compared to the previous year. According to a press statement of the Prime database (country's premier database on primary capital market), "the turnaround in the fortunes of the rights issues both by numbers and by amount has come about primarily because of the steady conditions in the secondary market and drying up of the ECB market. Companies offer shares on rights basis either to expand, diversify or simply to restructure their balance sheets."

Table 2-2: Resource Mobilisation from Public Issues

(Amount in Rs. mn.)

Issue	2002-03		2003-04	
	Number	Amount	Number	Amount
IPOs	6	10,387	17	32,766
Issues by Listed Companies	20	30,316	35	167,826
Public Issues	8	26,004	16	150,739
Rights Issues	12	4,312	19	17,087
Total	**26**	**40,703**	**52**	**200,592**

Source: SEBI.

A significant spurt can be seen in the total resource mobilisation from the public issues as shown in the Table 2-2. The listed companies mobilised Rs. 167,826 million through 35 issues during 2003-04, accounting for 84% of the resources, while in 2002-03, there were 20 issues by listed companies for Rs. 30,316 million.

During 2003-04, there were 22 mega issues (Rs. 1000 million and above) as against 12 such issues in the preceding year. The average size of an issue was Rs. 6,327 million in 2003-04 as against Rs. 4,094 million in 2002-03. There were only 2 issues below Rs. 30 million during 2003-04.

Most of the issues were made by private sector companies. Of the 52 issuers which tapped the market in 2003-04, 34 issues where by private sector issuers. They mobilised around 19.6% of the total resources raised. The public sector companies made 18 issues mobilising 80.4% to the total resources mobilised (Table 2-3). The joint sector has not been making any issue of capital for the past few years.

Table 2-3: Sector-wise Distribution of Resources Mobilised

(Amount in Rs. mn)

Sector	2002-03		2003-04	
	Number	Amount	Number	Amount
Private	18	18,973	34	39,342
Joint	0	—	0	—
Public	8	21,730	18	161,250
Total	**26**	**40,703**	**52**	**200,592**

Source: SEBI.

For the past few years, debentures have been pre-dominant in the public issues. However, in 2003-04, there has been a reversal in this trend. The share of debt in resource mobilisation through public issues decreased from 82% in 2002-03 to mere 19.53% in 2003-04 (Table 2-4). While, the amount raised through equity issues have been the highest ever in the history so far of the Indian capital market.

Table 2-4 Resources Mobilised through Debt and Equity

Year	Percentage Share	
	Equity	Debt
1995-96	72.39	27.61
1996-97	55.99	44.01
1997-98	41.17	58.83
1998-99	15.34	84.66
1999-00	58.41	41.59
2000-01	52.79	47.21
2001-02	16.88	83.12
2002-03	18.00	82.00
2003-04	80.47	19.53

Source: Prime Annual Report

The Banks and Financial Institutions (FIs) had assumed a dominant role in fund mobilisation. Their offers in 2001-02 and 2002-03 were 68.16% and 84.58% respectively, however, the year 2003-04 saw a significant fall to only 15.5% (Table 2-5). The chemical and the Information Technology (IT) industry collectively contributed approximately 10.2% in the resource mobilisation in 2003-04.

Table 2-5 Industry-wise Resource Mobilisation

Industry	Percentage Share	
	2002-03	2003-04
Banking/FIs	84.58	15.48
Cement & Construction	0.75	0.00
Chemical	0.38	7.34
Entertainment	0.00	0.76
Finance	0.72	0.35
Information Technology	5.58	2.82
Paper & Pulp	0.00	0.00
Plastic	5.34	0.00
Telecom	0.00	0.00
Textile	0.00	0.24
Others	2.65	73.00
Total	**100.00**	**100.00**

Source: SEBI.

Euro Issues

Indian companies raise resources from international markets through the issue of Foreign Currency Convertible Bonds (FCCBs), GDRs and ADRs. GDRs/ADRs are similar to Indian shares and are traded on overseas stock exchanges. In India, they are reckoned as part of foreign direct investment and hence, need to conform to the existing FDI policy. During 2003-04, the resources mobilised through Euro issues have been lower at Rs. 30,980 million as against Rs. 34,264 million raised during 2002-03 (Table 2-1).

Performance of IPOs

During 2003-04, eleven IPOs were listed on NSE of different sectors *viz.*, Media and Entertainment, Finance, Information Technology, Pharmaceuticals and Manufacturing. The market price of almost all the IPOs appreciated quite substantially on the first day of listing/ trading itself against their issue price. The price of Indraprastha Gas Limited rose by a whopping 148.75%, followed by TV Today Networks Limited (91.74%) and UCO Bank (63.33%). For few IPOs like Vardhaman Acrylics Limited, BAG Films Limited, Surya Pharmaceuticals Limited, Patni Computers Systems Limited and Petronet LNG Limited, the prices depreciated by end March 2004 (Table 2-6).

Table 2-6: Performance of IPOs Listed on NSE During April 01, 2003 to March 31, 2004

Sl. No.	Name of Company	Date of Listing	Issue Price (Rs.)	Close Price on first day of Trading (Rs.)	Close Price as at end-March, 2004 (Rs.)	Price Appreciation/ Depreciation on first day of Trading (%)	Price Appreciation/ Depreciation upto end-March, 2004 (%)
1.	Maruti Udyog Limited	9-Jul-03	125	164.3	497.45	31.44	297.96
2.	Vardhman Acrylics Limited	30-Sep-03	10	11.1	8.8	11.00	-12.00
3.	UCO Bank	9-Oct-03	12	19.6	22.22	63.33	85.17
4.	B.A.G. Films Limited	17-Oct-03	10	12.45	6.4	24.50	-36.00
5.	Jai Balaji Sponge Limited	9-Dec-03	10	13.1	15.95	31.00	59.50
6.	Indraprastha Gas Limited	26-Dec-03	48	119.4	82.9	148.75	72.71
7.	TV Today Network Limited	16-Jan-04	95	182.15	133.45	91.74	40.47
8.	Surya Pharmaceutical Limited	21-Jan-04	45	52.25	37.75	16.11	-16.11
9.	Patni Computer Systems Limited	25-Feb-04	230	234.45	214.4	1.93	-6.78
10.	Four Soft Limited	12-Mar-04	25	26.05	23	4.20	-8.00
11.	Petronet LNG Limited	26-Mar-04	15	14.65	14.7	-2.33	-2.00

Source: NSE

As quoted in the RBI annual report 2003-04, "empirical evidence regarding the variation of IPO share prices for the period 2001-02 to 2003-04 indicates that share prices of about 75% IPOs improved upon listing. The variation was measured as the percentage change between the offer price and the market price of the scrip's after six months. Stringent entry and disclosure norms introduced by the SEBI have had a significant impact on the quality of issues entering the market as well as their post-listing performance".

Book Building through On-line IPO System

Book building is basically a process used in IPO for efficient price discovery. During the period when the offer is open, bids are collected from investors at various prices, which are above or equal to the floor price. The offer price is determined after the bid closing date. In its endeavor to continuously improve the Indian securities market, NSE has offered an infrastructure for conducting online IPOs through book building. It helps to discover price as well as demand for the security to be issued through a process of bidding. The advantages are: a) the investor parts with money only after the allotment, b) it eliminates refunds except in case of direct applications and c) it reduces the time taken to process the issue. The securities get listed within 15 days from the closure of the issue. Though the guidelines for book building were issued in 1995, it is being also used for IPOs only from 1999. Till June 2004, 36 issuers have used this route for making IPO issues.

Disinvestment in PSUs in India[1]

The terms 'disinvestment' and 'privatisation' are usually used interchangeably all over the world. In actuality though disinvestment represents sale of government share holding in public sector undertakings (PSUs), 'privatisation' is a more comprehensive concept and implies denationalisation including transfer of management and control to private entities. The disinvestment process in India has evolved over for more than a decade. The union budget of 1991-92 contained the first explicit statement on divestiture – the proposal to divest up to 20% of Government equity in select PSUs. The disinvestment commission was set up in 1996 and it recommended mainly a shift from public offerings to a strategic/trade sale with transfer of management in respect of a number of PSUs. The broad objective of disinvestment has been to reduce the fiscal deficit, and distribute the shares to a wider investor base. The disinvestment from fiscal 1991-92 is given in the table below:

(Amount in Rs. crore)

Year	No. of Company in which equity sold	Target receipt for the year	Actual receipts
1991-92	47	2,500	3,038
1992-93	35	2,500	1,913
1993-94	—	3,500	—
1994-95	13	4,000	4,843
1995-96	5	7,000	361
1996-97	1	5,000	380
1997-98	1	4,800	902
1998-99	5	5,000	5,371
1999-00	4	10,000	1,860
2000-01	4	10,000	1,871
2001-02	9	12,000	5,632
2002-03	6	12,000	3,348
2003-04	9	13,200	15,547

Source: Department of Disinvestment, Govt. of India (www.divest.nic.in)

Disinvestment through the capital market route is most preferred route these days as it has certain advantages over the strategic sale route e.g. (a) increases public ownership; (b) helps in better price discovery. This can be affirmed by the success of the companies which

[1] References: Ministry of Disinvestment website (www.divest.nic.in), Government of India and RBI Annual Report.

went for disinvestment through this route in 2003-04 *viz.*, Maruti Udyog Limited, Indian Petrochemicals Corporation Limited, Gas Authority of India Limited, Oil and Natural Gas Corporation, CMC, IBP, ICI and DRDG.

Debt Issues

Government and corporate sector collectively raised a total of Rs. 2,509,089 million from primary market during 2003-04. About 78.97% has been raised by the Government, while the balance by the corporate sector through public issues and private placement (Table 2-7).

Table 2-7: Resources Raised from Debt Markets

(Rs. mn.)

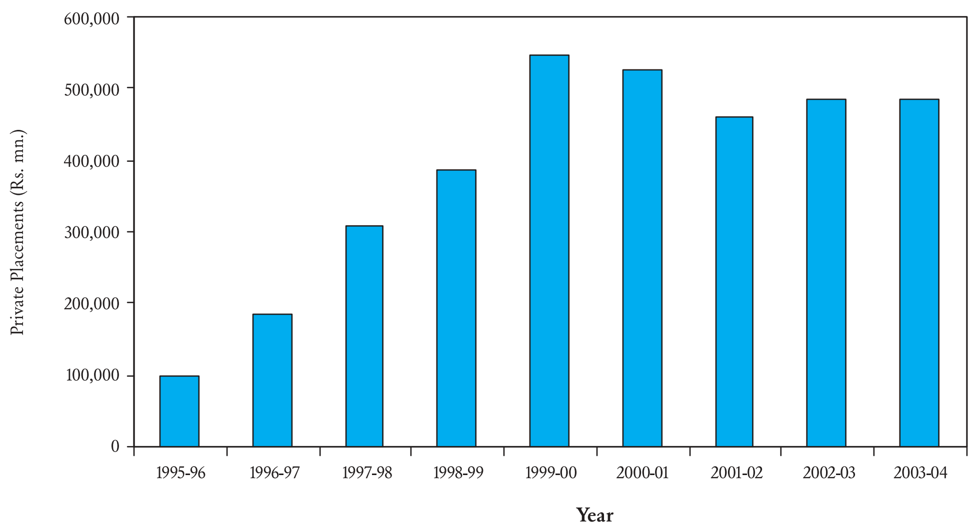
Issuer	2002-03	2003-04
Corporate	531,166	527,519
Public Issues	46,930	43,240
Private Placement*	484,236	484,279
Government	1,819,790	1,981,570
Total	**2,350,956**	**2,509,089**

* Only debt placements with a tenor and put/call option of 1 year or more.
Source: Prime Database (for corporate debt) & RBI (for Government debt).

Private Placement of Debt

According to Prime Database estimates, a total of 140 issuers (institutional and corporates) raised Rs. 484,279 million through 364 privately placed issues in 2003-04. 188 issues out of 364 were made by the public sector units, which together mobilised 87% of the total. The amount raised through the private placement of debt issues have been on an increasing trend over the past few years (Chart 2-1).

Chart 2-1: Growth of Private Placement of Debt



Mostly, debt securities were privately placed. Though, there were some instances of private placements of equity shares, there is no comprehensive data coverage of this. The two sources of information regarding private placement market in India are Prime Database and RBI. The former data set, however, pertains exclusively to debt issues. RBI data, which is compiled from information gathered from arrangers, covers equity private placements also. RBI estimates the share of equity in total private placements as rather insignificant. Some idea, however, can be derived from the equity shares issued by NSE-listed companies on private placement basis. A total of 20 companies listed on NSE privately placed equities, mobilising around Rs. 8,536 million during 2003-04 (Annexure 2-1).

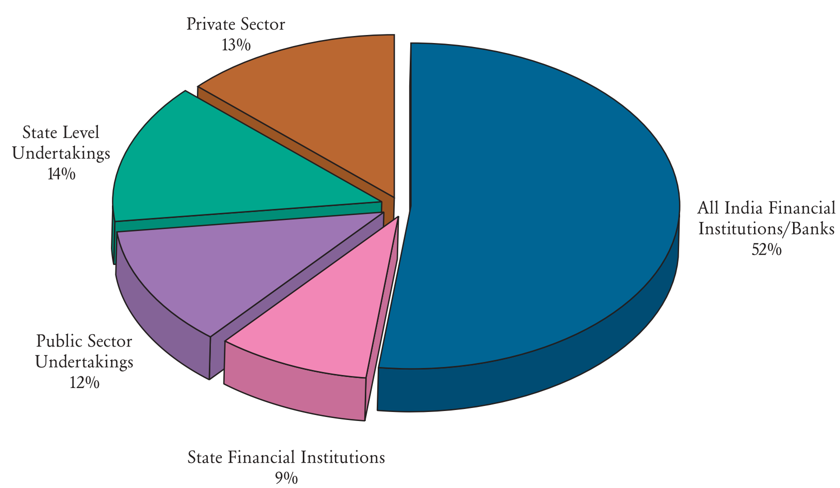
Of the 364 debt private placements, 188 (52%) were from the government/banking sector that together mobilised 87% of the total amount mobilised. The All India Financial Institutions (AIFIs) & Banks continued to top the list with 52.3% (Rs. 253,088 million), followed by the State Level Undertakings with 13.5% share (Rs. 65,642 million) (Table 2-8 and Chart 2-2). The top '10' issuers accounted for 41.2% of total private placement during 2003-04.

Table 2-8: Issuer-wise Distribution of Private Placement of Debt

Issuer	Issue Amount (Rs. mn.)		% of Issue Amount	
	2002-03	2003-04	2002-03	2003-04
All India Financial Institutions/Banks	173,687	253,088	35.87	52.26
State Financial Institutions	38665.2	42,084	7.98	8.69
Public Sector Undertakings	125,491	58,809	25.92	12.14
State Level Undertakings	43,894	65,642	9.06	13.55
Private Sector	102,498	64,656	21.17	13.35
Total	**484,236**	**484,279**	**100.00**	**100.00**

Source: Prime Database.

Chart 2-2: Issuer-wise Distribution of Private Placement of Debt, 2003-04



Sectoral distribution shows that the financial sector continued to dominate the private placement market, raising 67% in 2003-04 followed by power sector, which accounted for 17% during the year (Table 2-9).

Table 2-9: Sectoral Distribution of Resources Mobilised by Private Placement

(In per cent)

Sector	2002-03	2003-04
Financial	50	67
Power	16	17
Water Resources	3	5
Telecommunications	1	1
Others	30	10
Total	**100**	**100**

Source: Prime Database.

The maturity profile of issues in the private placement market ranged between 12 months to 180 months during 2003-04. The largest number of placements was for 36 months and 120 months. A total of 65 offers had a put option, while 69 offers had a call option.

Unlike public issues of bonds, it is not mandatory for corporates issuing bonds in the private placement market to obtain and disclose credit rating from an approved credit rating agency. Rating is, however, required for listing. Of the 364 debt private placement deals during 2003-04, 328 issues (90%) went for rating and 36 did not get rated.

Private placement accounted for 68.6% of total resources mobilised by the corporate sector from the primary market (Table 2-10). The corresponding share of public issues was a meager 25.3%.

Table 2-10: Resources Raised by Corporate Sector

(Amount in Rs. mn.)

Year	Public Equity Issues	Debt Issues: Public Issues	Debt Issues: Private Place-ments*	Debt Issues: Total (3+4)	Total Resource Mobilisation (2+5)	Share (%) of Private placement: Total Debt (4/5*100)	Share (%) of Private placement: Total Resource Mobilisation (4/6*100)	Share (%) of Debt in Total Resource Mobilisation (5/6*100)
1	2	3	4	5	6	7	8	9
1995-96	88,820	29,400	100,350	129,750	218,570	77.34	45.91	59.36
1996-97	46,710	69,770	183,910	253,680	300,390	72.50	61.22	84.45
1997-98	11,320	19,290	309,830	329,120	340,450	94.14	91.01	96.67
1998-99	5,040	74,070	387,480	461,550	466,580	83.95	83.05	98.92
1999-00	29,750	46,980	547,010	593,990	623,740	92.09	87.70	95.23
2000-01	24,790	41,390	524,335	565,725	590,520	92.68	88.79	95.80
2001-02	10,820	53,410	462,200	515,610	526,430	89.64	87.80	97.94
2002-03	10,390	46,930	484,236	531,166	541,556	91.16	89.42	98.08
2003-04	178,210	43,240	484,279	527,519	705,729	91.80	68.62	74.75

*Data from 2000-01 onwards include only issues with a tenor and put/call option of 1 year or more, while data for earlier years include all privately placed debt issues irrespective of tenor.
Source: Prime Database.

Corporate Debt

During 2003-04, the corporates raised a total of Rs. 527,519 million through debt issues, of which Rs. 484,279 million through private placement and Rs. 43,240 million through public issues. The privately placed debt issues make up a bulk of total debt issuances by accounting for 91.8%. The share of debt in total collection had been increasing consistently over the years but witnessed a reversal in the trend and stood at 74.8% in 2003-04 (Table 2-10).

International Scenario

The much talked about 'Google IPO' has made a history in the international primary market by auctioning the securities to the retail investors and keeping investment bankers out of the whole process. Nevertheless, there were few such instances before, but they were unable to attract the investors community so significantly. Though, Google faced with criticism from all quarters, its IPO managed to pull through successful, this is expected to rewrite IPO rules in the US.

Most of the exchanges world-wide have indicated an increase in the capital raised in the year 2003 as compared with the previous year. Annexure 2-2 indicates region-wise mobilisation through IPO and capital increased by already listed companies.

Annexure 2-1: Details of Private Placement Issues by NSE-listed Companies during the period April 1, 2003 to March 31, 2004 and listed on the Capital Market segment of the Exchange

Sl. No.	Name of Company	Number of Securities	Funds Raised (Rs. lakh)	Face Value (Rs.)	Issue Price (Rs.)	Close Price as end-March 2004 (Rs.)
1.	Aurobindo Pharma Ltd.	1,050,000	2,373	10	226.00	374.6
2.	Usha Beltron Ltd.	5,264,727	1,737	5	33.00	37.80
3.	Usha Beltron Ltd.	5,345,455	1,764	5	33.00	37.80
4.	The Dhampur Sugar Mills Ltd.	10,000,000	1,000	10	10.00	24.50
5.	Padmalaya Telefilms Ltd.	2,000,000	2,844	10	142.20	56.05
6.	UTI Bank Ltd.	38,362,834	16,400	10	42.75	148.65
7.	Nuchem Ltd.	2,067,130	207	10	10.00	1.95
8.	Arvind Mills Ltd.	146,033	22	10	15.00	45.55
9.	Arvind Mills Ltd.	63,949	10	10	15.00	45.55
10.	Arvind Mills Ltd.	7,776,489	1,166	10	15.00	45.55
11.	Arvind Mills Ltd.	1,551,796	233	10	15.00	45.55
12.	Arvind Mills Ltd.	7,350,000	1,103	10	15.00	45.55
13.	Khandwala Securities Ltd.	120,000	26	10	22.00	9.05
14.	Strides Arcolab Ltd.	3,144,445	3,144	10	100.00	–
15.	Orchid Chemicals & Pharmaceuticals Ltd.	4,382,727	9,642	10	220.00	200.15
16.	Pantaloon Retail (India) Ltd.	865,000	433	10	50.00	288.65
17.	Jindal Vijayanagar Steel Ltd.**	279,034,907	27,903	10	10.00	8.20
18.	Shriram Transport Finance Co. Ltd.	6,243,000	749	10	12.00	–
19.	Strides Arcolab Ltd.	13,714,286	9,600	10	70.00	–
20.	Glenmark Pharmaceuticals Ltd.	8,185,570	5,000	2	61.08	143.70
		–	**85,356**	**–**	**–**	**–**

Source: NSE.

Note:

** indicates preference shares issued on preferential basis.

Annexure 2-2: Investment Flows Region-wise - New Capital Raised

(USD million)

Exchange	2003			2002		
	Capital Raised by New Shares	Capital Raised by Existing Shares	Total	Capital Raised by New Shares	Capital Raised by Existing Shares	Total
AMERICA						
Amex	23	3,589	**3,612**	20	1,949	**1,969**
Bermuda	NA	11	**11**	NA	16	**16**
Buenos Aures	0	349	**349**	0	173	**173**
Lima	0	397	**397**	0	290	**290**
Mexico	42	691	**732**	204	210	**414**
Nasdaq	6,365	NA	**6,365**	4,504	NA	**4,504**
NYSE	27,362	54,197	**81,559**	27,178	60,202	**87,381**
Santiago	2,573	0	**2,573**	0	152	**152**
Sao Paulo	0	1,955	**1,955**	130	5,114	**5,244**
TSX Group	8,465	9,439	**17,904**	5,808	8,646	**14,454**
Total Region			**115,458**			**114,596**
EUROPE - AFRICA - MIDDLE EAST						
Athens	69	2,113	**2,182**	87	1,736	**1,824**
Borsa Italiana	11,356	3,021	**14,377**	4,364	1,881	**6,245**
Budapest	66	1	**67**	0	3	**3**
Copenhagen	160	0	**160**	601	199	**800**
Deutsche Borse	0	0	**0**	203	0	**203**
Euronext	682	50,480	**51,162**	3,501	32,454	**35,955**
Helsinki	0	83	**83**	0	443	**443**
Irish	673	179	**852**	1,510	39	**1,549**
Istanbul	12	497	**510**	739	404	**1,144**
JSE South Africa	525	2,522	**3,047**	0	9,806	**9,806**
Ljubljana	41	0	**41**	116	0	**116**
London	7,591	22,624	**30,216**	8,093	26,310	**34,403**
Luxembourg	241	2,030	**2,271**	405	1,792	**2,196**
Malta	4	N.A.	**4**	98	NA	**98**
Oslo	834	52	**886**	685	27	**712**
Spanish Exchanges (BME)	12,439	5,371	**17,809**	16,001	5,389	**21,390**
Stockholm	NA	NA	**NA**	NA	NA	**NA**
Swiss Exchange	0	NA	**0**	7	NA	**7**
Tehran	242	675	**917**	38	505	**543**
Tel Aviv	32	703	**735**	15	1,184	**1,199**
Warsaw	0	379	**379**	2	139	**141**
Wiener Borse	1,701	1,078	**2,779**	1,085	51	**1,137**
Total Region			**128,475**			**119,913**

(Contd.)

Annexure 2-2: Investment Flows Region-wise - New Capital Raised (Contd.)

(USD million)

Exchange	2003			2002		
	Capital Raised by New Shares	Capital Raised by Existing Shares	Total	Capital Raised by New Shares	Capital Raised by Existing Shares	Total
ASIA - PACIFIC						
Australian	6,013	16,824	**22,837**	2,880	9,430	**12,310**
Colombo	11	102	**112**	1	10	**11**
HongKong	7,598	19,855	**27,454**	6,665	7,504	**14,169**
Jakarta	1,110	532	**1,642**	121	802	**923**
Korea	612	0	**612**	5,009	1,040	**6,049**
Kuala Lumpur	823	953	**1,776**	1,835	1,550	**3,385**
Mumbai	2,917	0	**2,917**	2,269	83	**2,352**
National Stock Echange of India	2,420	5,192	**7,612**	2,936	1,752	**4,688**
New Zealand	384	1,002	**1,386**	665	703	**1,367**
Osaka	39	4,934	**4,973**	28	2,242	**2,269**
Philipine	3	28	**32**	77	709	**786**
Shanghai	5,479	1,298	**6,777**	6,246	802	**7,048**
Shenzhen	616	438	**1,054**	1,207	307	**1,514**
Singapore	1,087	200	**1,286**	434	885	**1,319**
Taiwan	3,456	5,150	**8,606**	1,316	11,931	**13,247**
Thailand	NA	NA	**NA**	NA	NA	**NA**
Tokyo	NA	29,006	**29,006**	NA	15,749	**15,749**
Total Region			**89,075**			**71,437**

Source: WFE Annual Report & Statistics 2003.

Collective Investment Vehicles

The International Organization of Securities Commission (IOSCO) has, in its Report on Investment Management of the Technical Committee, defined the Collective Investment Schemes, as "an open ended collective investment scheme that issues redeemable units and invests primarily in transferable securities or money market instruments". In India, these collective investment schemes are known as collective investment vehicles (CIVs). There are three distinct categories of CIVs, namely, Mutual Funds (MFs), Collective Investment Schemes (CIS) and Venture Capital Funds (VCFs). The developments in the year 2003-04 with respect to the above three different CIVs are discussed in this chapter.

Mutual Funds

Of the three categories of CIVs, Mutual Funds (MFs) are more popular among investors and are able to mobilize huge amounts of resources. They pool the savings of different investors together by issuing 'units' and invest them into specific securities (usually stocks or bonds) with a predetermined investment objective. Hence, for an investor, investments in MF imply buying shares (or portions) of the MF and becoming the shareholders of the fund.

The Unit Trust of India (UTI) was the first MF in India set up in 1964. However, with the entry of the private sector players, the MF industry has expanded. As of end March 2004, 37 mutual funds are registered with SEBI with an asset base of Rs. 1,396,160 million. The MF industry has become very popular over the years, particularly, among the households, as investing in MFs is perceived to be less cumbersome than in equities. As a result, the number of households owning units of MFs exceeds the number of households owning equities and debentures.

In recent years, the MF schemes have diversified considerably thus expanding the basket of investment opportunities to suit the different needs of the investors. There are schemes that invest only in equities or in debt instruments or in both. The objectives of the MFs have also widened, with MFs investing in growth stocks, in stocks of a particular sector. The MFs are managed aggressively as well as passively. Thus, investors have a variety of options such as income funds, balanced funds, liquid funds, gilt funds, index funds, exchange traded funds, sectoral funds, to deploy their savings.

Policy Developments

The policy and regulatory initiatives taken during the period April 2003-June 2004 are as discussed hereunder:

I. Union Budget, 2004-05

The Union Budget of 2004-05 proposed that the equity-oriented MFs should continue to be exempt from tax on dividends. The tax rate on corporate unit holders of debt-oriented MFs have been raised from 12.5% to 20%. However the tax rate remain unchanged at 12.5% for individuals and Hindu Undivided Family (HUF).

II. Investment by MFs

(i) The Government has decided to allow MFs to invest in equities of listed overseas companies. These overseas companies should have a shareholding of at least 10% in an Indian company listed on a recognized stock exchange in India (as on January 31 of the year of investment). The overall cap for the entire MFs industry to invest in ADRs/ GDRs, foreign equity and debt securities has been set at US$ 1 billion. Each MF individually is permitted to invest 10% of their net assets as on January 31 of each relevant year in foreign securities with the limit of a minimum of US$ 5 million and a maximum of US$ 50 million.

(ii) MFs are allowed to trade in interest rate derivatives listed on the stock exchanges.

(iii) In case of any scheme, if the MF is not been able to deploy funds in securities within the ambit of its investment objectives, then the MF is permitted to invest in short term deposits of any Scheduled Commercial Banks (SCBs). However, these investments have to be reported to the trustees along with the reasons, interalia, should include comparison with the interest rates offered by other SCBs.

III. Guidelines for MFs

SEBI issued the following guidelines in accordance with the provisions of Regulation 77 of the SEBI (Mutual Funds) Regulations, 1996:

(i) *Participation by MFs in Derivatives Trading:* Vide a circular dated February 6, 2004, SEBI issued the following guidelines for MFs, which they should adhere while trading in equity based derivatives. The 'hedging'/'portfolio balancing' should be clearly marked while initiating any derivatives position. At no point of time, the derivative position should result in actual or potential leverage or short sale/short position on any underlying security. In short all derivative positions should be backed by cash or stock (stocks portfolio for index derivatives) as the case may be at the time of exposure. Each MF should have a maximum derivative net position of 50% of the portfolio (i.e. net assets including cash). The maximum net derivatives exposure in terms of percentage of the portfolio value should be decided in advance by the Board of trustees. Within the overall limits of a maximum derivatives net position of 50% of the portfolio (i.e. net assets including cash), the limits on individual scrip/instrument have to be specified.

The MFs can hold different positions involving multiple derivatives positions on the same underlying. With regards to disclosure and accounting norms, each MF has to disclose the maximum net derivatives exposure in terms of the percentage of portfolio value, the limits on derivatives exposure per scrip/instrument. The data on actual exposures has to be disclosed in the half yearly portfolio statements. While calculating the industry exposure on monthly basis, the total exposure per scrip including derivatives exposure has to be considered. Gap reporting/Calendar spread analysis of all derivative positions should be reported internally on a weekly basis to a committee, which should be appointed by the Board of Trustees.

(ii) *Consolidation of Schemes:* SEBI in its circular dated June 23, 2003 clarified that any consolidation of MF schemes should be viewed as changes in fundamental attributes of the related schemes. In case of consolidation the MFs have to comply with the requirements laid down in the SEBI (Mutual Funds) Regulations, 1996. Further, the MFs are required to take the following steps: (a) the proposal and modalities of the merger/consolidation of schemes should be approved by the Boards of the AMC and Trustees in harmony with the interests of the unit holders of all concerned schemes; (b) pursuant to the approval, the MFs should file the proposals with SEBI, along with the draft offer document and requisite fees, in case a new scheme emerges after merger/consolidation. In addition, a draft letter has to be sent to all the unit holders, giving them an option to exit at prevailing NAV without exit load. To enable the investors to take well informed decisions, all relevant information such as the investment objective, asset allocation, percentage of total NPAs and percentage of total illiquid assets to net assets of individual schemes as well as consolidated schemes should be disclosed. In addition the main features of the new consolidated scheme, basis of allocation of new units by way of a numerical illustration and tax impact of the consolidation of schemes among others, should be disseminated. (c) The AMCs should maintain records of dispatch of the letters to the unit holders giving them an option to exit at prevailing NAVs and also the responses received from them.

(iii) *Advertisements by MFs:* To improve the standards of disclosures in advertisements, SEBI issued guidelines which include: (a) the MFs are mandated to carry only the statement "*Mutual Fund investments are subject to market risks, read the offer document carefully before investing*" along with advertisement, given the limited time available to the investors while passing by for reading the advertisements through hoardings/posters. Likewise, in the audio-visual media like television, a statement "*Mutual Fund investments are subject to market risks, read the offer document carefully before investing*" should be displayed on the screen for at least a period of 2 seconds, that too, in a clearly legible font-size covering at least 80% of the total screen space and accompanied by a voice over-reiteration. The remaining 20% space can be used for the name of the MF or logo or name of scheme, among others. Further, the MFs, while advertising schemes having very short investment horizons (in cash/liquid/money market), should display the simple annualized returns. The return will be based on 15 days period along with the normal annualized return based on 30 days period. In case the distribution taxes are excluded while calculating the returns, the same needs to be disclosed. While advertising pay-out dividends, it should be clearly stated that after the payment, the NAV will fall to the extent of the payout and distribution taxes (if applicable). (b) Widening the definition of sales literature to include fund fact sheets, research reports, newsletters, performance reports or summaries, telemarketing scripts, seminars texts, press releases and reprints etc. (c) the types of benchmark indices that can be used in performance advertisements should be disclosed in the offer documents. The half-yearly results should include a comparison of the returns with the benchmarks used.

(iv) *Uniform cut-off timings for applicability of NAV:* SEBI has directed the MFs to adopt uniform cut-off timings for applying NAVs both for subscriptions and redemptions. This is applicable to all schemes/plans whether existing or new, barring the international funds and transaction in units of MFs undertaken through the stock exchanges.

MF Scheme(s)/Plan(s): In case of purchases/redemptions, valid applications received up to 3 p.m. along with the local cheque or demand draft payable at par at the place where it is received, the closing NAV of the day should be applicable. But, in case of applications received after 3 p.m., the closing NAV of the next business day is applicable. If the outstation cheques/demand drafts not payable at par at the place where the application is received, then closing NAV of the day on which cheque/demand draft is credited should be applicable.

MF-Liquid Fund Scheme(s)/Plan(s): With respect to purchases, the closing NAV of the day immediately previous to the day on which funds are available for utilization should be applicable. However, in respect of applications received after 1 p.m. and if the funds are available for utilization on the same day, then the closing NAV of the same day should be applied. In case of redemptions, applications received up to 10 a.m., the NAV of the closing day is to be applied. In case of applications received after 10 a.m., the same days closing NAV should be applicable.

Applications for "switch out" and "switch in" should be treated as redemptions and purchases, respectively.

(v) *Investment/Trading in Securities by Employees of AMCs and MF Trustee Companies:* Any employee/person of the AMC willing to carry out a transaction of sale/purchase of a security has to take a prior approval from there compliance officer. The validity of the approval is to be for a week in tandem with the SEBI (Insider Trading) Regulations. The employees, hence, should refrain from transacting in any security within a period of 30 days from the date of personal transaction.

(vi) *Minimum Number of Investors in Schemes/Plans of MFs:* In consultation with Association of Mutual Funds in India (AMFI), SEBI issued guidelines stipulating the minimum number of investors in each MF schemes. Each scheme/individual plan(s) is required to have a minimum of 20 investors and no single investor should account for more than 25% of the corpus of such scheme/plan(s). This disclosure has to be made in the offer document to be filed with SEBI. In case of non-fulfillment of the aforementioned guidelines for open ended schemes, a grace period of 3 month or the end of the quarter whichever is earlier, from the close of IPO is given to balance and to ensure compliance. If the MF fails to comply, then the scheme is to be wound off. For Fixed Maturity Plans (FMPs) and Close Ended Schemes no such grace period is given. These guidelines, however, are not applicable to Exchange Traded Funds (ETFs). In case of existing open ended schemes/plans, the same conditions are required to be complied with as soon as possible and not later than December 31, 2004. However, for close ended schemes, FMPs and ETFs already in existence, the guidelines are not applicable considering the nature of the schemes/plans and in the interest of the investors.

(vii) *Role of CEO/Fund Managers:* The Chief Executive Officer (CEO) of the AMC has to ensure that the mutual fund complies with all the SEBI (MF) Regulations, guidelines and circulars issued hereto. Further, he should also make sure that the investments made by the fund managers are in the interest of the unit-holders and are designed to achieve the objectives of the scheme. Hence, he is responsible for the overall risk management function of the MF.

(viii) *Fund of Funds:* Fund of Funds (FoFs) is a financial instrument that invests in other MF schemes rather than in securities. However, a FoFs scheme is not permitted to invest in any other FoFs scheme, nor in any other assets than the schemes of MFs, except to meet the liquidity requirements for the purpose of repurchases or redemptions.

(ix) *Certification:* To foster professional standards in the operations of MFs, AMFI in association with the NSE, has developed a self-study and testing/certification programme for the employees and distributors of MFs. Further, AMFI in consultation with the SEBI, had made it mandatory to all existing personnel of MFs/AMCs, who are engaged in sales, marketing and employees to complete the certification process by September 2004. However, the existing employees above the age of 50 are exempted, but, are required to attend a refresher course organized by AMFI. They should submit a certificate to their employers by September 2004. After the September 2004, the MFs/AMCs have to necessarily engage/employ certified personnel only.

(x) *Quoting of Bank Account Number and PAN by investors:* SEBI has made it mandatory for the investors in MF schemes to mention their bank account numbers in their applications/ requests for redemption. Additionally, wherever an application is for a total of Rs. 50,000 or more, the applicant or in the case of joint applications, each of the applicants, should mention his/her Permanent Account Number (PAN) allotted under IT Act, 1961. If the PAN has not been allotted, then the GIR number and the income-tax circle/ward/district should be mentioned. In cases where neither the PAN nor the GIR numbers have been allotted, the fact of non-allotment should be mentioned in the application form.

Market Design

The MF industry is governed by SEBI (MF) Regulations, 1996, which lays the norms for the MF and its AMC. All MFs in India are constituted as trusts and are allowed to issue open-ended and close-ended schemes under a common legal structure. This section throws light on the market design of the MFs in India.

Structure of MFs

A typical MF in India has the following constituents:

Fund Sponsor: A 'sponsor' is a person who, acting alone or in combination with another corporate body, establishes a MF. In order to register with Sebi as a MF, the sponsor should have a sound financial track record of over five years and general reputation of fairness and integrity in all his business transaction. Following its registration, in accordance with SEBI Regulations, the sponsor forms a trust, appoints a Board of Trustees and an AMC as a fund manager. Further, a custodian is appointed to carry out the custodial services for the schemes of the fund. The sponsor should contribute at least 40% of the net worth of the AMC.

Mutual Fund: A MF is established in the form of a trust under the Indian Trusts Act, 1882. The instrument of trust is executed by the sponsor in favour of trustees and is registered under the Indian Registration Act, 1908. The investor subscribes to the units issued by the MFs. The resources raised are pooled under various schemes established by the trust. These assets are held by the trustee for the benefit of unit holders. Under the Indian Trusts Act, only the trustee(s) has an independent legal capacity.

Trustees: The MF can either be managed by the Board of Trustees, which is a body of individuals, or by a Trust Company, which is a corporate body. Most of the funds in India are managed by a Board of Trustees. The trustees are appointed with the approval of SEBI. Two thirds of trustees are independent persons and are not associated with sponsors. The trustees, being the primary guardians of the unit holders' funds and assets, have to be persons of high repute and integrity. The Trustees, however, do not directly manage the portfolio of MF. It is managed by the AMC as per the defined objectives, in accordance with trust deed and SEBI (MF) Regulations.

Asset Management Company: The AMC, appointed by the sponsor or the Trustees and approved by SEBI, acts like the investment manager of the Trust. The AMC should have at least a net worth of Rs. 10 crore. It functions under the supervision of its Board of Directors, Trustees and the SEBI. In the name of the Trust, AMC floats and manages different investment 'schemes' as per the SEBI Regulations and the Investment Management agreement signed with the Trustees. The regulations require non-interfering relationship between the fund sponsors, trustees, custodians and AMC.

Apart from these, the MF has some other constituents, such as, custodians and depositories, banks, transfer agents and distributors. A custodian is appointed for safe keeping the securities and participating in the clearing system through approved depository. The bankers handle the financial dealings of the fund. Transfer agents are responsible for issue and redemption of the units. The AMC appoints distributors or brokers to sell units on behalf of the Fund, who also serve as investment advisers. Besides brokers, independent individuals are also appointed as 'agents' to market the schemes to the investors.

Types of MFs/Schemes

A wide variety of MFs/Schemes cater to different preferences of the investors based on their financial position, risk tolerance and return expectations. The MF Schemes can be broadly categorized under three headings, *viz.*, Funds by structure e.g. open ended and close ended schemes; Funds by investment objective e.g. growth schemes, income schemes, balanced schemes, money market schemes and lastly other schemes e.g. tax saving schemes, index schemes and sector specific schemes.

An open-ended fund provides the investors with an easy entry and exit option at NAV, which is declared on a daily basis. While, in close-ended funds, the investors have to wait till maturity to redeem their units, however, an entry and exit is provided through mandatory listing of units on a stock exchange. The listing is to be done within six months of the close of the subscription. Assured return schemes, is a scheme that assures a specific return to the unit holders irrespective of performance of the scheme, which are fully guaranteed either by the sponsor or AMC.

Growth/Equity Oriented Schemes provide capital appreciation over medium to long-term by investing a major part of their corpus in equities. Income/Debt Oriented Schemes provide regular and steady income to investors by investing in fixed income securities such as bonds, corporate debentures, government securities and money market instruments. Hence, they are less risky compared to equity schemes. Balanced Funds provide both growth and regular income as they invest both in equities and fixed income securities in the specified proportion as indicated in their offer documents. Money Market or Liquid Funds provide easy liquidity and preserves capital, but generates moderate income. As they invest exclusively in safer short-term instruments such as, treasury bills, certificates of deposit, commercial paper, inter-bank call money, and government securities. Index Funds replicate the portfolio of any particular index such as the S&P CNX Nifty by investing in the same securities with the same weightage as in the index. The exchange traded index funds, as the name suggests, are traded on the stock exchanges. Then, there are funds/schemes that invest in shares of specific sectors or industries such as Pharmaceuticals, Software, Fast Moving Consumer Goods (FMCG), Petroleum stocks. Some of the examples of them are UTI Software Fund, Pioneer ITI Internet Opportunities Fund, etc. As they are sectors or industries specific, the returns on these funds are dependent on the performance of the respective sectors/industries.

Regulation of Funds

The MFs are regulated under the SEBI (MF) Regulations, 1996. All the MFs have to be registered with SEBI. The regulations have laid down a detailed procedure for launching of schemes, disclosures in the offer document, advertisements, listing and repurchase of close-ended schemes, offer period, transfer of units, investments, among others. Further, the regulations also specify the qualifications, eligibility criteria for the sponsor of a fund, the directors and the AMC, the contents of Trust Deed, rights and, obligations of Trustees, appointments and restrictions on business activities.

In addition, RBI also supervises the operations of bank-owned MFs. While SEBI regulates all market related and investor related activities of the bank/FI-owned funds, any issues concerning the ownership of the AMCs by banks falls under the regulatory ambit of the RBI.

Further, as the MFs, AMCs and corporate trustees are registered as companies under the Companies Act, 1956, they have to comply with the provisions of the Companies Act.

Many close-ended schemes of the MFs are listed on one or more stock exchanges. Such schemes are, therefore, subject to the regulations of the concerned stock exchange(s) through the listing agreement between the fund and the stock exchange.

MFs, being Public Trusts are governed by the Indian Trust Act, 1882, are accountable to the office of the Public Trustee, which in turn reports to the Charity Commissioner, that enforces provisions of the Indian Trusts Act.

Investment Restrictions

Investment policies of each scheme are dictated by the investment objective stated in the offer document and by the restrictions imposed by SEBI. In case of investments in money market instruments, they have to be in accordance with RBI directives. Hence, the MFs can invest only in transferable securities in the money or the capital market or in privately placed debentures or securitized debts. Investment by a MF is subject to following restrictions:

i. A MF is not permitted to invest more than 15% of its NAV in debt instruments issued by a single issuer. The instruments should be rated not below investment grade by an authorized credit rating agency. However, the limit may be extended to 20% of the NAV of the scheme with the prior approval of the Board of Trustees and the Board of the AMC. This limit is not applicable for investments in government securities and money market instruments. Within the given limit, investments in at least investment grade mortgaged backed securitized debt can be made.

ii. MF schemes are not allowed to invest more than 10% of their NAV in unrated debt instruments issued by a single issuer. In addition the total investment in such instruments should not exceed 25% of the NAV of the scheme. All such investments should be made with the prior approval of the Board of Trustees and the Board of AMC.

iii. No MF under all its schemes should own more than 10% of any company's paid up capital.

iv. A scheme may invest in any other scheme under the same AMC or any other MF without charging any fees. However the aggregate inter scheme investment made by all schemes under the same AMC or in schemes under the management of any other AMC should not exceed 5% of the NAV of the MF. However, this is not applicable for any fund of funds scheme.

v. The initial issue expenses in any scheme should not exceed six per cent of the funds raised under that scheme.

vi. No MF is to make any investments in any unlisted or listed securities of an associate or group company of the sponsor in excess of 25% of the net assets or any security issued by way of private placement.

vii. MFs should not invest more than 10% of their NAV in the equity shares or equity related instruments of any company. This limit, however, is not applicable for investments in case of index funds or sector or industry specific schemes.

viii. Investments in the unlisted equity shares or equity related instruments are capped at not more than 5% of its NAV in case of open ended scheme and 10% in case of close ended scheme.

ix. Each buy and sell transactions carried out by MFs should necessarily be delivery based. It should not in any case short sell the securities or carry forward transactions or engage in badla finance. Nevertheless, MFs are permitted to enter into derivatives transactions on a recognized stock exchange for the purpose of hedging and portfolio balancing.

Disclosure of Performance

A MF has to compute net asset value (NAV) for each scheme by dividing the net assets of the scheme by the number of outstanding units as on the valuation date. The NAV reflects the performance of a scheme. The NAV is to be disseminated on daily basis in case of open ended schemes and on weekly basis in case of close ended schemes. Apart from publishing NAVs in newspapers and the web sites of respective MFs, all MFs are required to put their daily NAVs on the website of AMFI, so that the investors can access NAVs of all the MFs at one place.

Along with the NAV, sale and repurchase prices are also to be disseminated. The repurchase price should not be lower than 93% of the NAV and sale price should not be higher than 107% of NAV. The repurchase price of a close ended scheme should, however, not be less than 95% of NAV. The difference between repurchase and sale price should not exceed 7% of the sale price.

The MFs are required to publish their performance in the form of half-yearly results, which should include their returns/yields over a period of time i.e. last six months, 1 year, 3 years, 5 years and at the inception of the schemes. The MFs are required to send annual report or abridged annual report to all the unit holders at the end of the year but not later than six months from the date of closure of the relevant accounts year.

Code of Conduct

The MF regulations include codes of conduct for the MFs and AMCs, their employees and intermediaries. They are as follows:

i. Trustees and AMCs must maintain high standards of integrity and fairness in all their dealings and in the conduct of their business. They must keep the interest of all unit holders paramount in all matters.

ii. The sponsor of the MF, the trustees or the AMC or any of their employees should not render, directly or indirectly any investment advice about any security in the publicly accessible media, whether on real-time or non real-time basis. However, while rendering such advice, a disclosure of his interest including long or short position in the said security should be made.

iii. MF schemes should not be organized, operated, managed or the portfolio of securities selected, in the interest of sponsors, directors of AMCs, members of Board of trustees or directors of Trustee Company, associated persons.

iv. Trustees and AMCs have to ensure that the dissemination of adequate, accurate, explicit and timely information about the investment policies, investment objectives, financial position and general affairs of the scheme is made to all the unit holders.

v. Excessive concentration of business with few broking firms, affiliates and also excessive holding of units in a scheme among a few investors should be avoided by the Trustees and AMCs.

vi. Trustees and AMCs should also avoid conflicts of interest in managing the affairs of the schemes and the interest of all the unit holders should govern all their activities. The investments should be made in accordance with the objectives stated in the offer documents. They should not indulge in any unethical means to sell securities or induce any investor to buy their schemes.

vii. It is expected that the Trustees and AMCs should render at all times high standards of services, exercise due diligence, ensure proper care and exercise independent professional judgment.

viii. The AMC should not make any exaggerated statement, whether oral or written, either about their qualifications or capability to render investment management services or their achievements.

Advertisements Code by MFs

As per the MF regulations, advertisements should be truthful, fair and clear, and not contain any statement/promise/forecast, which is untrue or misleading. The sales literature should also contain information, which is included in the current advertisement. Assuming that the investors are not trained in legal or financial matters, it should be ensured that the advertisement is set forth in a clear, concise and understandable manner. Excessive use of technical/legal jargons or complex language, inclusion or exclusion of excessive details, which is likely to detract the investors, should be avoided. Also, standardized computations such as annual dividend on face value, annual yield on the purchase price and annual compounded rate of return should be used.

Market Outcome

Resource Mobilisation

MFs are quite popular among the investors, who are wary of investing directly in the equities. The popularity of the MFs as an investment avenue is clearly visible from Table 3-1. The resources mobilized by MFs have remained steady during the period 1992-95 with annual gross mobilisation averaging Rs. 110,000 million during the period. Owing to the bearish secondary market conditions, the MFs were adversely affected in 1995-96 and 1996-97. However, in the subsequent two financial years, MFs were able to mobilise modest amounts. It was only in 1999-00 that the MF witnessed a sharp turnaround, with a record mobilisation of Rs. 199,530 million. This was due to the tax sops announced in the Union Budget 1999-00, which was also supported by the bullish trends in the equities and debt market. The year 2000-01 again witnessed a slowdown with net mobilisation falling to Rs. 71,370 million, as the secondary market turned bearish and the tax rate on income distributed by debt-oriented MFs was increased. In 2002-03, the mobilization fell to a further low of Rs. 45,800 million, with UTI having a net outflow of Rs. 94,340 million. However, the year 2003-04 witnessed a sharp rise in the net mobilization to Rs. 476,840 million, as there have been bullish sentiments in equity market and buoyancy in debt market.

During 2003-04, the number of registered MF with the SEBI stood at 37. As against 53 schemes in the year 2002-03, 46 new schemes were launched in 2003-04, of which 44 were open-ended and 2 close-ended schemes. This took the total number of schemes as at end-March 2004 to 403 against 382 as at end-March 2003. Aggregate sales of all the 403 schemes amounted to Rs. 5,901,900 million registering an increase of 88% over last year and the redemptions during the year were at Rs. 5,433,810 million an increase of 80% over

Table 3-1: Resource Mobilisation by Mutual Funds

(Rs. mn.)

Year	Public Sector MFs			Private	Grand Total
	Bank sponsored	FI sponsored	UTI	Sector MFs	
1990-91	23,520	6,040	45,530	—	75,090
1991-92	21,400	4,270	86,850	—	112,520
1992-93	12,040	7,600	110,570	—	130,210
1993-94	1,480	2,390	92,970	15,600	112,440
1994-95	7,650	5,760	86,110	13,220	112,740
1995-96	1,130	2,350	-63,140	1,330	-58,330
1996-97	60	1,370	-30,430	8,640	-20,360
1997-98	2,370	2,030	28,750	7,490	40,640
1998-99	2,310	6,910	1,700	25,190	36,110
1999-00	1,560	3,570	45,480	148,920	199,530
2000-01	— 15,200 —		3,220	92,920	111,350
2001-02	— 14,740 —		-72,840	129,470	71,370
2002-03	— 18,950 —		-94,340	121,220	45,830
2003-04	— 37,610 —		10,500*	428,730	476,840

* Data for 2003-04 relate to UTI Mutual Fund for the period February 01, 2003 to March 31, 2004.
Source: RBI.

the previous year. After adjustment of sale and purchases, there was an inflow of funds of Rs. 468,090 million during 2003-04 (Table 3-2).

Public sector MFs (including UTI) made gross mobilisation of Rs. 685,580 million accounting for about 11.62% of total resource mobilisation by MFs during 2003-04. In net terms, the public sector MFs witnessed an inflow of Rs. 55,790 million during 2003-04 as against Rs. 17,840 million during the preceding year. The private sector MFs accounted for the bulk of the mobilization, by raising about 88.4% of gross resources mobilised by MF industry during 2003-04.

The share of open-ended schemes in total funds raised by MFs registered a marginal decline to 99.54% in 2003-04 as compared to 99.85% in 2002-03. No new assured return schemes were launched in 2003-04. The share of close ended schemes, on the other hand, had a slight increase from 0.14% during 2002-03 to 0.46% during 2003-04. The open ended and close ended schemes together registered a net inflow of Rs. 460,340 million and Rs. 7,850 million in 2003-04, respectively. On the other hand, the assured return schemes registered outflows to the tune of Rs. 100 million (Table 3-3a).

Table 3-2: Accretion of Funds with Mutual Funds

(Rs. mn.)

Category	2002-03			2003-04			Management at the end of	
	Sale	Purchase	Net	Sale	Purchase	Net	March-03	March-04
A Public Sector (i+ii+iii)	**356,870**	**339,030**	**17,840**	**685,580**	**629,790**	**55,790**	**239,420**	**346,240**
i. Unit Trust of India	70,620	72,460	-1,840	—	—	—	135,160 [a]	—
ii. Bank Sponsored	110,900	105,360	5,540	466,610	431,830	34,780	44,910	280,850
iii. Institution Sponsored	175,350	161,210	14,140	218,970	197,960	21,010	59,350	65,390
B Private Sector (i+ii+iii+iv)	**2,789,860**	**2,673,220**	**116,640**	**5,216,320**	**4,804,020**	**412,300**	**555,220**	**1,049,920**
i. Indian	833,510	793,410	40,100	1,430,500	1,331,310	99,190	101,800	198,850
ii. Joint Ventures - Predominately Indian	715,130	683,330	31,800	1,405,450	1,272,800	132,650	154,590	331,430
iii. Joint Ventures - Predominately Foreign	1,241,220	1,196,480	44,740	2,169,480	2,007,430	162,050	298,830	483,310
iv. Foreign	—	—	—	210,890	192,480	18,410	—	36,330
Grand Total (A+B)	**3,146,730**	**3,012,250**	**134,480**	**5,901,900**	**5,433,810**	**468,090**	**794,640[a]**	**1,396,160**

Source: AMFI Updates.

Note: A Erstwhile UTI has been bifurcated into UTI Mutual Fund and the Specified Undertaking of the Unit Trust of India effective February 2003 and hence the data pertaining to the Specified Undertaking of the Unit Trust of India under the Assets under management for the period April 2002 to March 2003 are not included in the table presented above.

Table 3-3a: Scheme-wise Resource Mobilisation by Mutual Funds

(Rs. mn.)

Scheme	2002-03		2003-04	
	Sale	Purchase	Sale	Purchase
Open-ended	3,142,060	3,006,460	5,874,800	5,414,460
Close-ended	4,670	5,190	27,100	19,250
Assured Return	—	600	—	100
Total	**3,146,730**	**3,012,250**	**5,901,900**	**5,433,810**

Source: AMFI Updates

With the decline in interest rates during past few years, the liquid/money market schemes have become very popular among investors due to the attractive returns delivered by them. They have accounted for almost two-thirds of the total resources mobilized. The sale as well as repurchase has been very high in case of these schemes, resulting in a net inflow of Rs. 245,770 million during the year. However, the balanced schemes and the ELSS schemes have witnessed outflows to the extent of Rs. 131 million and Rs. 4,661 million, respectively during 2003-04. The income schemes raised about 29.3% of resources mobilising Rs. 1,729,390 million during 2003-04 (Table 3-3b).

Table 3-3b: Scheme-wise Resource Mobilisation by Mutual Funds

(Rs. mn.)

Scheme	2002-03		2003-04	
	Sale	Purchase	Sale	Purchase
Income	1,094,230	1,004,080	1,729,390	1,601,440
Growth	46,180	39,170	266,420	189,580
Balanced	3,610	7,560	25,230	25,360
Liquid/Money Market	1,950,470	1,900,420	3,756,460	3,510,690
Gilt	52,020	58,920	123,870	101,550
ELSS	220	2,100	530	5,190
Total	**3,146,730**	**3,012,250**	**5,901,900**	**5,433,810**

Source: AMFI Updates.

Assets under Management

As on March 31, 2004, the MFs have managed assets of Rs. 1,396,160 million. As shown in Table 3-2, the share of private sector MFs in total assets managed increased from 69.8% as at end-March 2003 to 75% as at end-March 2004 (Chart 3-1). During the year the assets under management of the private sector MFs increased by Rs. 494,700 million amounting to an aggregate of Rs. 1,049,920 million.

The open ended schemes and the close ended schemes as at end-March 2004 accounted for 96.35% and 3.65% of total assets under management of MFs, respectively (Table 3-4).

The income schemes accounted for 44.8% of total assets under management of MFs as at end-March 2004, followed by liquid/money market schemes with 29.9%. The growth

Table 3-4: Assets under Management as at end March, 2004

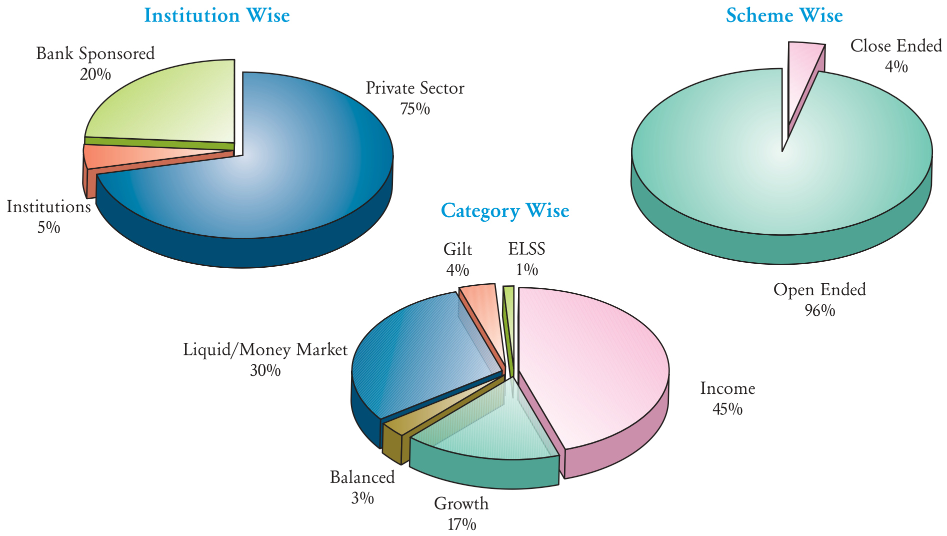
(Rs. mn.)

Scheme	Open Ended	Close Ended	Assured Returns	Total
Income	608,540	16,700	—	625,240
Growth	221,540	14,590	—	236,130
Balanced	32,960	7,840	—	40,800
Liquid/Money Market	417,040	—	—	417,040
Gilt	60,260	—	—	60,260
ELSS	4,890	11,800	—	16,690
Total	**1,345,230**	**50,930**	**—**	**1,396,160**

Source: AMFI Updates.

schemes accounted for 16.9% of assets under management of MFs as at end-March 2004 (Chart 3-1).

Chart 3-1: Assets under Management at the end of March 2004



Index Funds

Index funds attempt to copy the performance of a stock market index such as Nifty or Sensex as closely as possible. This is done by investing in all the stocks that comprise the index in proportions equal to the weightage given to those stocks in the index. Unlike a typical MF, index funds do not actively trade stocks throughout the year. They may at times hold their stocks for the full year even if there are changes in the composition of index; this reduces transaction costs. Index funds are considered, particularly, appropriate for conservative long-term investors looking at moderate risk, moderate return arising out of a well-diversified portfolio. Since Index funds are passively managed, the bias of the fund managers in stock selection is reduced, yet providing returns at par with the index.

Some of the index funds based on S&P CNX Nifty are UTI Nifty Fund, Franklin India Index Fund and IDBI Principal Index Fund. Templeton launched the 'Franklin India Index Tax Fund' in February 2001, which has been the first tax saving index fund based on S&P CNX Nifty. There are a total of twelve funds based on S&P Nifty: Franklin India Index Fund, Franklin India Tax Index Fund, IDBI Principal Index Fund, UTI Nifty Fund, Magnum Index Fund, IL&FS Index Fund Nifty Plan, Prudential ICICI Index Fund Nifty Plan, HDFC Index Fund Nifty Plan, Birla Index Fund, LIC Index Fund, ING Vysya Nifty Plus Fund and Tata Index Fund (Table 3-5). The table shows that the index funds closely track their benchmark indices.

Table 3-5: Performance of Index Funds

Index Funds	Launch Date	Returns*			Base Index
		3 months	6 months	12 months	
Principal Index Fund	July 26, 1999	-29.71	-7.75	34.88	S&P CNX Nifty
Franklin India Index Tax Fund	February 26, 2001	-6.40	23.21	79.89	S&P CNX Nifty
Franklin India Index Fund	August 4, 2001	-6.04	23.58	80.04	S&P CNX Nifty
UTI Nifty Fund	March 27, 2000	-6.74	24.04	83.60	S&P CNX Nifty
UTI Master Index	June 29, 1998	-4.68	24.78	84.70	BSE Sensex
SBI Magnum Index Fund	December 1, 2001	-24.15	0.39	47.77	S&P CNX Nifty
IL&FS Index Fund	February 1, 2002	-6.66	-15.14	24.71	S&P CNX Nifty
Prudential ICICI Index Fund	February 1, 2002	-6.32	23.97	82.29	S&P CNX Nifty
HDFC Index Fund	July 1, 2002	-6.50	24.35	81.86	S&P CNX Nifty
Birla Index Fund	September 17, 2002	-19.25	-30.21	2.69	S&P CNX Nifty
LIC Index Fund	November 1, 2002	-18.20	8.37	-36.62	S&P CNX Nifty
Tata Index Fund	February 1, 2003	-18.64	-25.47	9.20	S&P CNX Nifty
ING Vysya Nifty Plus Fund	February 6, 2004	—	—	—	S&P CNX Nifty
S&P CNX Nifty	November 3, 1995	-5.74	25.04	81.14	—
BSE Sensex	January 2, 1986	-4.25	25.54	83.38	—

* Returns are calculated as on March 31, 2004

Exchange Traded Funds

An Exchange Traded Fund (ETF) is a type of Investment Company whose investment objective is to achieve similar returns as in case of a particular market index. An ETF is similar to an index fund, but the ETFs can invest in either all of the securities or a representative sample of securities included in the index. Importantly, the ETFs offer a one-stop exposure to a diversified basket of securities that can be traded in real time like an individual stock. ETFs first came into existence in USA in 1993. Some of the popular ETFs are: SPDRs (Spiders) based on the S&P 500 Index, QQQs (Cubes) based on the Nasdaq-100 Index, iSHARES based on MSCI Indices, TRAHK (Tracks) based on the Hang Seng Index and DIAMONDs based on Dow Jones Industrial Average (DJIA).

Like index funds, ETFs are also passively managed funds wherein subscription/redemption of units implies exchange with underlying securities. These being exchange traded, units can be bought and sold directly on the exchange, hence, cost of distribution is much lower and the reach is wider. These savings are passed on to the investors in the form of lower costs. The structure of ETFs is such that it protects long-term investors from inflows and outflows of short-term investor. ETFs are highly flexible and can be used as a tool for gaining instant exposure to the equity markets.

The first ETF in India, based on S&P CNX Nifty, was the Nifty Benchmark Exchange Traded Scheme (Nifty BeES). This was launched by Benchmark Mutual Fund in December 2001. It is bought and sold like any other stock on NSE. Over the past three years, few more ETFs have been introduced, they are: Junior Nifty BeES based on CNX Nifty Junior, S&P CNX Nifty UTI Depository Receipts Schemes (SUNDER) based on S&P CNX Nifty, Bank BeES (Banking Index Benchmark Exchange Traded Scheme) tracking the CNX Bank Index. Further the Benchmark Mutual Fund has launched a money market ETF in India which is incidentally the only money market ETF in the world. It is known as the Liquid BeES (Liquid Benchmark Exchange Traded Scheme). Prudential ICICI Mutual Fund also launched an ETF based on the BSE Sensex, SPICE (Sensex Prudential ICICI Exchange Traded Fund), trading for which has started on January 13, 2003.

A comparative view of ETFs vis-à-vis other funds are presented in the table below:

Parameter	Open-Ended Fund	Close-Ended Fund	Exchange Traded Fund
Fund Size	Flexible	Fixed	Flexible
NAV	Daily	Daily	Real time
Liquidity provider	Fund itself	Stock Market	Stock Market/Fund itself
Sale Price	At NAV plus load if any	Significant Premium/ Discount to NAV	Very close to actual NAV of scheme
Availability	Fund itself	Through Exchange where listed	Through Exchange where listed/fund itself
Portfolio Disclosures	Monthly	Monthly	Daily/Real time
Uses	Equitising Cash	—	Equitising cash, hedging, Arbitrage
Intra-day trading	Not Possible	Expensive	Possible at low cost

Collective Investment Schemes

A Collective Investment Scheme (CIS) is any scheme or arrangement made or offered by any company, which pools the contributions, or payments made by the investors, and deploy the same. Despite the similarity between the CIS and MF regarding the pooling of savings and issuing of securities, they differ in their investment objective. While MF invests exclusively in securities, CIS confine their investment to plantations and real estate. Any entity proposing to operate as a Collective Investment Management Company (CIMC) has to apply for registration with SEBI.

Guidelines under CIS Regulations

The SEBI (CIS) Regulations specifically state that, without obtaining a certificate of registration from SEBI, no entity can sponsor a CIS. The other regulations are as follows:

i. CIS should be floated as a public company registered under the provisions of the Companies Act, 1956 and the memorandum of association should specify management of CIS as one of its objectives.

ii. The company at the time of registration as CIMC should have a minimum net worth of Rs. 5 crore (provided that at the time of making the application, the applicant should have a minimum net worth of Rs. 3 crore which should be increased to Rs. 5 crore within three years from the date of grant of registration).

iii. The offer document should disclose adequate information to enable investors to take informed decisions. The offer document should also indicate the maximum and minimum amount expected to be raised. No scheme should be kept open for subscription for a period more than 90 days.

iv. Each scheme has to obtain a rating from a recognized credit rating agency and the projects to be undertaken should be appraised by an empanelled appraising committee.

v. CIMC should launch only close ended schemes with a minimum duration of three calendar years. These schemes are prohibited from guaranteeing or assuring returns.

vi. CIMC should obtain adequate insurance policy for protection of the scheme's property.

vii. Advertisements for each and every scheme have to conform to the SEBI's advertisement code.

viii. The units of every scheme should be listed immediately after the allotment is over, which is not later than six weeks from the date of closure of the scheme on the stock exchanges.

ix. The CIMC on behalf of the scheme should before the expiry of one month from the close of each quarter publish its unaudited financial results in one daily newspaper having nation wide circulation and in the regional newspaper of the region where the head office of the CIMC is situated.

As on March 31, 2004, there was no CIS entity registered with SEBI. SEBI had initiated action against 568 CIS entities for their failure to wind up their schemes and make repayments to investors.

Venture Capital Funds

Venture Capital Fund (VCF) is a fund established in the form of a trust or a company including a body corporate having a dedicated pool of capital, raised in the specified manner and invested in Venture Capital Undertakings (VCUs). VCU is a domestic company whose shares is not listed on a stock exchange and is engaged in a business for providing services, production, or manufacture of article. A company or body corporate to carry on activities as a VCF has to obtain a certificate from SEBI and comply with the regulations prescribed in the SEBI (Venture Capital Regulations) 1996. Unlike MFs and CIS, there is no retail participations in VCFs.

Regulations for VCFs

The salient features of the SEBI (Venture Capital Regulations), 1996 are as follows:

i. The minimum investment in a VCF by an investor should not be less than Rs. 5 lakh; the minimum corpus of the fund before it starts activities should be at least Rs. 5 crore.

ii. A VCF seeking to avail benefit under the relevant provisions of the Income Tax Act will be required to disinvest its holdings within a period of one year from the listing of the VCU.

iii. The VCF is eligible to participate in the IPO through book building route as Qualified Institutional Buyer.

iv. Automatic exemption is granted from open offer requirements in case of transfer of shares from VCFs in Foreign Venture Capital Investors (FVCIs) to promoters of a venture capital undertaking.

Investment Restrictions

i. The VCF have to disclose the investment strategy at the time of application for registration and should not have invested more than 25% corpus of the fund in any one VCU. A VCF, also, cannot invest in associated companies. At least 75% of the investible funds should be invested in unlisted equity shares or equity linked instruments.

ii. Not more than 25% of the investible funds may be invested by way of subscription to IPO of a VCU whose shares are proposed to be listed subject to lock-in period of one year and debt or debt instrument of a VCU in which the VCF has already made an investment by way of equity.

As on March 31, 2004 the total count of VCFs and FVCIs stood at 45 and 9 respectively. All VCFs are now required to provide information pertaining to their venture capital activity for every quarter starting from the quarter ending December 2000.

According to a survey conducted under the aegis of Indian Venture Capital Association (IVCA) by Thomson Venture Economics (Thomson Financial) and Prime Database, India ranked second as the most active VC market in Asia Pacific (excluding Japan). Indian VC funds received US $ 241.8 million in new commitments in 2002 and have invested $ 590.21 million in Indian Companies in the same year. 76 Indian companies received investments; the average value of each deal is around $ 7.11 million. 53% of companies that raised venture capital were in the Information Technology sector.

Secondary Market – Trading*

Introduction

After the securities are issued in the primary market, they are traded in the secondary market by the investors. The stock exchanges along with a host of other intermediaries provide the necessary platform for trading in secondary market and also for clearing and settlement. The securities are traded, cleared and settled within the regulatory framework prescribed by the Exchanges and the SEBI. Till recently, it was mandatory for the companies to list their securities on the regional stock exchange nearest to their registered office, in order to provide an opportunity to investors to invest/trade in the securities of local companies. However, following the withdrawal of this restriction, the companies have an option to choose from any one of the existing stock exchanges in India to list their securities. Due to the earlier regulation requiring companies to get listed first at the regional stock exchange, there are in all 23 exchanges operating today in the country.

With the increased application of information technology, the trading platforms of all the stock exchanges are accessible from anywhere in the country through their trading terminals. However, the trading platform of NSE is also accessible through internet and mobile devices. In a geographically widespread country like India, this has significantly expanded the reach of the exchanges to the homes of ordinary investors and assuaged the aspirations of people to have exchanges in their vicinity.

Policy Developments

Over the last decade the Government and the market regulators have taken several policy measures to improve the operations of the stock exchanges and market intermediaries. The measures are aimed at improving the market infrastructure and upgradation of risk containment, so as to protect the interest of the investors. The policy developments during April 2003 and June 2004 pertaining to trading of securities are enumerated below:

Initiatives from Government

I. Union Budget

The Union Budget for 2004-05 proposed the following measures that have a bearing on the functioning of the secondary market:

1. An alternate trading platform for Small and Medium Enterprises (SME) have been proposed to be set up. This will help these enterprises in raising equity and debt from the Capital Market.

* This Chapter discusses the trading of equity shares while the trading of debt and derivative instruments is discussed in Chapters 6 and 7 respectively.

2. The procedure for registration and operation of FIIs is to be made simpler and quicker.
3. The investment ceiling for FIIs in debt funds have been raised to US$ 1.75 billion from US$ 1 billion.
4. Long-term capital gains tax on securities transaction has been abolished. The short-term capital gains tax has been proposed to be at a flat rate of 10 percent.
5. Turnover taxes have also been imposed on delivery-based transaction at the rate of 0.15% and for non-delivery transactions at the rate of 0.015% for equities and 0.01% on trades on the derivatives segment.

II. Pension System/Interim Pension Fund Regulator

The Government has approved the basic features of the new pension system. A pension fund regulatory and development authority (PFRDA) in the interim is to be set up with the purpose to regulate and develop the pension market. In this system, there would be three different choices for investments e.g. Option A, B and C. The option A would imply predominant investments in fixed income instruments with some investments in equity. Option B with greater investments in equity and Option C would carry equal investment in fixed income and equity. The pension fund managers would be free to make investments in international markets subject to regulatory restrictions.

III. Amendment to Securities Contracts (Regulation) Act, 1957

As per the recommendations of a Committee constituted by the SEBI under the chairmanship of Shri K. R. Ramamoorthy, the Securities Contracts (Regulation) Rules, 1957 have been amended. They are called the Securities Contracts (Regulation) Amendment Rules, 2003. It states that a member is permitted to conduct business in commodity derivatives only by setting up a separate company. It is required that the company should comply with the regulatory requirements in terms of net worth, capital adequacy, margins and exposure norms as maybe specified by the Forward Market Commission.

IV. Revised ECB Guidelines

The Government notified the liberal External Commercial Borrowing (ECB) policy on January 19, 2004. Listed below are the new policies:

(i) *Removal of end-use restrictions:* ECBs are allowed for corporate investments in industrial sector especially infrastructure sector for acquisition of shares under the Governments disinvestment programme of PSU shares up to US$ 500 million having minimum average maturity of 5 years under the automatic route. The usual restriction on ECB for investment in capital market or in the real estate is to continue.

(ii) *Eligibility:* All corporates, except banks, NBFCs and FIs are eligible to borrow through the ECB route. However, those banks and FIs, who have participated in the Textile or Steel sector restructuring package of the Government/RBI, are permitted, but only to the extent of their investment in the package.

(iii) *Interest Rate Spreads:* All ECBs are subject to the following revised maximum spreads, over six month LIBOR or the applicable benchmark(s), as the case may be (a) Average maturity of 3-5 years - 200 basis points and (b) More than 5 years of average maturity - 350 basis points.

(iv) *Guarantee:* Banks, FIs, NBFCs are not permitted to provide guarantee/letter of comfort.

(v) *Procedure:* All ECBs satisfying the above criteria will be under the auto 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.

All cases, which fall outside the purview of the auto-route in the new liberalised ECB policy, should be subject to the approval by the Empowered Committee of the RBI. On similar lines, guidelines for Foreign Currency Convertible Bonds (FCCBs) have been liberalized.

V. Companies (Issue of Indian Depository Rules) 2004

Ministry of Finance (MoF) has notified the Companies (Issue of Indian Depository Rules), 2004, applicable to those companies incorporated outside India desiring to raise resources through Indian securities markets. The issuer company can issue Indian Depository Receipts (IDRs) only against its underlying equity shares. The rules require that the issuer company's pre-issue paid up capital and average turnover should be US$ 100 millions and US$ 500 millions, respectively. The company should also be making profits for at least 5 years preceding the issue and must have declared dividend of at least 10% during the period and has a pre-issue debt equity ratio of 2:1. The issuer company has to obtain prior permission from the SEBI and the necessary approvals/exemptions from the country of its incorporation (where required) for making the issue. Following the approval, issuer should appoint a number of intermediaries such as overseas custodian bank, domestic depository, and a merchant banker. The issuer company should also take in-principle listing approval from one or more stock exchanges having nation wide trading terminals in India. The IDRs should be denominated in Indian Rupees and not exceed 15% of the total paid-up capital and free reserves of the company. Redemptions are to be subject to FEMA and other laws and cannot be made within one year of their issue. In case of redemption, the underlying equity shares may be released to the IDR holder or may be sold directly by him.

Initiatives from SEBI

I. SEBI (Listing Authority) Regulations, 2003

To bring about uniformity in scrutinizing listing applications across the stock exchanges and to strengthen the listing agreement, SEBI has established the Central Listing Authority (CLA) under the SEBI (Central Listing Authority) Regulations, 2003. The important features of these regulations are as follows:

(i) The Central Listing Authority (CLA) is to be constituted by SEBI and should consist of a President and a maximum of ten other members, of which at least four members should be representatives of the stock exchanges. The SEBI Board shall appoint the President and the members from amongst persons having integrity and outstanding ability from judiciary, lawyers, academicians, financial experts etc.

(ii) The authority should discharge the following functions *viz.*, processing the application made for listing by any body corporate, MF or CIS, issuing the letter of recommendations, reviewing listing norms and any other functions as may be specified by the Board from time to time.

(iii) Prior to applying for listing to any stock exchange, a body corporate, MF or CIS should obtain a letter of recommendations to list from the CLA.

(iv) Any exchange should not consider any listing application, unless it is accompanied by a letter of recommendation issued by the CLA.

(v) In case, the CLA refuses to issue letter of recommendation in accordance with the procedure laid down in the Regulations, the aggrieved party may approach SEBI within 10 days of receipt of the refusal. If the SEBI is not satisfied with the reason, SEBI may direct the CLA to issue a letter of recommendation within 15 days of receipt of such representation.

(vi) If the exchange refuses listing to the body corporate, MF or CIS, it may appeal to the Securities Appellate Tribunal (SAT) as provided in the Securities Contracts (Regulation) Act, 1956.

(vii) The CLA should also constitute a 'Fund' to be called the Central Listing Authority Fund, which should be constituted basically from the processing fees charged and received by the Authority.

II. Amendments to Listing Agreement

SEBI advised the Stock Exchanges to initiate action against the listed companies, who have not complied with the various requirements of the listing agreements. It has been clarified that Section 23(2) of the SC(R)A, 1956 prescribes punishment for violation and non-compliance of the provisions of listing agreement. Further, in order to ensure that listed companies do not in anyway violate or override or circumscribe the provisions of securities laws or the stock exchange requirements, SEBI amended the clause 24 of the listing agreement. The amended clauses are as given below:

(a) The company should file with the stock exchange for approval any scheme/petition proposed to be filed before any court or tribunal at least a month before it is presented to the Court/tribunal.

(b) The company should ensure that any scheme of arrangement/amalgamation/merger/reconstruction/reduction of capital, etc., to be presented to any Court or Tribunal does not in any way violate, override or circumscribe the provisions of securities laws or the stock exchange requirements. Securities law here means the SCRA 1956, the SEBI Act, 1992, the Depositories Act 1996 and the provisions of Companies Act 1956 and the other rules, regulations, guidelines etc. made under these Acts, and the Listing Agreement.

III. Margin Trading

With a view to improve liquidity in the equity market, SEBI initiated steps to introduce margin trading w.e.f. April 1, 2004. The securities, eligible for margin trading, should have an average impact cost of less than or equal to 1 and should be traded on at least 80% (+/-5%) of the days for the previous eighteen months. Only corporate brokers with net worth of at least Rs. 3 crore are eligible to offer this facility. They may use their own or borrowed funds, however, their total indebtedness should not exceed 5 times their net worth. The initial and maintenance margin is to be paid in cash and have to be a minimum of 50% and 40%, respectively. While providing the margin trading facility, the broker should be prudent and ensure that there is no concentration on any single client. The arbitration mechanism of the exchange is not available for grievances arising out of this facility.

IV. Eligibility of a Sub-broker to Trade through the Subsidiary Company

The Stock Exchanges had been allowed to set up subsidiary company to acquire membership rights of other stock exchanges subject to certain conditions prescribed by SEBI. As per the conditions stated in the SEBI directive, the subsidiary company could register only the members of the parent stock exchange as sub-brokers of the subsidiary company. However, it was noticed that the necessary changes have not been made in the rules, bye-laws and the regulations of all the stock exchanges which have set up subsidiaries and Memorandum/ Articles of Association of the subsidiary company. Therefore, all the stock exchanges, which have set up subsidiaries were directed to make the necessary provisions in their rules, regulations and the bye-laws as well as in the Memoranda/Articles of Associations to this effect.

V. Listing Fees

It has been decided by SEBI, that the stock exchanges should have the freedom to charge listing fees without seeking prior approval from the SEBI. Accordingly, the exchanges have been directed to make necessary amendments to the bye-laws, rules and regulations/listing agreement.

VI. Mark-up in respect of debentures and bonds traded on the Stock Exchange

Through a circular issued by SEBI on December 09, 1996, it has been stipulated that the mark-up for the close out should be 20% above the official closing price for equities as well as debentures and bonds. However, based on the recommendations of the Advisory Committee on Derivatives and Market Risk Management it has now been decided that in case of debentures and bonds with a credit rating AAA and above, close out mark-up of 5% should be applied. In cases where the credit rating is below AAA, then the existing close out mark-up of 20% should be applicable.

VII. Fair Practices and Code of Conduct

A code of conduct for public representatives/SEBI nominee directors has been notified to ensure that the affairs of the stock exchanges are conducted on the healthy lines with the highest standards of professional conduct, business ethics and morality. Also the guidelines enumerating fair practices have been notified. The public representatives/SEBI nominee directors should:

- endeavor to attend all the board meetings. They should be liable to vacate their office if they remain absent for three consecutive meetings of the Board of Directors or do not attend 75% of the total meetings of the Board in a calendar year.
- not participate in the discussion on subjects, which may involve any conflict of interest or give rise to. If in case it happens then the same should be disclosed and recorded in the minutes of the meeting; however, during the meeting the agenda papers should not be circulated, unless circumstances requires.

- meet at least once in 6 months separately, if necessary, to exchange views on critical issues.
- offer their comments on the draft minutes and ensure that the same are incorporated in the final minutes. It should be ensured that the minutes of the previous meeting are placed for approval in the subsequent meeting.
- endeavor to have the date of next meeting fixed at each Board Meeting itself in consultation with other members of the Governing Board. In case, all the items of the agenda of a meeting are not covered, then next meeting is to be held within 15 days.
- participate in the formulation and execution of various strategies by being pro-active in decision making in the Board meetings, so that the exchanges benefits from their experience and expertise.
- endeavour to ensure that the Exchange abides by all the provisions of the SEBI Act, Securities Contracts (Regulation) Act, Rules, Regulations framed thereunder and the circulars, directions issued by the Government/SEBI.
- endeavour to make the regulatory system foolproof by ensuring compliance at all levels of hierarchy in the Exchange. They should also ensure that the Exchange honours the time limit prescribed by SEBI for corrective actions.
- not support any decision of the Board, which may adversely affect the interest of investors. They should report forthwith any such decision to SEBI.
- make sure that the arbitral award is given within the period stipulated in the Bye-Laws, Rules or Regulations of the Exchange and in any case, the award is to be delivered within 15 days after the final meeting.
- priorities redressing of investor grievances by encouraging fair trade practice. They should also make use of every opportunity to enhance and improve their level of knowledge, so that they are able to resolve various issues arising in the operations of the exchange with professional competence, fairness, impartiality, efficiency and effectiveness.
- submit the necessary disclosures/statement of holdings/dealings in securities as required by the Exchange as per their Rules or Articles of Association.
- maintain confidentiality about any information obtained in the discharge of their duty unless otherwise required by law. Further, they should not use the confidential information for their personal gains.
- avoid any interest or activity which is in conflict with the conduct of their official duties.
- not engage in any act involving moral turpitude, dishonesty, fraud, deceit, or misrepresentation or any other act prejudicial to the administration of the exchange.

VIII. Corporate Governance in Listed Companies

Clause 49 of the listing agreement has been amended to include the recommendations as prescribed by the committee on corporate governance set up under the chairmanship of Shri N. R. Narayana Murthy:

Composition of Board: The board of directors of a company should have an optimum combination of executive and non-executive directors. However, the non-executive directors should not be less than 50% of the directors. The number of independent directors should be determined on the basis of the post held by the Chairman; in case of a non-executive chairman, at least 1/3rd of board should comprise of independent directors and if he is an executive chairman, then at least half of Board should comprise of independent directors.

Non-Executive Directors' Compensation and Disclosures: All the compensation paid to non-executive directors should be fixed by the Board and should be approved by shareholders in general meeting. A limit should be placed for the maximum number of stock options that can be granted to them in any financial year and in aggregate. In its annual report, the company should publish its compensation philosophy, statement of entitled compensation in respect of non-executive directors and the details of shares held by non-executive directors.

Independent Director: Independent Director should periodically review the company's legal compliance reports as well as the steps taken by the company. In the event of any legal proceedings against an independent director in connection with the affairs of the company, the defence would not be permitted on the ground that he was unaware of his responsibility.

Board Procedure: The Board should meet at least four times a year, with a maximum time gap of four months between any two meetings. A director should not be a member in more than 10 committees or act as Chairman of more than five committees across all companies in which he is a director. Furthermore, it should be mandatory for all the directors to inform the company about the positions they occupy in other companies every year and also notify changes as and when they take place.

Code of Conduct: It is obligatory for the Board to lay down the code of conduct for all its members and the senior management of the company, which should be posted on the company's website. On an annual basis, all the members of the Board and senior management personnel should affirm compliance with the code. In addition, the annual report should contain a declaration to this effect signed by the CEO and COO.

Term of Office of Non-executive directors: A person would be eligible for the office of non-executive director so long as his term in the office has not exceeded nine years in three terms of three years each, running continuously.

Qualified and Independent Audit Committee: A qualified and independent audit committee with a minimum of three members comprising of a chairman and members shall be set up. Wherein the chairman should be an independent director and majority of members should be independent directors. It is required that all the members of audit committee should be financially literate and at least one of them should have accounting or related financial management expertise. The Chairman should be present at Annual General Meeting to answer the queries of the shareholders. The audit committee should invite executives, as it considers appropriate (and particularly the head of the finance function) to be present at the meetings, but on occasions it may also meet without the presence of any executives.

Audit Committee: The audit committee should meet at least thrice a year, but once every six months; at least one meeting should be held before finalization of annual accounts. The quorum for the meeting should be either two members or one third of the total members; whichever is higher and minimum of two independent directors. The committee is empowered to (i) investigate any activity within its terms of reference (ii) seek information from any employee (iii) obtain outside legal or other professional advice (iv) secure attendance of outsiders with relevant expertise, if it considers necessary.

Role of Audit Committee: The role of the audit committee should be to (a) oversee the company's financial reporting process and the disclosure made in the financial statement and ascertain its accuracy, sufficiency and credibility (b) recommend the appointment and removal of external auditor, fixation of audit fee and also approve payment for any other services (c) review the adequacy of internal audit function, including the structure of the internal audit department, its staff, officials heading the department, reporting structure coverage and frequency of internal audit. Further, the committee should discuss with internal auditors any significant findings and follow them up (d) review the findings of any internal investigations into matters of a suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting the matter to the board. Also, the committee should discuss with external auditors before the audit commences about nature and scope of audit. Post-audit the committee should ascertain any area of concern regarding company's financial and risk management policies. The Audit Committee should also compulsorily review information related to (i) financial statements and draft audit report, including quarterly/half-yearly financial information; (ii) management discussion and analysis of financial condition and results of operations; (iii) reports relating to compliance with laws and to risk management; and (iv) management letters/letters of internal control weaknesses issued by statutory/internal auditors.

IX. Listing of Further Issue of Capital

Following the withdrawal of compulsory listing of companies on regional stock exchange, it has been decided by the SEBI that a company should be listed on any of the stock exchanges, which have a nationwide trading terminals. If the company is not listed on any stock exchange having nationwide trading terminals, then it should continue to obtain 'in-principle' approval from all the exchanges where it is listed. The listing agreement states: "The Company agrees to obtain 'in-principle' approval for listing from the exchanges having nationwide trading terminals where it is listed, before issuing further shares or securities. Where the company is not listed on any exchange having nationwide trading terminals, it agrees to obtain such 'in-principle' approval from all the exchanges in which it is listed before issuing further shares or securities."

X. Amendment to SEBI (Depositories and Participants) (Second Amendment) Regulations 2003

SEBI amended the SEBI (Depositories and Participants) Regulations 1996 to include the clauses regarding the manner of handling the share registry work, redressal of investor grievances and maintenance of audit reports. All matters relating to transfer of securities, maintenance of records of holders of securities, handling of physical securities should be handled and maintained at a single point by establishing connectivity with the depositories i.e. either in-house by the issuer or by a Share Transfer Agent (STA) registered with the SEBI. Every issuer or its agent or any person who is registered as an intermediary under this act, should redress the grievances of beneficial owners within thirty days of the receipt of the complaint. Simultaneously, the depository should also be informed about the number and nature of grievances redressed by it and number of grievances pending before it. The issuers should submit the audit report on a quarterly basis, starting from September 30, 2003 to the concerned stock exchanges audited by a qualified Chartered Accountant or a practicing Company Secretary.

XI. Amendment to SEBI (FII) (Second Amendment) Regulations 2003

The SEBI (Foreign Institutional Investors) Regulations has been amended by the SEBI to include the new clauses as stated herewith. The FIIs should fully disclose information concerning the terms of and parties to off-shore derivative instruments such as Participatory Notes (P-Notes), Equity Linked Notes (ELN) or any other such instruments listed or proposed to be listed. The code of conduct has also been specified which states that (a) a FII and its key personnel should observe high standards of integrity, fairness and professionalism in all their dealings with intermediaries, regulatory and other government authorities in the Indian securities market. They should, at all times, render high standards of service, exercise due diligence and independent professional judgment (b) a FII should ensure and maintain confidentiality in respect of trades done on its own behalf and/or on behalf of its sub-accounts/clients. There should be clear segregation of its own money/securities and sub-accounts' money/securities; arms length relationship should be maintained between its business of fund management/investment and its other business (c) a FII should maintain an appropriate level of knowledge and competency and abide by the provisions of the Act, regulations made thereunder and the circulars and guidelines applicable and relevant to them. Every FII should also comply with award of the Ombudsman and decision of the Board under SEBI (Ombudsman) Regulations, 2003 (d) a FII should not make any untrue statement or suppress any material fact in any documents, reports or information furnished to the Board (e) they should ensure that good corporate policies and corporate governance are observed and do not engage in fraudulent and manipulative transactions in the securities listed in any stock exchange in India (f) a FII and/or any of its affiliates should not indulge in any insider trading, should not be a party to or instrumental for creation of false market in securities listed or proposed to be listed in any stock exchange in India. They should not be involved in price rigging or manipulation of prices of securities listed or proposed to be listed in any stock exchange in India.

XII. SEBI (Central Database of Market Participants) Regulations 2003

The SEBI (Central Database of Market Participants) Regulations, 2003 intends to develop an inventory of Market Participants and Investors and also set up standards for client code. It places a mandatory obligation on all entities under the jurisdiction of SEBI and specified investors to obtain unique identification number under MAPIN database. The main features of this regulation are as cited: (a) every investor, listed company, company intending to get its securities listed, intermediary and other entities should make applications for allotment of unique identification numbers (UINs) for itself and for its related persons (b) the application made by a specified intermediary or any other entity should be in a specified form. On receipt of an application, the designated service provider should allot to the applicant a UIN. In case of any defect, the designated service provider should give the applicant an opportunity to rectify it within a period of 15 days from the date of the intimation or within the period approved by the Board. If the defect is not rectified within the allotted time period, then the designated service provider should refer the application to the SEBI board (c) if unique identification number was obtained through fraud or misrepresentation or was allotted to a person by mistake, the Board may, after giving him an opportunity of making representations, revoke the UIN allotted to him or to the related persons. Once the UIN is revoked, the person will be treated as if no UIN was allotted to him. In case a person issues any security or buys, sells or deals in any securities in contravention of these regulations, they would be liable for suspension from trading or may be debarred from dealing in the securities market, or any other action as may be deemed appropriate by the Board.

XIII. Disclosure of Proprietary Trading by Brokers to Client

To increase the transparency in the dealings between the broker and the client, it has been decided that every broker should disclose to his client whether he does client based business or proprietary trading as well. This should be disclosed to all his existing clients and also to his new clients at the time of entering into the 'Know Your Client' agreement. In case of a broker who at present does not trade on proprietary account, chooses to do so at a later date, he is required to disclose this to his clients before carrying out any proprietary trading.

XIV. Trading by Members/Sub-brokers

Since certain members/sub-brokers deal through a large number of other stock brokers/ sub-brokers on the same exchange/other exchanges for their proprietary trades as well as trades on behalf of their clients, SEBI has prohibited these transactions, except with the prior permission of the exchange. After the stock exchange considers the reason stated by the broker-sub-broker for such transactions and carry out due diligence, it should permit such deals with only one broker/sub-broker registered with it. The stock broker/sub-broker of an exchange can deal with only one broker/sub-broker of another exchange for proprietary trading after intimating the names of such stock broker/sub-broker to his parent stock exchange.

XV. Disclosure of Trade Details of Bulk Deals

SEBI has decided to bring about greater disclosure in the nature of the bulk deals. All transactions in scrip where total quantity of shares bought/sold is more than 0.5% of the outstanding equity shares of that company are considered to be bulk deals.

The brokers should disclose to the stock exchange the name of the scrip, name of the client, quantity of shares bought/sold and the traded price. Immediately after executing the trade, the brokers should intimate the exchange and the stock exchange, in turn, should disseminate the aforesaid information on the same day after the market hours to the general public.

XVI. Changes in the Name of the Listed Companies

All listed companies, which decide to change their names, are required to comply with certain provisions: (i) They have to maintain a time period of at least one year before the last name change (ii) At least 50% of its total revenue in the preceding one year period should have been accounted for by the new activity suggested by the new name (iii) The new name along with the old name should be disclosed through web sites of the respective stock exchange/s where the company is listed and also through EDIFAR web site for a continuous period of one year from the date of last name change.

XVII. Reduction in Notice Period for Fixing the Book Closure/Record Date

On receiving representations from various quarters and in view of the major structural changes/developments in the secondary markets, SEBI decided to reduce the notice period which the listed companies have to give to the stock exchanges before their book-closure/record date. In the first phase, the said notice period has been reduced to 15 calendar days from 30 days in case of dematerialized scrips and from 42 days to 21 calendar days in case of physical scrips.

Initiatives from RBI

I. FIs Trading in GOI Securities

With a view to facilitate participation of the financial institutions (FIs) for trading in government securities on the stock exchanges, the FIs have to follow the procedure mentioned below:

1. FIs should open demat accounts with the Depository Participant (DP) of either NSDL/CDSL, in addition to their SGL Accounts with RBI.
2. Value free transfer, (i.e. transfer of the GOI securities from the SGL/CSGL account to the demat account of the same party) of securities between SGL/CSGL and demat accounts should be enabled subject to operational guidelines.
3. FIs should also ensure: (a) to obtain specific approval from their Board of Directors to enable them to trade in Government securities on the stock exchanges, (b) they should put in place necessary infrastructure, risk management systems and appropriate internal control systems for trading/settlement of Government securities on stock exchanges (c) their transactions through any single broker should be subjected to the extant guidelines on dealings through brokers (d) all their trades should be settled either directly with clearing corporation/clearing house or else through clearing member custodians (e) at the time of trade, securities should be available with the FIs either in their SGL account with RBI or in demat account with depositories (f) the purchase transactions

by the FIs should be subject to availability of clear funds in their settlement accounts at the time of pay-in, (g) all pay-out of funds should invariably be out of clear funds, i.e. the pay out must not be contingent upon the outcome of any clearing to be conducted on that day.

4. Any settlement failure on account of non-delivery of securities/non-availability of clear funds should be treated as SGL bouncing and the penalties in respect of SGL bouncing should be applicable.

5. All the details of transaction in Government securities, on aggregate basis, undertaken on the stock exchanges and particulars of any "closed out" should be reported to the audit committee of the Board.

In the mid-term review of the monetary and credit policy, RBI has permitted sale of Government security already contracted for purchase subject to two conditions: (a) the purchase contract is confined prior to the sale, is guaranteed by CCIL or the security is contracted for purchase from the RBI; (b) the sale transaction settles either in the same settlement cycle as the preceding purchase contract so that the delivery obligation under the sale contract is met by the securities acquired under the purchase contract.

II. De-recognition of Overseas Corporate Bodies as an Investor Class

RBI in consultation with the Government have de-recognised Overseas Corporate Bodies (OCBs) in India as an eligible 'class of investor' under various routes/schemes available under extant Foreign Exchange Management Regulations. In addition, following measures have also been initiated (i) an unincorporated entity also should not be allowed to make fresh investments under the Foreign Direct Investment scheme including the automatic route. However, the unincorporated entities and OCBs may continue to hold shares and convertible debentures till they are sold/redeemed (ii) they should also not undertake purchase of Government dated securities or treasury bills or units of domestic MFs or units of Money Market Mutual Funds (MMMFs) in India or National Plan/Savings Certificates both on repatriation and non-repatriation basis. However, they may continue to hold these securities till they are sold/ matured (iii) a person resident outside India including OCBs should not transfer by way of sale or gift, the shares or convertible debentures held by them to another OCB (iv) OCBs should not purchase equity or preference shares or convertible debentures offered on right basis by an Indian company. A person resident in India should also not borrow in foreign currency from OCBs (v) an Indian company should not borrow in rupees on repatriation and non-repatriation basis from OCBs by way of investment in Non-Convertible Debentures (NCDs) (vi) an Indian company, a proprietorship concern or a firm in India should not accept deposits from OCBs on non-repatriation basis (vii) OCBs should not open and maintain Non-Resident (External) Rupee Account (NRE), Foreign Currency (Non-Resident) Account (Banks) [FCNR(B)] Accounts and Non-Resident Ordinary Rupee (NRO) Deposit Account with Authorised Dealers in India. (viii) no new NRE/FCNR/NRO Accounts in the name of OCBs should be opened and no renewal of deposits should be made.

As regards with investment on repatriation basis, authorised dealers (ADs) may allow repatriation as authorised. For investment on non-repatriation basis, ADs should arrange to obtain requests for disposal of funds from their OCB clients and seek the specific approval for each case from the RBI. The ban imposed on OCBs under PIS vide a circular issued earlier shall continue. However, they are allowed to hold the shares and convertible debentures purchased under PIS till such time these are sold on Stock Exchange in India.

It has also been clarified that the de-recognition of OCBs as a separate category of investor meant withdrawal of special facilities made available to them. However, the overseas entities owned by NRIs remain unaffected of the same.

III. Bank Financing of Equities and Investments in Shares

As per the RBI directive, banks were required to apply a uniform margin of 40% on all advances against shares/financing of IPOs/issue of guarantees. A minimum cash margin of 20 per cent (within the margin of 40%) is also to be applied in respect of guarantees issued by the banks. This has been reviewed and it has been raised to a uniform margin of 50% to all fresh advances/guarantees issued. A minimum cash margin of 25% (within the margin of 50%) should be maintained in respect of guarantees issued by banks for capital market operations. The existing advances/guarantees issued may continue at the earlier margins until they come up for renewal.

Market Design*

At the end of March 2004, there were 23 operative stock exchanges with 9,368 registered brokers and 12,815 registered sub-broker trading on them (Annexure 4-1).

Stock Exchanges

The stock exchanges need to be recognized under the Securities Contracts (Regulation) Act, 1956. Of the 23 recognized stock exchanges, only 3 exchanges (Mumbai, Ahmedabad, Madhya Pradesh) are organized in the form of "Association of Persons", while the rest are organized as limited companies. Except NSE, all exchanges are *not-for-profit* making organizations.

Realizing the problems of a non-demutualised set up, a committee under the chairmanship of Chief Justice M. H. Kania was set up (i) to review the present structures of stock exchanges (ii) to examine the legal, financial and fiscal issues involved to corporatise and demutualise the stock exchanges, and recommend the specific steps that need for demutualisation, and (iii) to advise on the consolidation and merger of the stock exchanges. The committee recommended a uniform model of demutualisation and corporatisation and advised the stock exchanges to initiate the process of getting demutualised. As on date only two exchanges *viz.*, NSE and OTCEI are demutualised and others are in the process of getting demutualised. The NSE model of demutualisation compares well with the international models of demutualised stock exchanges, as may be seen from Table 4-1.

* While an attempt has been made to present market design for the entire Indian securities market, the trading mechanism and such other exchange-specific elements have been explained based on the model adopted by NSE. The market developments have been explained, mostly for the two largest stock exchanges, *viz.* NSE and BSE. Wherever data permits, an all-India picture has been presented.

Table 4-1: Comparison of the NSE Model and the International Models of Demutualised Stock Exchanges

Comparators	**International Model**	**NSE Model**
Legal Structure	Company	Company
For Profit/Not for Profit	For Profit Company	For Profit Company
Ownership Structure	Owned by Shareholders which includes brokers	Owned by Shareholders which are financial institutions which also have broking firms as subsidiaries.
Listing	Several stock exchanges are listed on themselves after Initial Public Offer.	Not a listed company. No Initial Public Offer made.
Ceilings on shareholding	Mostly 5% of voting rights for a single shareholder	No ceiling
Segregation of ownership, trading rights and management	These are segregated. To become a member of the demutualised stock exchange, it is not necessary to own a share in the company. Thus, members may or may not be shareholders and members who own shares may sell off their trading rights and all shareholders are not necessarily members.	These are segregated. The trading rights and ownership are segregated. The broking firms are not shareholders.
Board Structure	The Governing Board comprises of directors who are elected by shareholders. Some of the directors are brokers but majority do not have stock broking background.	The Board comprises of representats of shareholders, academics, chartered accountants, legal experts etc. Of these, 3 directors are nominated by SEBI and 3 directors are public representatives approved by SEBI.
Fiscal benefits	As mutual entities, stock exchanges enjoyed fiscal benefits prior to demutualisation, but when converted into for profit companies these are taxed.	NSE was set up as a demutualised for profit company and is taxed. So the question of fiscal benefit prior to demutualisation does not arise.
Transfer of assets	Assets were transferred from the mutual entity to the for-profit demutualised company and shares were given to the members in lieu of the ownership in the old entity. There was no cash consideration paid. Since an Initial Public Offer (IPO) was also made in many cases, the valuation of the shares were done by the market and no separate valuation exercise was required as for example in the case of LSE where a bonus issue was made.	The question of transfer of assets did not arise because NSE was set up by the institutions as a demutualised company itself.
Enactment of legislation to give effect to demutualisation	In several countries a separate legislation was necessary as in the case of Australia, Hong Kong, Toronto and Singapore. In several others no legislation was necessary as in the case of UK.	Not applicable as NSE was set up as a demutualised company.

Source: Report of the SEBI Group on Corporatisation and Demutualisation of Stock Exchanges.

Membership

The trading platform of a stock exchange is accessible only to brokers. They play a significant role in the secondary market by bringing together the buyers and sellers. The brokers input buy/sell orders either on his own account or on behalf of clients. The clients may place their orders either with them directly or through a sub-broker indirectly. Thus, as these buy and sell order matches, the trades are executed. The exchange can admit a broker as its member only on the basis of the terms specified in the Securities Contracts (Regulation) Act, 1956, the SEBI Act 1992, the rules, circulars, notifications, guidelines, and the byelaws, rules and regulations of the concerned exchange. No stock broker or sub-broker is allowed to buy, sell or deal in securities, unless he or she holds a certificate of registration from the SEBI.

The stock exchanges, however, are free to stipulate stricter requirements than those stipulated by the SEBI. The minimum standards stipulated by NSE are in excess of those laid down by the SEBI. The NSE admits members based on factors, such as, corporate structure, capital adequacy, track record, education, and experience (Table 4-2). This reflects a conscious decision of NSE to ensure quality broking services.

Table 4-2: Eligibility Criteria for Trading Membership on CM Segment of NSE

(Amount in Rs. lakh)

Particulars	CM and F&O Segment	CM and WDM Segment	CM, WDM and F&O Segment
Constitution	Individuals/Firms/Corporates	Corporates	Corporates
Paid-up capital (in case of corporates)	30	30	30
Net Worth	100	200	200
Interest Free Security Deposit (IFSD)	125	250	275
Collateral Security Deposit (CSD)	25	25	25
Annual Subscription	1	2	2
Education	Individual trading member/two partners/two directors should be graduates. Dealers should also have passed SEBI approved certification test for Derivatives and Capital Market (Basic or Dealers) Module of NCFM.	At least two directors should be graduates.	At least two directors should be graduates. Dealers should also have passed SEBI approved certification test for Derivatives and Capital Market (Basic or Dealers) Module of NCFM.
Experience	—— Two year's experience in securities market ——		
Track Record	The Applicant/Partners/Directors should not be defaulters on any stock exchange. They must not be debarred by SEBI for being associated with capital market as intermediaries. They must be engaged solely in the business of securities and must not be engaged in any fund-based activity.		

Note: Clearing Membership requires higher networth, IFSD and CSD.

The authorities have been encouraging corporatisation of the broking industry. As a result, a number of brokers-proprietor firms and partnership firms have converted themselves into corporates. As at end-March 2004, there were brokers 9,368 (including multiple registrations) registered with SEBI as compared to 9,519 brokers as at end-March 2003. As of end-March 2004, 3,787 brokers, accounting for nearly 40% of total have become corporate entities. Amongst those registered with NSE around 88.97% of them were corporatised, followed by OTCEI with 77.85% corporate brokers.

As at end-March 2004, there were 12,815 sub-brokers registered with SEBI, as compared with 13,291 sub-brokers as at end of previous year. There were a total of 141 additions of members during the year 2003-04, whereas 292 were membership cases of reconciliation/cancellation/surrender. NSE and BSE together constituted 88.29% of the total sub-brokers.

Listing of Securities

Listing means formal admission of a security to the trading platform of a stock exchange. Listing of securities on the domestic stock exchanges is governed by the provisions in the Companies Act, 1956, the Securities Contracts (Regulation) Act, 1956 (SC(R)A), the Securities Contracts (Regulation) Rules (SC(R)R), 1957, the circulars/guidelines issued by Central Government and SEBI. In addition, they are also governed by the rules, bye-laws and regulations of the concerned stock exchange and by the listing agreement entered into by the issuer and the stock exchange. Some of the key provisions are enumerated below:

1. The Companies Act, 1956 requires a company intending to issue securities to the public should seek a permission from one or more recognised stock exchanges for its listing. If the permission is not granted by all the stock exchanges before the expiry of 10 weeks from the closure of the issue, then the allotment of securities would be void. Also, a company may prefer to appeal against refusal of a stock exchange to list its securities to the Securities Appellate Tribunal (SAT). The prospectus should state the names of the stock exchanges, where the securities are proposed to be listed.

2. The bye-laws of the exchanges stipulates norms for the listing of securities. All listed companies are under obligation to comply with the conditions of listing agreement with the stock exchange where their securities are listed. If they fail to comply with them, then they are punishable with a fine up to Rs. 1,000.

3. The SC(R)R prescribe requirements with respect to the listing of securities on a recognised stock exchange and empowers SEBI to waive or relax the strict enforcement of any or all of them.

4. The listing agreement states that the issuer should agree to adhere to the agreement of listing, except for a written permission from the SEBI. As a precondition for the security to remain listed, an issuer should comply with the conditions as may be prescribed by the Exchange. Further, the securities are listed on the Exchange at its discretion, as the Exchange has the right to suspend or remove from the list the said securities at any time and for any reason, which it considers appropriate.

5. A SEBI circular asserts that the basic norms of listing on the stock exchanges should be uniform across the exchanges. However, the stock exchanges can prescribe additional norms over and above the minimum, which should be part of their bye-laws. SEBI has been issuing guidelines/circulars prescribing certain norms to be included in the listing agreement and to be complied by the companies. The listing requirements for companies in the CM segment of NSE are presented in Table 4-3.

Table 4-3: Listing Criteria for Companies on CM Segment of NSE

Criteria	Initial Public Offerings (IPOs)	IPOs by Knowledge Based Companies	Companies listed on other exchanges
Paid-up Equity Capital (PUEC)/Market Capitalisation (MC)	PUEC ≥ Rs. 10 cr. and MC ≥ Rs. 25 cr.	PUEC ≥ Rs. 5 cr. and MC ≥ Rs. 50 cr.	PUEC ≥ Rs. 10 cr. and MC ≥ Rs. 25 cr. OR PUEC ≥ Rs. 25 cr. OR MC ≥ Rs. 50 cr.
Company/Promoter's Track Record	3 years of existence of applicant/promoting company.	3 years of existence of applicant/promoting company.	3 years of existence of applicant/ promoting company.
Dividend Record or Net worth	—	—	Dividend paid for at least 2 out of the last 3 years OR Net worth Rs. 50 cr.
Project Appraisal/ Listing	Project appraisal by specified agencies	Project appraisal by specified agencies	Listed on any other stock exchange for at least last three years OR Project appraisal by specified agencies
Other Requirements	(a) No disciplinary action by other stock exchanges/regulatory authority in past 3 years. (b) Satisfactory redressal mechanism for investor grievances, distribution of shareholding and litigation record of the promoting company, if any.	(a) No disciplinary action by other stock exchanges/regulatory authority in past 3 years. (b) Satisfactory redressal mechanism for investor grievances, distribution of shareholding and litigation record of the promoting company, if any.	(a) Same as for IPOs. (b) No negative net worth, No winding-up petition, and No reference to BIFR.

Note:

1. The criteria for IPOs shall also be applicable to companies which have come out with IPOs, but are not listed on NSE, provided they make an application for listing within 6 months of the date of closure of public issue.
2. Knowledge-based companies are companies in the field of information technology, internet commerce, telecommunications, pharmaceuticals, etc. and the revenue from knowledge-based activity is more than 75% of income for last 2 years.
3. Dividend track record/net worth/project appraisal/listing are not applicable to Government Companies, PSUs, FIs, Nationalised Banks, Statutory Corporations, Banking Companies etc. who are otherwise governed by a regulatory framework.

Explanations:

1. Paid-up Equity Capital means post issue paid-up equity capital.
2. In case of IPOs, market capitalisation is the product of the issue price and the post-issue number of equity shares. In case of listed companies it is the product of post issue number of equity shares and average of the weekly high and low of the closing prices during last 12 months is used to calculate market capitalisation.
3. Net worth means paid-up equity capital + reserves excluding revaluation reserve - miscellaneous expenses not written off - negative balance in profit and loss account to the extent not set off.

6. The stock exchanges levy listing fees on the companies, whose securities are listed with them. The listing fee has two components-initial fee and annual fee. While, initial fee is a fixed amount, the annual fee varies depending upon the size of the company. NSE charges Rs. 7,500 as initial fees. For companies with a paid-up share and/or debenture capital of less than or equal to Rs. 1 crore annual listing fees is Rs. 4,200. For companies with a paid-up share and/or debenture capital of more than Rs. 50 crore, the annual listing fees is Rs. 70,000 *plus* Rs. 1,400 for every additional Rs. 5 crore or part thereof.

A number of requirements, under the SC(R)R, the bye-laws, the listing agreement have to be continuously complied with by the issuers to ensure continuous listing of its securities. The listing agreement also stipulates the disclosures that have to be made by the companies. In addition, the corporate governance practices enumerated in the agreement have to be followed. The Exchange is required to monitor the compliance with requirements. In case a company fails to comply with the requirements, then trading of its security would be suspended for a specified period, or withdrawal/delisting, in addition to penalty as prescribed in the SC(R)A.

Trading Mechanism

NSE was the first stock exchange in the country to provide nation-wide, anonymous, order-driven, screen-based trading system, known as the National Exchange for Automated Trading (NEAT) system. The member inputs, in the NEAT system, the details of his order such as the quantities and prices of securities at which he desires to transact. The transaction is executed as soon as it finds a matching sale or buy order from a counter party. All the orders are electronically matched on a price/time priority basis. This has resulted in a considerable reduction in time spent, cost and risk of error, as well as frauds, resulting in improved operational efficiency. It allows for faster incorporation of price sensitive information into prevailing prices, as the market participants can see the full market on real time basis. This increases informational efficiency and makes the market more transparent. Further, the system allows a large number of participants, irrespective of their geographical locations, to trade with one another simultaneously, improving the depth and liquidity of the market. A single consolidated order book for each stock displays, on a real time basis, buy and sell orders originating from all over the country. The book stores only limit orders, which are orders to buy or sell shares at a stated quantity and stated price, are executed only if the price quantity conditions match. Thus, the NEAT system provides an Open Electronic Consolidated Limit Order Book (OECLOB), which ensures full anonymity by accepting orders, big or small, from members without revealing their identity. Thus, provides equal access to all the investors. A perfect audit trail, which helps to resolve disputes by logging in the trade execution process in entirety, is also provided.

The trading platform of the CM segment of NSE is accessed not only from the computer terminals, but also from the personal computers of the investors through the Internet and from the hand-held devices through WAP.

SEBI has allowed the use of internet as an order routing system for communicating investors' orders to the exchanges through the registered brokers. These brokers should obtain the permission from their respective stock exchanges. In February 2000, NSE became the first exchange in the country to provide web-based access to investors to trade directly on the Exchange followed by BSE in March 2001. The orders originating from the PCs of investors are routed through the internet to the trading terminals of the designated brokers with whom they have relations and further to the exchange. After these orders are matched, the transaction is executed and the investors get the confirmation directly on their PCs.

SEBI has also allowed trading through wireless medium or Wireless Application Protocol (WAP) platform. NSE is the only exchange to provide access to its order book through the hand held devices, which use WAP technology. This particularly helps those retail investors, who are mobile and want to trade from any place.

Technology

With the developments in communication and network technologies, there has been a paradigm shifts in the operations of the securities market across the globe. Technology has enabled organisations to build new sources of competitive advantage, bring about innovations in products and services, and provide new business opportunities. Stock exchanges all over the world have realised the potential of IT and have moved over to electronic trading systems, which have wider reach and provide a better mechanism for trade and post trade execution.

Given the importance of technology in shaping the securities industry, NSE has been emphasizing on innovations and sustained investments in technology. NSE is the first exchange in the world to use satellite communication technology for trading and also has the largest VSAT-based trading network in the world and largest VSAT network for any purpose in the Asia Pacific region. It uses satellite communication technology to energize participation from more than 2,800 VSATs from approximately 365 cities spread all over the country. It has been continuously undertaking capacity enhancement measures so as to effectively meet the requirements of increased users and associated trading loads. NSE's trading system called the National Exchange for Automated Trading (NEAT), is a state of-the-art client server based application. At the server's end all the trading information is stored in an in-memory database to achieve a minimum response time and maximum systems availability for users. It has uptime records of 99.7%. The system also ensures data integrity with past record of single error in 10 million bits. For all trades entered into the NEAT system, there is uniform response time of less than 1.5 seconds. NSE has also put in place NIBIS (NSE's internet Based Information System) for on-line real-time dissemination of trading information through its website.

As part of its business continuity plan, NSE has established a disaster back-up site at Chennai along with its entire infrastructure, including the satellite earth station. This site at Chennai is a mirror replica of the complete production environment at Mumbai. The link between the two is through a high-speed optical fiber and the transaction data is backed up on near real time basis from the main site to the disaster back-up site to keep both the sites synchronized with each other all the time.

Trading Rules

Insider Trading

Insider trading is considered an offence and is hence prohibited. The SEBI (Prohibition of Insider Trading) Regulations, 1992 prohibits an insider from dealing (on his own behalf or on behalf of others) in listed securities on the basis of 'unpublished price sensitive information'. It also prohibits communicating, counseling or procuring such information from any other person to deal in securities of any company on the basis of such information. Price sensitive information for a security is any information, which if published, is likely to affect its price.

It includes information regarding the financial results of the company, intended declaration of dividends, issue of securities or buy back of securities, amalgamation, mergers, takeovers, and any major policy changes. SEBI, on the basis of any complaint or otherwise, is empowered to investigate/inspect these allegation of insider trading. If a person is found *prima facie* guilty of insider trading, then SEBI may prosecute persons in an appropriate court or pass such orders as it may deem fit.

In order to strengthen insider trading regulations, SEBI has mandated a code of conduct for listed companies, its employees, analysts, market intermediaries and professional firms. The insider trading regulations require initial and continuous disclosure of shareholding by directors, officers and major shareholders (holding more than 5% shares/voting rights). The companies are also mandated to adopt a code of disclosure with regards to price sensitive information, market rumours, reporting of shareholding/ownership, etc.

Unfair Trade Practices

The SEBI (Prohibition of Fraudulent and Unfair Trade Practices in relation to the Securities Market) Regulations, 1995 empowers SEBI to investigate into cases of market manipulation, fraudulent and unfair trade practices. The regulations define frauds as acts committed by a party of the contract or by his agent, with intent to deceive another party or his agent or to induce him to enter into the contract. The regulations specifically prohibit market manipulation, misleading statements to induce sale or purchase of securities, and unfair trade practices relating to securities. Under these regulations, SEBI can investigate into violations committed by any person, including an investor, issuer or an intermediary, *suo moto* or upon information received by it. Based on the report of the investigating officer, SEBI can initiate action for suspension or cancellation of registration of an intermediary.

Takeovers

The restructuring of companies through takeover is governed by the SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 1997. The Regulations were formulated so that the process of acquisitions and takeovers is carried out in a well-defined and orderly manner following the principles of fairness and transparency. As per the regulations, the mandatory public offer is triggered on:

- crossing the threshold limit of 15%,
- crossing the creeping acquisition limit of 15% or more but less than 75% of shares or voting rights of a target company,
- Attempts by persons having 75% or more to acquire more shares.

The regulations give enough scope for existing shareholders to consolidate and also cover the scenario of indirect acquisition of control. The applications for takeovers are scrutinised by the Takeover Panel constituted by the SEBI.

Buy Back

Buy back is done by the company with the purpose to improve liquidity in its shares and enhance the shareholders' wealth. Under the SEBI (Buy Back of Securities) Regulations, 1998, a company is permitted to buy back its shares from:

(a) existing shareholders on a proportionate basis through the offer document;

(b) open market through stock exchanges using book building process; and

(c) shareholders holding odd lot shares.

The company has to disclose the pre and post-buy back holdings of the promoters. To ensure completion of the buy back process speedily, the regulations have stipulated time limit for each step. For example, in the cases of purchases through stock exchanges, an offer for buy back should not remain open for more than 30 days. The verification of shares received in buy back has to be completed within 15 days of the closure of the offer. The payments for accepted securities has to be made within 7 days of the completion of verification and bought back shares have to be extinguished and physically destroyed within 7 days of the date of the payment. Further, the company making an offer for buy back will have to open an escrow account on the same lines as provided in takeover regulations.

Circuit Breakers

Volatility in stock prices is a cause of concern for both the policy makers and the investors. To curb excessive volatility, SEBI has prescribed a system of circuit breakers. The circuit breakers bring about a nation-wide coordinated halt in trading on all the equity and equity derivatives markets. An index based market-wide circuit breaker system applies at three stages of the index movement either way at 10%, 15% and 20%. The breakers are triggered by movement of either S&P CNX Nifty or Sensex, whichever is breached earlier (discussed in details in chapter 5).

Further, the NSE views entries of non-genuine orders with utmost seriousness as this has market-wide repercussion. It may suo-moto cancel the orders in the absence of any immediate confirmation from the members that these orders are genuine or for any other reason as it may deem fit. As an additional measure of safety, individual scrip-wise price bands has been fixed as below:

- Daily price bands of 2% (either way) on a set of specified securities,
- Daily price bands of 5% (either way) on a set of specified securities,
- Daily price bands of 10% (either way) on another set of specified securities,
- Price bands of 20% (either way) on all remaining securities (including debentures, warrants, preference shares etc. which are traded on CM segment of NSE),
- No price bands are applicable on scrips on which derivative products are available or on scrips included in indices on which derivatives products are available.

For auction market the price bands of 20% are applicable. In order to prevent members from entering orders at non-genuine prices in these securities, the Exchange has fixed operating range of 20% for such securities.

Demat Trading

A depository holds securities in dematerialised form. It maintains ownership records of securities in a book entry form, and also effects transfer of ownership through book entry. Though, the investors have a right to hold securities in either physical or demat form, SEBI has made it compulsory that trading in securities should be only in dematerialised form. This was initially introduced for institutional investors and was later extended to all investors. The companies, which fail to establish connectivity with both the depositories on the scheduled date as announced by SEBI, their securities are traded on the 'trade for trade' settlement window of the exchanges.

At the end of March 2004, the number of companies connected to NSDL and CDSL were 5,212 and 4,720, respectively. The number of dematerialised securities have increased from 76.9 billion at the end of March 2003 to 97.7 billion at the end of March 2004. During the same period the value of dematerialised securities has increased from Rs. 5,875 billion to Rs. 10,701 billion. Since the introduction of the depository system, dematerialisation has progressed at a fast pace and has gained acceptance amongst the market participants. All actively traded scrips are held, traded and settled in demat form. The details of progress in dematerialisation in two depositories, *viz*. NSDL and CDSL, are presented in Table 4-4a.

Table 4-4a: Progress of Dematerialisation: NSDL & CDSL

Parameters of Progress	NSDL		CDSL	
	March-03	March-04	March-03	March-04
Companies — Agreement signed	4,803	5,216	4,628	4,810
Companies — Available for Demat	4,761	5,212	4,628	4,720
Market Cap. of Companies available (Rs. Bn.)	6,005	11,071	362	1,064
Number of Depository Participants	213	214	189	211
Number of DP Locations	1,718	1,719	414	441
Number of Stock Exchanges Connected	9	9	17	17
No. of Investor Accounts	3,795,604	5,203,393	247,369	629,159
Demat Quantity (Mn.)	68,757	83,690	8,210	14,010
Demat Value (Rs. Bn.)	5,513	9,662	362	1,039

Source: NSDL & CDSL.

Charges for Services

As per SEBI Regulations, every stockbroker, on the basis of his total turnover, is required to pay annual turnover charges, which are to be collected by the stock exchanges. In order to share the benefits of efficiency, NSE has been reducing the transaction charges over a period of time. At present a trading member is required to pay the exchange transaction charges @0.004% (Rs. 4 per Rs.1 lakh) of the turnover.

The maximum brokerage chargeable by a broker is fixed at 2.5% of the contract price, exclusive of statutory levies like, SEBI turnover fee, service tax, and stamp duty. This is inclusive of the brokerage charged by the sub-broker, which should not exceed 1.5% of contract price. However, the brokerage charged varies from clients to clients. There are instances wherein brokerage as low as 0.15% has been charged.

Stamp duties are payable as per the rates prescribed by the relevant states. In Maharashtra, it is charged @ Re. 1 for every Rs. 10,000 or part thereof (i.e. 0.01%) of the value of security at the time of its purchase/sale as the case may be. However, if the securities are not delivered, it is levied @ 20 paise for every Rs. 10,000 or part there of (0.002%).

The depositories provide depository services to investors through depository participants (DPs). They do not charge the investors directly, but charge their DPs who are free to have their own free structure for their clients. The depositories, however, have been reducing their charges from DPs over a period of time. The charges levied on DPs by NSDL and CDSL are presented in Table 4-4b.

Table 4-4b: Service Charges levied by the Depositories (March 2004)

Depositories Services	NSDL	CDSL
Dematerialisation	Nil	Nil
Rematerialisation	Rs. 10 per certificate	Rs. 10 per certificate
Custody	Rs. 6 per ISIN per annum	Nil
Settlement	Rs. 8 per debit instruction	0.01% of the transaction value subject to a minimum of Rs. 5 and a maximum of Rs. 12 per debit instruction
	Nil for credit instruction	Nil for credit instruction
Pledge Creation	Rs. 25 per instruction	Rs. 12 per instruction
Pledge Closure	Nil	Rs. 12 per instruction
Pledge Invocation	Nil	Nil
Securities Borrowing	Rs. 25 per instruction	Not available

Source: NSDL & CDSL.

Institutional Trades

Trades by Mutual Funds and Foreign Institutional Investors are termed as Institutional trades, Transactions by MFs in the secondary market are governed by SEBI (Mutual Funds) Regulations, 1996. A MF under all its schemes is not allowed to own more than 10% of any company's paid-up capital. They are allowed to do only 'delivery-based' transactions. A MF cannot invest more than 10% of the NAV of a particular scheme in the equity shares or equity related instruments of a single company.

The investments by FIIs are governed by the rules and regulations of the RBI and the SEBI. As per the RBI guidelines, each FII can invest up to 10% of the paid-up capital of a company, however, the total FII investment should not exceed 24%. This can, however, be increased up to the sectoral cap/statutory ceiling, as applicable, provided the Indian company's board of directors and also its general body approve it. As per the SEBI guidelines, all FII transactions are to be routed through a registered member of a recognised stock exchange in India. FIIs have to necessarily give and take delivery of securities sold and bought.

Index Services

A stock index consists of a set of stocks that are representative of either the whole market, or a specified sector. It helps to measure the change in overall behaviour of the markets or sector over a period of time. NSE and CRISIL, in technical partnership with Standard & Poor's, have jointly promoted the India Index Services & Products Limited (IISL). The IISL provides stock index services by developing and maintaining an array of indices for stock prices. IISL is the only specialized organization of this type in the country. IISL maintains a number of equity indices comprising broad-based benchmark indices, sectoral indices and customised indices. The most popular index is the S&P CNX Nifty, followed by the CNX Nifty Junior, S&P CNX Defty, S&P CNX 500, CNX Midcap 200, S&P CNX Industry indices (for 73 industries) and CNX IT Index. These indices are monitored and updated dynamically and are reviewed regularly. These are maintained professionally to ensure that it continues to be a consistent benchmark of the equity markets, which involves inclusion and exclusion of stocks in the index, day-to-day tracking and giving effect to corporate actions on individual stocks.

S&P CNX Nifty is a well diversified 50 stock index accounting for 24 sectors of the economy. It accounted for 56.97% of total market capitalisation of CM segment of NSE as at end-March 2004. The total traded value of all Nifty stocks is approximately 77% of the traded value of all the stocks on the NSE. CNX Nifty Junior accounts for 11.6% of the market capitalization in NSE.

After carrying out a number of iterations, it was felt that Indian stock market had comfortable liquidity at around 50 stocks. Beyond 50, the liquidity levels became increasingly lower. Hence the index set size of 50 stocks was chosen. The stocks included in the Nifty index are selected on the basis of their impact cost, liquidity and market capitalisation. The composition of Nifty is reviewed at every quarter. The index is calculated afresh every time a trade takes place in any of the index stock. It is calculated on-line and disseminated over trading terminals across the country. Annexures 4-2 to 4-5 present the market capitalisation, weightage, beta and monthly returns of the S&P CNX Nifty stocks for the period April 2003-March 2004.

S&P CNX Nifty was introduced considering the fact that it would not only be used for reflecting the stock market behavior accurately, but also for modern applications such as index funds and index derivatives. It has become the most popular and widely used stock market indicator in the country.

Index futures and options have been launched based on S&P CNX Nifty index and on CNX IT Index. Futures contracts based on S&P CNX Nifty have also been launched at the derivative exchange at Singapore. It is the only Indian index-based derivative product traded on a foreign exchange.

Market Outcome

Turnover – Growth and Distribution

Trading volumes in the equity segments of the stock exchanges have witnessed phenomenal growth over the last few years.

While it has increased from Rs. 10,233,820 million in 1998-99 to Rs. 28,809,900 million in 2000-01, it witnessed a slump during 2001-02 registering volumes of only Rs. 8,958,180 million. The traits of recovery in the market are visibly seen for the last two years. The volumes have risen to Rs. 9,689,093 million in 2002-03 and further to Rs. 16,204,977 million in 2003-04. In percentage terms there has been a growth of 67.29% in 2003-04 over the previous year's volume (Table 4-5).

The monthly trading value of the CM segment on NSE increased from Rs. 489,713 million in April 2003 to Rs. 1,048,765 million in March 2004 (Table 4-6). The daily turnover on NSE averaged around Rs. 43,289 million in this year.

Most of the exchanges saw large scale declines in their trading volumes in the year 2003-04 with nine exchanges viz., Calcutta, Uttar Pradesh, Ahmedabad, Delhi, Pune, ICSE, Hyderabad, Vadodara and Magadh observing the highest decline. Five exchanges *viz.*, NSE, BSE, Bangalore, Madras and OTCEI were the only ones showing growth trends in this period. NSE consolidated its position further as the market leader by contributing about 67.8% of the total turnover. Since its inception in 1994, NSE has emerged as the favoured exchange among trading members. The consistent increase in popularity of NSE is clearly evident from Annexure 4-6, which presents business growth of CM segment of NSE. NSE now reports higher turnover from its trading terminals in most of the cities than their corresponding regional exchanges. The comparative picture of turnover of regional stock exchanges and turnover of NSE terminals

Table 4-5: Turnover on Stock Exchanges in India*

	Stock Exchanges	Turnover (Rs. Mn.)		Share in Turnover (%)	
		2002-03	2003-04	2002-03	2003-04
1	NSE	6,179,887	10,995,339	63.78	67.85
2	Mumbai	3,140,732	5,030,532	32.42	31.04
3	Calcutta	65,399	19,275	0.67	0.12
4	Uttar Pradesh	147,634	117,510	1.52	0.73
5	Ahmedabad	154,586	45,445	1.60	0.28
6	Delhi	111	34	0.00	0.00
7	Pune	18.1	0.0	0.00	0.00
8	Ludhiana	0.0	0.0	0.00	0.00
9	Bangalore	0.0	0.5	0.00	0.00
10	ICSE	648	0.5	0.01	0.00
11	Hyderabad	46.0	19.6	0.00	0.00
12	SKSE	0.0	0.0	0.00	0.00
13	Madras	0.0	1,008.9	0.00	0.01
14	Madhya Pradesh	0.0	0.0	0.00	0.00
15	Vadodara	25	1.4	0.00	0.00
16	OTCEI	1.0	157.6	0.00	0.00
17	Guwahati	0.5	0.0	0.00	0.00
18	Cochin	0.0	0.0	0.00	0.00
19	Magadh	5.1	0.7	0.00	0.00
20	Bhubaneshwar	0	0	0.00	0.00
21	Coimbatore	0	0	0.00	0.00
22	Jaipur	0	0	0.00	0.00
23	Mangalore	0	0	0.00	0.00
	Total	**9,689,093**	**16,204,977**	**100.00**	**100.00**

* Excludes turnover in WDM and derivatives segments of Exchanges.

Source: SEBI Annual Report 2003-04

Table 4-6: Stock Market Indicators - Monthly Trends on NSE and BSE

(Rs. Mn.)

Month	Turnover		Average Daily Turnover		Market Capitalisation (end of period)	
	NSE	BSE	NSE	BSE	NSE	BSE
Apr-03	489,713	208,226	24,486	10,411	5,306,304	5,725,255
May-03	546,902	225,104	26,043	10,719	6,120,303	6,609,816
Jun-03	615,857	249,329	29,327	11,873	6,785,500	7,343,889
Jul-03	788,776	329,757	34,295	14,337	7,191,449	7,759,958
Aug-03	853,466	363,343	42,673	18,167	8,366,505	9,051,925
Sep-03	1,033,456	446,978	46,975	20,317	8,634,805	9,330,868
Oct-03	1,155,953	530,654	50,259	23,072	9,267,479	10,004,941
Nov-03	928,858	450,292	46,443	22,515	9,795,410	10,658,531
Dec-03	1,103,726	548,155	50,169	24,916	11,670,287	12,733,610
Jan-04	1,342,687	656,203	63,937	31,248	11,161,500	12,068,544
Feb-04	1,087,181	514,635	57,220	27,086	11,109,543	11,962,215
Mar-04	1,048,765	507,856	47,671	23,084	11,209,760	12,012,068
2003-04	**10,995,339**	**5,030,532**	**43,289**	**19,805**	**11,209,760**	**12,012,068**

Source: NSE & Monthly SEBI Bulletins.

at different cities is presented in Table 4-7. Not only in the national arena, but also in the international markets, NSE has been successful in creating a niche for itself. According to reports of FIBV, in the calendar year 2003, in terms of trading intensity NSE ranked 3rd next only to NASDAQ and NYSE.

Table 4-7: Turnover on NSE Terminals vs. Turnover on other Exchanges in the City

(Rs. Mn.)

Stock Exchange/Exchange City		2002-03		2003-04	
		NSE	Exchange	NSE	Exchange
1	Mumbai (BSE)	2,472,423	3,140,732	4,845,908	5,030,532
2	Mumbai (OTCEI)	2,472,423	1	4,845,908	158
3	Mumbai (ICSE)	2,472,423	648	4,845,908	1
4	Calcutta	743,670	65,399	1,446,259	19,275
5	Delhi	1,135,646	111	1,800,806	34
6	Ahmedabad	141,059	154,586	329,020	45,445
7	Uttar Pradesh (Kanpur)	46,221	147,634	54,503	117,510
8	Ludhiana	27,102	0	47,357	0
9	Pune	65,340	18	106,217	0
10	Bangalore	155,440	0	193,970	1
11	Hyderabad	197,777	46	265,204	20
12	Cochin	54,160	0	77,865	0
13	Chennai (Madras)	221,703	0	316,430	1,009
14	Madhya Pradesh (Indore)	52,620	0	111,302	0
15	Magadh (Patna)	7,125	5	10,167	1
16	Vadodara	42,240	26	77,505	1
17	Coimbatore	34,070	0	49,387	0
18	Bhubaneshwar	3,077	0	2,720	0
19	Jaipur	82,078	0	147,566	0
20	Guwahati	2,792	5	295	0
21	Mangalore	7,570	0	11,057	0
22	Rajkot	16,897	0	26,975	0

Note: The NSE figures relate to its volumes in the CM segment (not WDM and Derivatives segments) only from the concerned city, while all other figures represent all India turnover of the concerned exchange.

Source: SEBI & NSE.

The sectoral distribution of turnover has undergone significant change over last few years. Table 4-8 presents the share of top '50' companies at NSE, classified according to different sectors, in turnover and market capitalisation. The share of manufacturing companies in trading volume of top '50' companies, which was nearly more than 23% in 1998-99, witnessed a sharp decline to 2.03% 2002-03. Further, in 2003-04, their share has risen sharply to 37.66%. The share of information technology (IT) companies in trading volume has fallen from 74.71% in 2002-03 to only 31.04% in 2003-04.

Table 4-8: Distribution of Turnover and Market Capitalisation of Top '50' Companies listed at NSE

Companies	Turnover																	
	Amount (Rs. mn.)									% to Total								
	1995-96 (Nov.-Mar)	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	1995-96 (Nov.-Mar)	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Manufacturing	499,094	1,311,094	1,326,775	882,241	1,397,421	1,247,790	284,260	111,930	3,289,182	79.29	45.88	37.43	23.13	18.78	9.85	6.05	2.03	37.66
Financial Services	108,587	1,000,375	540,709	265,005	343,082	175,590	49,170	142,040	1,164,357	17.25	35.01	15.25	6.95	4.61	1.39	1.05	2.57	13.33
F.M.C.G.	7,039	438,181	1,551,480	942,404	380,109	324,380	132,580	44,630	194,259	1.12	15.33	43.77	24.71	5.11	2.56	2.82	0.81	2.22
I.T.	0	1,591	25,793	1,381,476	3,693,152	9,571,590	3,128,510	4,127,810	2,711,187	0.00	0.06	0.73	36.22	49.63	75.56	66.58	74.71	31.04
Pharmaceuticals	1,576	4,085	19,762	90,295	482,304	210,850	225,380	95,600	229,623	0.25	0.14	0.56	2.37	6.48	1.66	4.80	1.73	2.63
Others	13,130	102,294	80,484	252,850	1,144,814	1,138,030	878,840	1,002,930	1,146,357	2.09	3.58	2.27	6.63	15.39	8.98	18.70	18.15	13.12
Total	**629,426**	**2,857,618**	**3,545,003**	**3,814,271**	**7,440,881**	**12,668,230**	**4,698,740**	**5,524,940**	**8,734,966**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Companies	Market Capitalisation																	
	Amount (Rs. mn.)									% to Total								
	1995-96 (Nov.-Mar)	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	1995-96 (Nov.-Mar)	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
Manufacturing	1,395,458	1,621,883	1,773,710	1,065,715	1,516,922	967,180	561,090	333,830	2,621,234	62.05	62.18	54.95	34.39	20.53	20.79	12.41	8.03	31.13
Financial Services	256,555	290,827	340,613	183,338	362,092	364,600	424,850	452,830	1,045,514	11.41	11.15	10.55	5.92	4.90	7.84	9.39	10.89	12.41
F.M.C.G.	226,476	298,883	591,987	907,729	795,220	804,970	565,070	378,260	598,188	10.07	11.46	18.34	29.29	10.76	17.30	12.49	9.09	7.10
I.T.	0	0	84,343	457,416	3,064,181	1,060,950	801,450	760,170	811,075	0.00	0.00	2.61	14.76	41.48	22.80	17.72	18.28	9.63
Pharmaceuticals	41,683	47,279	81,758	242,208	193,237	210,350	323,140	275,740	425,007	1.85	1.81	2.53	7.82	2.62	4.52	7.14	6.63	5.05
Others	328,801	349,338	355,454	242,718	1,456,091	1,245,020	1,847,200	1,958,270	2,920,559	14.62	13.39	11.01	7.83	19.71	26.76	40.84	47.08	34.68
Total	**2,248,972**	**2,608,210**	**3,227,864**	**3,099,124**	**7,387,742**	**4,653,070**	**4,522,800**	**4,159,100**	**8,421,576**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

F.M.C.G. Fast Moving Consumer Goods

I.T. Information Technology

The share of top '5' securities in turnover has been on a declining trend since the past few years from 52.2% in 2000-01 to 31.04% in 2003-04 (Table 4-9). Trading in top '100' securities also has witnessed a decline from 97.5% to 91.03% over the same period. Member-wise distribution of turnover indicates increasing diffusion of trades among a larger number of trading members over the years. During 2003-04, top '5' members accounted for only 11.6% of turnover, while top '100' members accounted for 61.4% of total turnover.

Table 4-9: Percentage Share of Top 'N' Securities/Members in Turnover of NSE

	No. of Securities/Members				
	5	10	25	50	100
Securities					
1994-95 (Nov.-Mar.)	48.77	55.92	68.98	81.14	91.07
1995-96	82.98	86.60	90.89	93.54	95.87
1996-97	84.55	91.96	95.70	97.03	98.19
1997-98	72.98	85.17	92.41	95.76	97.90
1998-99	52.56	67.11	84.71	92.03	95.98
1999-00	39.56	59.22	82.31	88.69	93.66
2000-01	52.15	72.90	88.93	94.57	97.46
2001-02	44.43	62.92	82.24	91.56	95.91
2002-03	40.58	55.41	77.8	89.16	95.38
2003-04	31.04	44.87	64.32	79.44	91.03
Members					
1994-95 (Nov.-Mar.)	18.19	26.60	44.37	61.71	81.12
1995-96	10.65	16.56	28.61	41.93	58.59
1996-97	5.94	10.08	19.67	30.57	45.95
1997-98	6.29	10.59	18.81	29.21	44.24
1998-99	7.73	11.96	20.77	31.66	47.02
1999-00	7.86	12.99	22.78	34.41	49.96
2000-01	7.78	12.76	23.00	33.86	48.79
2001-02	7.14	12.29	23.63	36.32	53.40
2002-03	10.26	16.41	29.07	42.49	59.15
2003-04	11.58	17.36	30.34	44.05	61.37

Source: NSE.

Turnover in India seems to be more concentrated in comparison to that in other comparable markets (international) as may be seen from Table 4-10. Ten most active index securities accounted for 44.2% of turnover in India and top ten index securities in terms of equity base accounted for 36.5% of market capitalisation at the end of December 2003.

Table 4-10: Market Concentration in Emerging Asian Markets: End December 2003

(In per cent)

Market	Index Stock's Share of		Share of 10 Largest Index Stock in Market Capitalisation	Share of 10 Most Active Index Stocks in Turnover
	Market Capitalisation	Turnover		
China	60.3	46.5	27.1	12.7
Thailand	70.1	56.2	42.0	25.5
Taiwan	72.5	58.9	34.0	20.7
Korea	84.5	58.6	43.8	24.0
Malaysia	67.2	39.7	31.2	16.5
India	75.0	74.2	36.5	44.2

Source: S&P Emerging Stock Markets Factbook 2004

At the end of March 2004, NSE has permitted 70 members on its CM segment the web based access to its trading system. These members in turn have registered 413,454 clients for web based access. About 235 lakh trades for Rs. 379,451 million constituting 3.45% of the total trading volume, were routed and executed through the internet. NEAT*iXS* a product of the NSE.IT helps brokerage firms to conduct internet trading, which can be accessed easily using standard browsers. It provides real time on-line market information including stock quotes and order screens, allowing investors to place orders from their personal computers. The success of internet trading in India, however, will depend on expansion of internet bandwidth, which is necessary for faster execution of trades.

Market Capitalisation

The market capitalisation for securities available for trading on the equity segment of NSE and BSE witnessed enormous growth over the previous years (Table 4-6). The market capitalisation of NSE and BSE as at end March 2004 amounted to Rs. 11,209,760 million and Rs. 12,012,068 million respectively.

A sharp change in the shares of different sectors in market capitalisation is observed over the years (Table 4-8). Sectors like manufacturing, which used to dominate in terms of market capitalization with more than 35% in the year 1998-99, have shown declines in 2001-02 and 2002-03. However, they witnessed a turnaround in 2003-04 having registered 31.13% share in market capitalization of the top 50 companies.

Prices

The year 2003-04 proved to be good for all the major indices in the world. The S&P CNX Nifty index, which remained subdued for the early part of 2003, rose sharply from August 2003 onwards to reach a peak of 2014.65 in January 2004. The index rose by 81.14% in 2003-04 as compared to its previous years close (Table 4-11). Similarly BSE also gave returns to the tune of 83.38% in the said period.

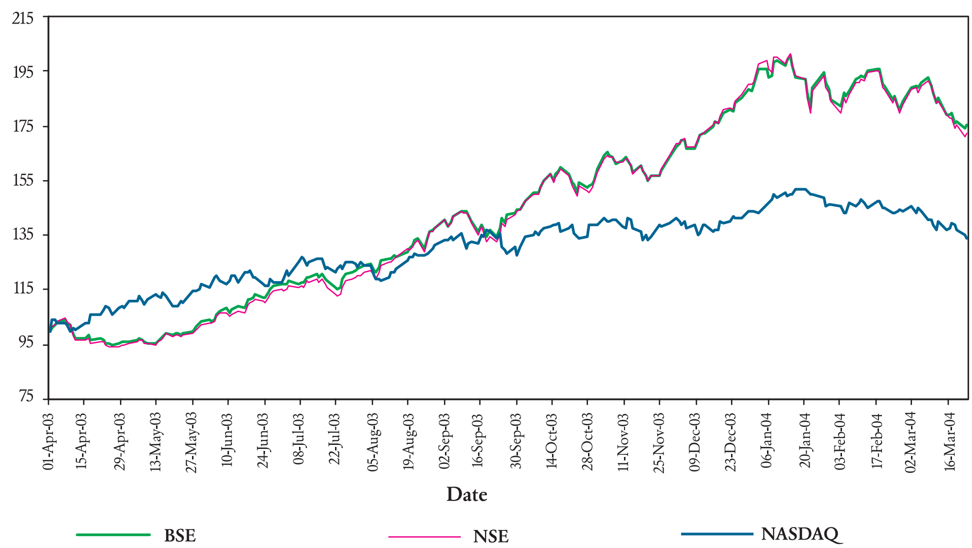
Table 4-11: Movement of Select Indices on Indian/Foreign Markets

Index	31.03.2002	31.03.2003	31.03.2004	Change during 2002-03 (%)	Change during 2003-04 (%)
S&P CNX Nifty	1129.55	978.20	1771.90	-13.40	81.14
BSE Sensex	3469.35	3048.72	5590.60	-12.12	83.38
Hang Seng	11032.92	8634.45	12681.67	-21.74	46.87
Dow Jones	10403.94	7992.13	10381.70	-23.18	29.90
Nasdaq	1845.35	1341.17	2000.63	-27.32	49.17
Nikkei	11024.94	7972.71	11715.39	-27.68	46.94
FTSE	5271.80	3613.30	4417.50	-31.46	22.26

Source: NSE, BSE & Bloomberg.

Of late, the market participants, analysts and investors have related the developments in domestic equity markets with the NASDAQ. NASDAQ index has come to symbolise the new economy or technology stocks. Chart 4-1 plots the daily movement in S&P CNX Nifty, Sensex and NASDAQ index. During most part of the year, the stock prices in India are synchronized with that in Nasdaq.

Chart 4-1: Movement of S&P CNX Nifty, BSE and NASDAQ, 2003-04



Volatility

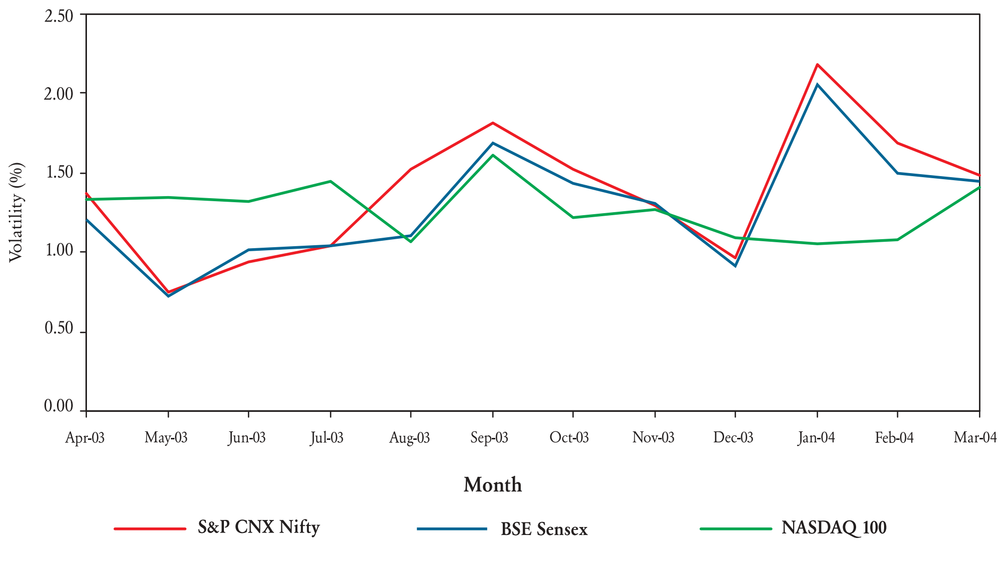
The stock markets witnessed maximum volatility in January 2004 due to the fear of possible ban on the use of Participatory Notes (P-Notes), wherein it was 2.18% and 2.05% on Nifty and Sensex, respectively (Table 4-12). However, in May 2003 lowest volatility was witnessed at 0.74% and 0.72% for S&P CNX Nifty and Sensex respectively. Chart 4-2 presents the volatility of S&P CNX Nifty, Sensex and NASDAQ.

Table 4-12: Stock Market Index, Volatility and P/E Ratio: April 2003 to March 2004

Month/Year	S&P CNX Nifty			Sensex		
	Index	Volatility (%)**	P/E Ratio*	Index	Volatility (%)**	P/E Ratio*
Apr-03	934.05	1.38	13.14	2,959.79	1.21	12.88
May-03	1006.80	0.74	11.65	3,180.75	0.72	13.94
Jun-03	1134.15	0.94	12.95	3,607.13	1.02	14.70
Jul-03	1185.85	1.04	12.84	3,792.61	1.04	15.11
Aug-03	1356.55	1.52	14.95	4,244.73	1.36	15.55
Sep-03	1417.10	1.81	15.43	4,453.24	1.69	16.23
Oct-03	1555.90	1.52	17.15	4,906.87	1.44	17.55
Nov-03	1615.25	1.30	17.81	5,044.82	1.31	16.01
Dec-03	1879.75	0.96	20.73	5,838.96	0.91	18.86
Jan-04	1809.75	2.18	19.96	5,695.67	2.05	18.36
Feb-04	1800.30	1.69	19.74	5,667.51	1.50	18.24
Mar-04	1771.90	1.48	20.70	5,590.60	1.45	18.57

* As on the last trading day of the month.
** Volatility is calculated as standard deviation of the natural log of returns in indices for the respective period.
Source: SEBI & NSE.

Chart 4-2: Stock Market Volatility, 2003-04



The volatility across different sectoral indices varied widely (Table 4-13). For the month of April 2003, while the Nifty volatility was 1.38%, the volatility of CNX IT Index was 5.20%.

Table 4-13: Performance of Sectoral Indices

Month/Year	Monthly Closing Prices						Average Daily Volatility (%)					
	S&P CNX Nifty	CNX FMGG	CNX IT	CNX Finance	S&P CNX Petro-chemicals	S&P CNX Pharma-ceutical	S&P CNX Nifty	CNX FMGG	CNX IT	CNX Finance	S&P CNX Petro-chemicals	S&P CNX Pharma-ceutical
Apr-03	934.05	1952.08	11351.13	299.91	1228.08	1386.13	1.38	1.35	5.20	1.16	1.76	0.99
May-03	1006.80	2083.43	10993.40	336.38	1341.90	1477.98	0.92	0.85	2.27	1.30	1.38	0.80
Jun-03	1134.15	2303.28	13002.42	371.54	1465.64	1719.37	0.94	1.10	1.68	1.01	1.96	1.38
Jul-03	1185.85	2243.25	13675.94	433.54	1604.18	1862.79	1.05	1.37	2.99	1.94	1.44	1.31
Aug-03	1356.55	2490.61	15056.30	465.01	1818.26	2175.33	1.51	1.52	2.37	2.71	1.40	1.55
Sep-03	1417.10	2432.13	17315.55	491.29	2016.94	2165.53	1.81	1.92	2.87	1.84	2.23	1.81
Oct-03	1555.90	2417.39	18550.60	568.17	2202.26	2323.96	1.53	1.34	2.50	2.28	1.93	1.39
Nov-03	1615.25	2457.27	20644.80	623.54	2234.44	2459.00	1.30	1.06	1.85	1.95	1.68	1.33
Dec-03	1879.75	2863.38	23542.27	721.31	2627.16	2785.15	0.97	1.14	1.65	1.76	1.61	1.24
Jan-04	1809.75	2751.38	21370.45	717.53	2527.41	2619.23	2.18	1.70	2.34	2.86	2.39	1.61
Feb-04	1800.30	2694.83	20599.20	687.20	2508.53	2624.23	1.69	1.25	1.96	1.69	1.97	1.25
Mar-04	1771.90	2464.11	19372.90	670.46	2441.24	2508.65	1.48	1.15	1.93	1.38	1.89	0.96

Source: IISL.

Returns in Indian Market

The performance of S&P CNX Nifty and various other indices over different periods of last one month to 12 months is presented in Table 4-14. It reveals that the indices have performed with varying degrees over varying periods. A common phenomenon observed was that some of the indices provided substantial gains in the longer period of 6 months and one year, but did not give encouraging returns for the shorter periods of 1 month, 3 months. The investments made in S&P CNX Nifty securities in February 2004 did not yield having positive returns, however the investments in the same a year back (March 2003) gave out positive returns of 81.14%. CNX Midcap 200 and CNX IT index proved to follow the same trend as of Nifty.

Table 4-14: Performance of Select Indices as at end March 2004

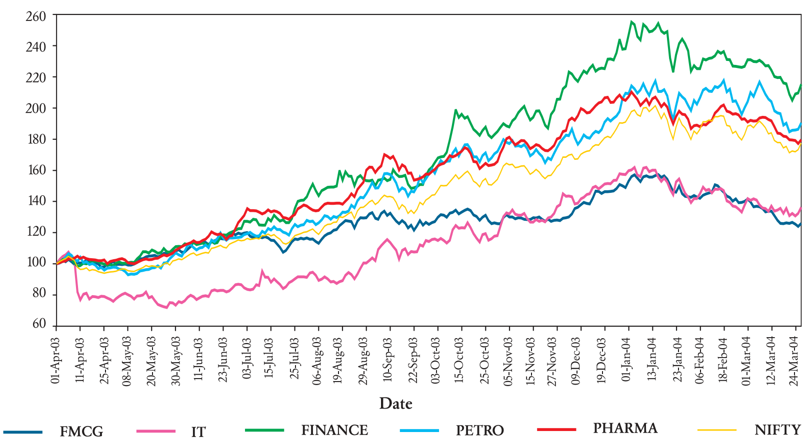
(In per cent)

	1 month	3 months	6 months	1 year
S&P CNX Nifty	-1.58	-5.74	25.04	81.14
S&P CNX 500	1.02	-4.82	28.01	107.81
S&P CNX Defty	1.13	-2.47	30.12	95.98
CNX Nifty Junior	1.85	-0.40	38.06	169.31
CNX Midcap 200	-2.41	-10.67	29.02	139.72
CNX IT Index	-5.95	-17.71	11.88	29.44
CNX Bank Index	8.35	9.98	43.94	134.56

Source: IISL

The comparative performance of five major sectoral indices, *viz*. S&P CNX Petrochemicals Index, S&P CNX Finance Index, CNX FMCG Index, S&P CNX Pharma Index, and CNX IT Index, with that of S&P CNX Nifty Index for the year 2003-04 is presented in Chart 4-3. It is observed that during the entire period, CNX Finance Index, S&P CNX Petrochemicals Index and the S&P CNX Pharma Index out-performed the Nifty. The CNX IT Index, was the worst performer during the whole year. CNX FMCG Index though mirrored the movement of Nifty during the first half of the year. However, it under performed the benchmark index 'Nifty' during the later half. The monthly closing prices of these sectoral indices are presented in Table 4-13.

Chart 4-3: Movement of Nifty and Sectoral Indices, 2003-04



Exchange Traded Funds

The first ETF in India, the "Nifty BeES (Nifty Benchmark Exchange Traded Scheme) is based on S&P CNX Nifty. It was launched in December 2001 by Benchmark Mutual Fund. It is bought and sold like any other stock on NSE and has all characteristics of an index fund. As on March end 2003, there were five ETFs launched on Nifty, Junior Nifty, CNX Bank Index namely, the Nifty BeES, Junior Nifty BeES, Bank BeES, Liquid BeES and SUNDER (S&P CNX Nifty UTI Notional Depository Receipts Scheme). Prudential ICICI launched an ETF based on BSE Sensex, namely SPICE (Sensex Prudential ICICI Exchange Traded Fund).

During the month of March 2004, 637 trades involving 0.13 million Nifty BeES were transacted. The trading value was Rs. 22.42 million. Details about ETFs are available in Chapter 3.

Liquidity

Many listed securities on stock exchanges are not traded actively. The percentage of companies traded on BSE was quite low at 35.93% as compared with 97.71% on NSE in March 2004 (Table 4-15). Only 75.10% of companies traded on BSE were traded for more than 100 days during 2003-04, while that on NSE, it has been 92.16% (Table 4-16). Trading took place for less than 100 days in case of 24.9% of companies traded at BSE during the year, and for less than 10 days in case of 5.6% of companies traded.

Table 4-15: Trading Frequency on NSE & BSE

Month/Year	NSE			BSE		
	Companies Available for Trading*	Companies Traded	% of Traded to Available for Trading	Listed Securities	Traded Securities	% of Traded to Listed Securities
Apr-03	771	749	97.15	7,338	2,094	28.54
May-03	769	743	96.62	7,335	2,173	29.63
Jun-03	769	744	96.75	7,349	2,245	30.55
Jul-03	774	755	97.55	7,360	2,312	31.41
Aug-03	775	752	97.03	7,347	2,363	32.16
Sep-03	774	761	98.32	7,354	2,357	32.05
Oct-03	776	728	93.81	7,343	1,692	23.04
Nov-03	777	738	94.98	7,353	1,697	23.08
Dec-03	779	754	96.79	7,368	2,230	30.27
Jan-04	786	761	96.82	7,305	2,118	28.99
Feb-04	788	763	96.83	7,332	2,075	28.30
Mar-04	787	769	97.71	7,264	2,610	35.93

Source: SEBI and NSE.

* At the end of the month. Includes listed/permitted to trade companies but excludes suspended companies.

Table 4-16: Frequency Distribution of Companies Traded at NSE and BSE

No. of Days Traded	No. of Companies Traded at NSE		No. of Companies Traded at BSE	
	2003-04	% to Total	2003-04	% to Total
Above 100 days	741	92.16	1,960	75.10
91-100 days	7	0.87	65	2.49
81-90 days	8	1.00	54	2.07
71-80 days	3	0.37	49	1.88
61-70 days	2	0.25	46	1.76
51-60 days	11	1.37	58	2.22
41-50 days	8	1.00	61	2.34
31-40 days	2	0.25	56	2.15
21-30 days	7	0.87	52	1.99
11-20 days	8	1.00	63	2.41
1-10 days	7	0.87	146	5.59
Total	**804**	**100.00**	**2,610**	**100.00**

Source: SEBI & NSE.

Institutional Transactions

Though the volume of trades done by FIIs is not very high as compared to other market participants, they are the driving force in determination of market sentiments and price trends. This is so because, they do only delivery-based trades and they are perceived to be infallible in their assessment of the market. During 2003-04, the investments made by FIIs were a total turnaround compared to its performances in the earlier years. The strong risk adjusted returns of the Indian market have led FIIs to make more allocations to India. The FIIs registered a net investment of Rs. 457,645 million. The FIIs net investment was highest during the month of October 2003, when they made net purchases for a peak of Rs. 67,228 million (Table 4-17). The cumulative net FIIs investment touched US$ 25.75 billion by end-March 2004. As on end March 2004, the total number of FIIs registered with SEBI amounted to 540 against 502 in March 2003.

Table 4-17: Trends in FIIs Investment

Period	Purchases (Rs. Mn.)	Sales (Rs. Mn.)	Net Investment (Rs. Mn.)	Cumulative Net Investment (Rs. Mn.)	Net Investment (US$ Mn.)	Cumulative Net Investment (US$ Mn.)
1994-95	**76,311**	**28,348**	**47,963**	**47,963**	**1,528**	**3,167**
1995-96	**96,935**	**27,516**	**69,420**	**117,384**	**2,036**	**5,202**
1996-97	**155,539**	**69,794**	**85,745**	**203,129**	**2,432**	**7,634**
1997-98	**186,947**	**127,372**	**59,574**	**262,703**	**1,650**	**9,284**
1998-99	**161,150**	**176,994**	**-15,845**	**246,857**	**-386**	**8,898**
1999-00	**568,555**	**467,335**	**101,219**	**348,077**	**2,339**	**11,237**
2000-01	**740,506**	**641,164**	**99,342**	**447,419**	**2,159**	**13,396**
2001-02	**499,199**	**411,650**	**87,552**	**534,972**	**1,846**	**15,242**
2002-03	**470,601**	**443,710**	**26,889**	**561,861**	**562**	**15,804**
2003-04	**1,448,575**	**990,940**	**457,645**	**1,019,506**	**9,949**	**25,754**
Apr-03	58,782	48,855	9,925	571,786	208	16,012
May-03	73,855	43,253	30,605	602,391	645	16,449
Jun-03	78,353	43,729	34,617	637,008	734	16,746
Jul-03	85,501	63,892	21,609	658,617	462	17,854
Aug-03	88,475	66,205	22,275	680,892	480	18,335
Sep-03	122,705	80,952	41,755	722,647	907	19,242
Oct-03	152,122	84,895	67,228	789,875	1,466	20,708
Nov-03	111,240	75,300	35,941	825,816	788	21,496
Dec-03	149,161	85,343	63,819	889,635	1,404	22,900
Jan-04	176,520	137,827	38,693	928,328	850	23,749
Feb-04	159,618	132,887	26,735	955,063	587	24,336
Mar-04	192,243	127,802	64,443	1,019,506	1,418	25,754

Source: SEBI.

During 2003-04, the MFs have invested more funds in the debt instruments than equity instruments (Table 4-18). In the equity market, MFs were net buyers to the tune of Rs. 13,157 million during 2003-04. The months of April 2003, June 2003, September 2003, October 2003 and February 2004 witnessed the MFs in a selling spree in the equity, whereas in the debt instruments only February 2004 witnessed the MFs in selling mode.

Table 4-18: Trends in Transactions by Mutual Funds

(Rs. Mn.)

Month/Year	Equity			Debt			Total Net Purchases/ Sales
	Gross Purchase	Gross Sales	Net Purchases/ Sales	Gross Purchase	Gross Sales	Net Purchases/ Sales	
Apr-03	13,328	15,110	-1,772	40,190	22,676	17,514	**15,743**
May-03	22,182	21,420	762	54,950	28,409	26,541	**27,303**
Jun-03	19,975	21,931	-1,956	50,510	28,095	22,415	**20,458**
Jul-03	26,422	25,712	711	64,854	33,468	31,386	**32,097**
Aug-03	31,485	27,451	4,034	65,599	38,840	26,759	**30,793**
Sep-03	28,126	31,027	-2,901	58,968	42,170	16,798	**13,897**
Oct-03	33,623	35,572	-1,948	48,447	33,660	14,787	**12,838**
Nov-03	29,173	27,268	1,905	43,759	23,381	20,378	**22,283**
Dec-03	46,474	37,954	8,521	54,041	36,735	17,306	**25,828**
Jan-04	50,983	41,604	9,379	55,653	38,322	17,331	**26,710**
Feb-04	26,062	31,399	-5,337	31,841	35,128	-3,287	**-8,624**
Mar-04	39,878	38,106	1,760	62,887	43,808	19,079	**20,839**
2003-04	**367,711**	**354,554**	**13,157**	**631,699**	**404,692**	**227,007**	**240,164**

Source: SEBI.

ADR/GDR Prices

A comparison of the price of ADR/GDR of a company with the domestic price of its share gives an idea about the extent to which domestic price of the security is at premium/discount to the international price. The extent of divergence between the prices of ADRs/GDRs and the domestic prices of the companies constituting the Instanex Skindia index is presented in Table 4-19. RBI permitted two-way fungibility for ADRs/GDRs, which meant that the investors (foreign institutional or domestic) in any company that has issued ADRs/GDRs could freely convert the ADRs/GDRs into underlying domestic shares. They could also reconvert the domestic shares into ADRs/GDRs, depending on the direction of price change in the stock.

Table 4-19: Divergence between ADR/GDR Prices and Local Prices

(In per cent)

Company	Weight (%)	Premium/Discount to Local
Instanex Skindia	**100.00**	**15.75**
Bajaj Auto (G)	1.63	-4.21
Dr. Reddy's (A)	4.19	2.10
HDFC Bank (A)	6.28	16.30
Hindalco (G)	5.63	-0.59
ICICI Bank (A)	16.71	5.84
Infosys Tech (A)	18.54	48.54
ITC (G)	4.25	-1.87
L&T (G)	2.90	-1.42
MTNL (A)	3.55	24.08
Ranbaxy Labs (G)	5.43	-1.79
Reliance (G)	10.55	3.14
Satyam Computers (A)	5.94	35.40
State Bank of India (G)	7.95	10.47
VSNL (A)	3.96	0.75
Wipro (A)	2.49	33.24

Source: The Economic Times, August 31, 2004

Takeovers

In 2003-04, there were 65 takeovers under open category involving Rs. 15,948 million as against Rs. 63,891 million during the preceding year (Table 4-20). However, there were 171 takeovers under exempted category involving Rs. 14,357 million as against Rs. 24,284 million in the previous year.

Table 4-20: Substantial Acquisition of Shares and Takeovers

(Value in Rs. Mn.)

Year	Open Offers								Automatic Exemption	
	Objectives						Total		Number	Value of Shares Acquired
	Change in Control of Management		Consolidation of Holdings		Substantial Acquisition					
	Number	Value	Number	Value	Number	Value	Number	Value		
1994-95	0	0	1	1,140	1	42	2	1,182	—	—
1995-96	4	301	4	255	0	0	8	556	—	—
1996-97	11	118	7	783	1	23	19	924	—	—
1997-98	18	1,429	10	3,398	13	956	41	5,784	93	35,022
1998-99	29	997	24	4,163	12	3,271	65	8,430	201	18,881
1999-00	42	2,588	9	711	23	1,300	74	4,599	252	46,774
2000-01	70	11,404	5	1,890	2	425	77	13,719	248	48,732
2001-02	54	17,562	26	18,152	1	390	81	36,104	276	25,390
2002-03	46	38,144	40	25,733	2	14	88	63,891	238	24,284
2003-04	38	3,952	16	1,966	11	10,030	65	15,948	171	14,357
Total	**312**	**76,496**	**142**	**58,191**	**66**	**16,451**	**520**	**151,138**	**1,479**	**213,440**

Source: SEBI.

Performance of Brokers

As mentioned earlier, there were 9,368 trading members at the end of March 2004, however, the details of their performance are not readily available. A brief detail with respect to 799 members of NSE is presented in Table 4-21. It is observed that about 57% of the members had deployed a capital of less than Rs. 20 million at the end of March 2003, while 5% have deployed more than Rs. 100 million. Similarly about 52% of members had a turnover of less than Rs. 10,000 million during 2003-04, while about 6% had turnover of more than Rs. 10,000 crore.

Table 4-21: Distribution of Trading Members according to Capital/Turnover

Turnover (Rs. Mn.) (2003-04) / Capital (Rs. Mn.) as on March 31, 2003	≤10000	>10000-20000	>20000-30000	>30000-40000	>40000-50000	>50000-100000	>100000	Total
< 20	287	84	25	22	9	18	11	**456**
> 20 - 40	80	33	27	7	10	19	8	**184**
> 40 - 60	26	20	8	9	2	11	11	**87**
> 60 - 80	7	3	4	2	0	5	1	**22**
> 80 - 100	7	1	0	1	0	1	3	**13**
> 100	6	4	1	3	2	8	13	**37**
Total	**413**	**145**	**65**	**44**	**23**	**62**	**47**	**799**

Note: Turnover considered for the above computation is Capital Market Turnover only.

Box Item 4-1

Commodities Market

An important area wherein many new developments have taken place in the year 2003-04 has been the commodities futures market. The Government vide its notification on April 1, 2003 rescinded all its previous notifications which prohibited futures trading in a large number of commodities in the country. This was followed by a notification in May 2003 revoking the prohibition on non-transferable specific delivery forward contracts (i.e. merchandising contracts). These developments have set the stage for a prominent role for commodity futures trading which was in hibernation for four decades in the country. Based on the recommendation of the Forward Markets Commission (FMC) three exchanges were granted recognition *viz.*, National Multi Commodity Exchange (NMCE), Multi Commodity Exchange (MCX) and National Commodity and Derivatives Exchange (NCDEX).

An inter-ministerial task force, under the chairmanship of Wajahat Habibullah, was set up to look into the convergence of securities and commodity derivative markets. Even though there are some differences in commodity and financial derivatives markets, they have a close resemblance as far as trade practices and operations are concerned. The task force considered strengthening and restructuring the Forward Markets Commission or to institutionalise some form of coordination or convergence with the Securities Regulator, whose functions collide with the functions of the commodities derivatives regulator. Some of the observations made by the committee with regards to the gains from convergence are as given below[1].

(a) *Opportunity to speed up the development of the commodity market:* If derivatives in commodities resemble securities, then the challenge of obtaining sound institutions for trading commodity derivatives can be eased by using the stable and mature institutions that are in existence in the securities markets. Efforts can be speeded up if the institutions of the securities markets are used, which are available off the shelf. As a result, the modern market institutions would become available to farmers in record time. This in turn may help accelerate the growth of the agricultural sector.

(b) *Commodity derivatives resemble securities:* There are strong commonalities between commodity and securities derivatives. A commodity futures contract is tradable and fungible. If the commodity futures markets are used for purely *financial* purposes, then the knowledge and procedures for trading in securities is directly pertinent to trading in commodity futures. Thus, almost all commodity futures contracts are akin to securities; however there are certain differences with regard to delivery and settlement.

[1] Report of the inter-ministerial task force on convergence of securities and commodity derivative markets.

(c) *Economies of scale:* The securities infrastructure could be obtained for trading in commodity derivatives at a small incremental cost. Conversely, the viability of the new multi-commodity exchanges would be enhanced if they could trade derivatives on all the underlyings. This would serve to save capital, which would otherwise be required to create the desired institutional structure for the commodities sector. It is, however, quite possible that convergence would provide economies of scale to some of the leading stock/commodity exchanges, particularly, BSE and NSE.

(d) *Economies of scope:* In the risk management system, for each market, there is different clearing corporation. And a trader operating in different markets have to maintain separate collaterals across the markets. Hence, if a clearing corporation holds a single settlement fund, then it will benefit from diversification, as the collateral required in order to obtain a given level of safety will be lower. Existing SEBI and RBI rules prohibit such integration of the settlement guarantee fund. However, the basic opportunity to reduce the capital requirements of the clearing corporation in this fashion exists, and will be extended, if commodity markets are also brought alongside equities and debt.

(e) *Possibility of strengthening the commodity spot market:* If the commodity futures markets has surfeit of liquidity and price discovery in a transparent, anonymous, order matching environment, then this is likely to have a considerable impact upon the underlying spot market. To the extent that convergence helps speed up the migration of commodity futures markets into screen-based, anonymous order matching, this would thus indirectly assist in strengthening of agricultural spot markets.

(f) *Impact upon informal market:* Presently, a major problem faced with commodity futures trading is a substantial informal market, which is illegal under Indian law. There have been persistent problems in fully eliminating illegal trading given the limitations of the enforcement mechanism. The convergence approach offers the possibility of a market-based mechanism through which informal trading can be curbed. As the users would realize that sophisticated, liquid, low-cost platforms of the legal markets are better places to trade safely and at better prices, the incentive to trade in informal market would be reduced. Liquidity has a natural monopoly character, and once exchanges achieves a certain minimal 'critical mass' of liquidity, there are strong incentives for each user of the market to seek the liquidity of exchanges.

(g) *Consequences for Government:* Integration of commodity futures markets with the securities markets would not hinder Governments policies for the agriculture, instead they would provide Government with an early warning system. If shortages or gluts are expected to take place at a future date, this would be revealed in the futures price well ahead of time. This could be used by the Government to devise the policy measures in advance. ❑❑❑

Box Item 4-2

The New Pension System

A new pension system has been introduced for the central Government employees (excluding the armed forces) joining service with effect from January 1, 2004. The new system is based on a defined contribution wherein both employer and employees would make contributions. Every person who joins this system will be given an Individual Retirement Account (IRA) to which all such contributions would flow. This account will have two tiers: tier I and tier II. While no withdrawals should be allowed under tier I, no such restrictions would be imposed on the accumulations in tier II. It is tier I that should serve the real purpose of retirement, while tier II should be just like a savings account with investment options.

The new system proposes to attract the best global fund managers and adopt the best global regulatory practices. Currently, MF managers are allowed to invest abroad within certain overall limits. They are allowed to invest in foreign companies that have certain minimum investment in an Indian subsidiary. However, the ceiling on the funds that a pension fund manager can invest abroad is expected to be determined on the basis of best global practice.

There are four important key actors, namely, the regulator, fund manager, central record-keeping agency and the network of agents, called points of presence for collecting funds, involved in the system. A brief of them is as given herewith:

1. A new regulatory agency, the Pension Fund Regulatory and Development Authority (PFRDA) has been created in order to perform regulatory and developmental functions. As with SEBI and IRDA, PFRDA has been created by an administrative order. PFRDA's activities include contracting for the CRA, choosing fund managers, setting up regulatory requirements for fund management, reaching out into the unorganized sector, and establishing links between the CRA and Government.

2. The Central record-keeping agency (CRA) as the name suggests should be responsible for keeping records of all transactions and maintenance of individual retirement accounts. The PFRDA has to ensure that there is no abuse of this power. The CRA needs to ensure that people wanting to switch from one pension fund manager to another, as also between investment plans are able to do so promptly and cost-effectively.

3. There will be a number of pension fund managers each of whom has to offer three options: safe, balanced and risky. PF managers will be guided by investor's preferences. If an investor does not specify any investment option, safe option will be considered the default option. To give psychological

satisfaction to the account holders, it is also proposed that one of the fund managers should be from the Government, who will be on the same footing as private fund managers. However, in such a case, there is a possibility of potentials conflict of interest between the fund manager and the regulater.

4. Points of presence will be the agencies/organisations one can approach to open an account and make deposits. POPs will collect money and speedily transfer the money and the information to the CRA. The underlying logic of allowing banks and post offices that already have well-developed network of branches is to minimize the transactions costs so that such costs do not destroy the accumulation mechanism.

This new pension system envisages harnessing many of the strengths of the India's financial system. It is expected that existing bank branches (regulated by RBI) and post offices would offer access to these services, so as to avoid the cost of building up a new branch network. The pension fund managers would be prominent users of the existing asset markets in the country, including the markets for government bonds, corporate bonds, equity and the currency spot and derivatives. PFRDA is expected to play a synergetic role coordinating with SEBI, RBI and IRDA in effecting a new leap for India's pension sector. The new system for pensions is also expected to create a new class of large institutional investors who would participate on all the asset markets.

Reference:

The Economic Survey 2003-04.

Economic and Political Weekly, June 12, 2004 edition.

Annexure 4-1: Exchange-wise Brokers and Sub-brokers in India

Exchanges	Participants at the end March			
	Registered Brokers		Registered Sub-Brokers	
	2003	2004	2003	2004
Ahmedabad	323	323	141	124
Bangalore	245	242	159	156
Bhubaneshwar	233	229	17	17
Calcutta	987	980	142	92
Cochin	464	468	43	42
Coimbatore	182	177	26	24
Delhi	374	373	460	363
Guwahati	175	172	4	4
Hyderabad	306	305	201	199
ICSEIL	630	633	2	3
Jaipur	555	532	34	34
Ludhiana	302	297	34	38
Madhya Pradesh	188	179	124	115
Madras	186	182	3	3
Magadh	199	195	3	1
Mangalore	116	105	5	5
Mumbai	665	673	6,890	6,600
NSEIL	1,036	970	4,703	4,717
OTCEI	883	867	32	25
Pune	197	197	161	161
SKSE	436	437	0	0
Uttar Pradesh	518	514	25	19
Vadodara	319	318	82	73
Total	**9,519**	**9,368**	**13,291**	**12,815**

Source: SEBI Annual Report

Annexure 4-2: Market Capitalisation of S&P CNX Nifty Securities: April 2003 to March 2004 (end of period)

(Rs. mn.)

Sl. No.	Security	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Mar-04
1	ABB	13,064	14,520	15,721	16,084	20,152	20,150	22,473	22,481	28,390	28,500	29,512	33,785
2	ACC	22,357	24,878	28,580	33,209	36,321	34,773	36,442	38,716	41,870	43,657	44,298	43,622
3	BAJAJAUTO	48,862	51,882	57,988	64,611	73,818	79,970	92,886	99,347	114,980	101,087	91,627	92,163
4	BHARTI	—	—	—	—	—	—	—	—	—	—	—	*288,755
5	BHEL	56,589	62,916	66,000	64,825	86,131	98,748	118,195	108,845	123,640	125,696	142,450	147,921
6	BPCL	69,315	80,220	85,275	79,170	100,020	110,235	103,080	107,445	135,120	139,365	138,045	143,775
7	BRITANNIA	13,334	13,514	13,256	13,842	14,284	13,856	14,286	13,350	17,210	16,494	16,637	15,844
8	CIPLA	37,939	41,060	45,375	49,138	60,485	61,763	77,925	72,126	78,990	72,111	71,766	70,399
9	COLGATE	17,645	18,019	18,719	19,909	19,930	19,223	18,726	18,917	21,720	20,297	19,481	17,747
10	DABUR	10,573	12,773	13,645	16,273	18,517	17,502	18,488	19,402	25,230	24,159	23,158	22,914
11	DIGITALEQP	17,338	16,375	14,753	15,206	16,670	17,721	18,217	21,689	24,550	27,910	28,136	28,380
12	DRREDDY	66,775	68,195	83,670	87,871	88,135	80,946	91,463	97,229	109,350	106,988	94,945	74,553
13	GAIL	—	*86,891	93,360	101,986	112,894	124,649	137,292	148,243	219,910	186,635	170,948	180,293
14	GLAXO	24,070	26,867	26,517	30,967	32,587	33,633	35,566	36,582	42,700	45,698	44,812	45,188
15	GRASIM	33,079	35,380	46,202	50,093	56,831	61,079	78,345	82,434	92,030	102,042	98,036	97,903
16	GUJAMBCEM	25,847	27,496	31,905	35,243	35,864	35,684	39,148	43,536	47,150	44,988	48,760	47,999
17	HCLTECH	38,923	35,608	44,549	47,131	53,375	49,770	64,115	79,600	90,270	89,714	85,474	73,278
18	HDFC	83,116	90,727	99,880	100,955	117,954	121,890	127,310	135,712	158,190	159,280	149,708	158,196
19	HDFCBANK	69,939	69,401	73,067	75,222	78,156	77,957	89,594	85,907	103,650	98,239	106,697	107,865
20	HEROHONDA	40,616	42,643	50,681	53,297	58,768	61,634	70,510	74,793	89,540	90,279	98,356	97,967
21	HINDALCO	56,993	63,184	69,102	75,649	84,356	85,082	101,579	114,591	130,210	107,396	115,229	112,857
22	HINDLEVER	317,089	346,476	391,601	375,422	408,551	404,479	383,787	392,372	450,040	413,614	382,906	339,872
23	HINDPETRO	94,554	102,953	118,613	109,994	146,302	122,888	111,674	124,449	148,440	151,256	154,005	172,091
24	ICICIBANK	74,269	84,568	92,047	97,565	110,163	125,388	151,531	153,574	181,710	181,713	166,946	182,641
25	INDHOTEL	7,730	8,615	11,279	11,687	11,642	11,861	15,903	17,098	20,260	19,891	19,309	18,991
26	INFOSYSTCH	184,487	177,046	216,855	238,621	260,085	299,980	313,936	326,341	368,660	345,852	336,430	328,173
27	IPCL	20,516	23,817	26,957	28,769	37,680	43,092	46,927	52,959	55,990	44,395	46,666	45,177
28	ITC	169,038	171,810	189,941	177,590	205,992	198,239	214,539	212,237	243,500	253,751	272,468	258,316
29	L&T	49,757	55,291	61,035	72,635	72,088	80,344	101,096	99,691	131,100	124,720	139,913	142,823
30	MARUTI	—	—	—	—	—	—	—	—	—	—	—	*143,718
31	M&M	12,889	15,029	17,152	23,237	23,313	27,506	39,542	40,922	45,100	47,477	53,915	53,898
32	MTNL	57,740	58,811	71,474	72,450	77,963	75,600	68,261	75,821	86,720	83,507	86,090	80,798
33	NATIONALUM	—	*64,012	72,066	71,035	86,434	76,125	88,399	98,869	125,770	96,002	114,494	119,552
34	ORIENTBANK	16,607	26,089	30,816	32,934	33,463	39,981	49,059	44,698	49,330	44,708	54,421	58,022
35	RANBAXY	125,356	126,216	145,775	150,235	185,578	179,028	182,571	189,663	203,220	184,328	174,214	174,437
36	REL	—	—	—	—	—	—	—	—	—	—	—	*116,758
37	RELIANCE	383,236	416,958	453,683	499,764	559,528	619,712	679,268	680,106	799,920	782,739	774,571	751,321
38	SAIL	—	—	—	—	*169,140	156,542	184,835	173,890	211,060	185,248	172,651	133,205
39	SATYAMCOMP	47,810	52,686	60,691	64,780	71,527	80,067	96,344	103,752	115,150	100,135	97,590	92,851
40	SBIN	146,653	185,441	202,336	222,493	231,940	237,334	254,808	247,518	282,910	314,753	307,622	318,858
41	SCI	18,928	22,161	21,144	19,309	28,033	30,305	33,721	47,257	51,070	42,769	40,976	35,909
42	SUNPHARMA	25,981	27,599	32,488	37,195	46,837	45,640	49,773	55,570	55,250	56,651	60,328	60,430
43	TATACHEM	12,175	12,609	13,458	14,298	16,745	16,836	22,526	22,977	27,720	22,219	20,855	22,932
44	TATAPOWER	23,698	25,816	31,307	28,547	38,382	36,562	46,654	53,086	62,010	74,261	68,661	74,637
45	TATATEA	11,252	12,748	12,692	11,713	13,597	13,737	14,811	14,564	19,270	19,719	20,037	18,640
46	TATAMOTORS	—	—	—	—	—	—	—	—	*147,000	171,745	176,471	168,495
47	TISCO	48,601	58,108	62,487	76,766	93,481	100,123	132,040	133,165	163,570	149,880	157,684	141,559
48	VSNL	21,589	25,707	35,782	32,960	34,485	34,756	34,656	38,532	41,970	47,752	53,552	58,454
49	WIPRO	201,563	187,483	220,427	220,380	248,579	292,045	312,162	357,677	403,780	362,587	338,386	316,774
50	ZEETELE	31,619	35,269	36,383	50,057	42,488	50,924	56,575	53,564	61,880	62,515	55,028	55,255
	Total	**2,849,511**	**3,205,865**	**3,606,732**	**3,771,117**	**4,419,264**	**4,605,359**	**5,041,036**	**5,231,295**	**6,247,100**	**6,014,722**	**5,964,263**	**6,385,988**

* Denotes the month in which the particular security was included in S&P CNX Nifty Index.

Source: IISL

Annexure 4-3: Weightage of S&P CNX Nifty Securities: April 2003 - March 2004

(In per cent)

Sl. No.	Security	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Mar-04
1	ABB	0.43	0.43	0.42	0.41	0.44	0.42	0.43	0.41	0.45	0.47	0.48	0.53
2	ACC	0.74	0.74	0.76	0.84	0.79	0.73	0.69	0.71	0.66	0.71	0.73	0.68
3	BAJAJAUTO	1.62	1.55	1.53	1.63	1.61	1.67	1.77	1.82	1.81	1.65	1.50	1.44
4	BHARTI	—	—	—	—	—	—	—	—	—	—	—	*4.52
5	BHEL	1.87	1.87	1.74	1.64	1.88	2.07	2.25	2.00	1.95	2.05	2.34	2.32
6	BPCL	2.29	2.39	2.25	2.00	2.19	2.31	1.96	1.97	2.13	2.28	2.26	2.25
7	BRITANNIA	0.44	0.40	0.35	0.35	0.31	0.29	0.27	0.25	0.27	0.27	0.27	0.25
8	CIPLA	1.25	1.22	1.20	1.24	1.32	1.29	1.49	1.32	1.25	1.18	1.18	1.10
9	COLGATE	0.58	0.54	0.49	0.50	0.44	0.40	0.36	0.35	0.34	0.33	0.32	0.28
10	DABUR	0.35	0.38	0.36	0.41	0.40	0.37	0.35	0.36	0.40	0.39	0.38	0.36
11	DIGITALEQP	0.57	0.49	0.39	0.38	0.36	0.37	0.35	0.40	0.39	0.46	0.46	0.44
12	DRREDDY	2.21	2.03	2.21	2.22	1.93	1.69	1.74	1.78	1.72	1.75	1.56	1.17
13	GAIL	—	*2.59	2.47	2.58	2.47	2.61	2.62	2.72	3.47	3.05	2.80	2.82
14	GLAXO	0.80	0.80	0.70	0.78	0.71	0.70	0.68	0.67	0.67	0.75	0.73	0.71
15	GRASIM	1.09	1.05	1.22	1.27	1.24	1.28	1.49	1.51	1.45	1.67	1.61	1.53
16	GUJAMBCEM	0.85	0.82	0.84	0.89	0.78	0.75	0.75	0.80	0.74	0.74	0.80	0.75
17	HCLTECH	1.29	1.06	1.18	1.19	1.17	1.04	1.22	1.46	1.42	1.47	1.40	1.15
18	HDFC	2.75	2.70	2.64	2.55	2.58	2.55	2.43	2.49	2.49	2.60	2.46	2.48
19	HDFCBANK	2.31	2.07	1.93	1.90	1.71	1.63	1.71	1.58	1.63	1.61	1.75	1.69
20	HEROHONDA	1.34	1.27	1.34	1.35	1.29	1.29	1.34	1.37	1.41	1.48	1.61	1.53
21	HINDALCO	1.88	1.88	1.83	1.91	1.84	1.78	1.94	2.10	2.05	1.76	1.89	1.77
22	HINDLEVER	10.48	10.32	10.35	9.49	8.93	8.47	7.31	7.20	7.10	6.76	6.28	5.32
23	HINDPETRO	3.13	3.07	3.14	2.78	3.20	2.57	2.13	2.28	2.34	2.47	2.53	2.69
24	ICICIBANK	2.46	2.52	2.43	2.47	2.41	2.62	2.89	2.82	2.86	2.97	2.74	2.86
25	INDHOTEL	0.26	0.26	0.30	0.30	0.25	0.25	0.30	0.31	0.32	0.33	0.32	0.30
26	INFOSYSTCH	6.10	5.27	5.73	6.03	5.69	6.28	5.98	5.99	5.81	5.65	5.52	5.14
27	IPCL	0.68	0.71	0.71	0.73	0.82	0.90	0.89	0.97	0.88	0.73	0.77	0.71
28	ITC	5.59	5.12	5.02	4.49	4.50	4.15	4.09	3.90	3.84	4.15	4.47	4.05
29	L&T	1.65	1.65	1.61	1.84	1.58	1.68	1.93	1.83	2.07	2.04	2.29	2.24
30	MARUTI	—	—	—	—	—	—	—	—	—	—	—	*2.25
31	M&M	0.43	0.45	0.45	0.59	0.51	0.58	0.75	0.75	0.71	0.78	0.88	0.84
32	MTNL	1.91	1.75	1.89	1.83	1.70	1.58	1.30	1.39	1.37	1.36	1.41	1.27
33	NATIONALUM	—	1.91	1.91	1.80	1.89	1.59	1.68	1.81	1.98	1.57	1.88	1.87
34	ORIENTBANK	0.55	0.78	0.81	0.83	0.73	0.84	0.93	0.82	0.78	0.73	0.89	0.91
35	RANBAXY	4.14	3.76	3.85	3.80	4.06	3.75	3.48	3.48	3.20	3.01	2.86	2.73
36	REL	—	—	—	—	—	—	—	—	—	—	—	*1.83
37	RELIANCE	12.67	12.42	11.99	12.64	12.24	12.97	12.95	12.48	12.61	12.79	12.70	11.77
38	SAIL	—	—	—	—	*3.70	3.28	3.52	3.19	3.33	3.03	2.83	2.09
39	SATYAMCOMP	1.58	1.57	1.60	1.64	1.56	1.68	1.84	1.90	1.82	1.64	1.60	1.45
40	SBIN	4.85	5.52	5.35	5.63	5.07	4.97	4.86	4.54	4.46	5.14	5.05	4.99
41	SCI	0.63	0.66	0.56	0.49	0.61	0.63	0.64	0.87	0.81	0.70	0.67	0.56
42	SUNPHARMA	0.86	0.82	0.86	0.94	1.02	0.96	0.95	1.02	0.87	0.93	0.99	0.95
43	TATACHEM	0.40	0.38	0.36	0.36	0.37	0.35	0.43	0.42	0.44	0.36	0.34	0.36
44	TATAPOWER	0.78	0.77	0.83	0.72	0.84	0.77	0.89	0.97	0.98	1.21	1.13	1.17
45	TATATEA	0.37	0.38	0.34	0.30	0.30	0.29	0.28	0.27	0.30	0.32	0.33	0.29
46	TATAMOTORS	—	—	—	—	—	—	—	—	*2.32	2.81	2.89	2.64
47	TISCO	1.61	1.73	1.65	1.94	2.04	2.10	2.52	2.44	2.58	2.45	2.59	2.22
48	VSNL	0.71	0.77	0.95	0.83	0.75	0.73	0.66	0.71	0.66	0.78	0.88	0.92
49	WIPRO	6.66	5.58	5.83	5.57	5.44	6.11	5.95	6.57	6.37	5.93	5.55	4.96
50	ZEETELE	1.05	1.05	0.96	1.27	0.93	1.07	1.08	0.98	0.98	1.02	0.90	0.87
	Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

* Denotes the month in which the particular security was included in S&P CNX Nifty Index.

Source: IISL

Annexure 4-4: Beta of S&P CNX Nifty Securities: April 2003 to March 2004

(In per cent)

Sl . No.	Security	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Mar-04
1	ABB	0.40	0.41	0.38	0.38	0.57	0.56	0.45	0.46	0.51	0.53	0.48	0.42
2	ACC	0.85	0.89	1.00	1.08	1.10	1.11	1.10	1.12	1.13	1.19	1.21	1.25
3	BAJAJAUTO	0.74	0.62	0.52	0.38	0.44	0.44	0.41	0.40	0.43	0.52	0.57	0.60
4	BHARTI	—	—	—	—	—	—	—	—	—	—	—	*0.72
5	BHEL	0.64	0.56	0.48	0.50	0.70	0.69	0.75	0.78	0.84	1.03	1.00	1.05
6	BPCL	0.91	0.85	0.87	0.85	0.91	0.81	0.84	0.84	0.77	0.81	0.85	0.91
7	BRITANNIA	0.09	0.11	0.08	0.10	0.14	0.22	0.20	0.19	0.18	0.23	0.24	0.24
8	CIPLA	0.25	0.23	0.25	0.35	0.40	0.47	0.47	0.45	0.48	0.52	0.51	0.49
9	COLGATE	0.15	0.16	0.18	0.16	0.25	0.29	0.31	0.28	0.28	0.34	0.34	0.35
10	DABUR	0.51	0.58	0.59	0.55	0.67	0.77	0.70	0.70	0.77	0.82	0.79	0.79
11	DIGITALEQP	1.92	1.85	1.76	1.79	1.64	1.61	1.61	1.55	1.52	1.16	1.00	0.88
12	DRREDDY	0.72	0.65	0.75	0.60	0.56	0.54	0.50	0.57	0.60	0.57	0.56	0.45
13	GAIL	—	*0.49	0.54	0.58	0.74	0.87	0.99	1.07	1.11	1.32	1.39	1.39
14	GLAXO	0.18	0.26	0.17	0.17	0.21	0.19	0.18	0.22	0.25	0.31	0.33	0.30
15	GRASIM	0.44	0.33	0.45	0.38	0.51	0.63	0.80	0.88	0.90	0.90	0.90	0.98
16	GUJAMBCEM	0.52	0.50	0.59	0.58	0.65	0.73	0.73	0.79	0.81	0.88	0.95	1.02
17	HCLTECH	1.90	1.92	1.97	1.90	1.71	1.73	1.61	1.60	1.59	1.49	1.45	1.39
18	HDFC	0.28	0.29	0.26	0.29	0.28	0.42	0.42	0.43	0.43	0.42	0.40	0.41
19	HDFCBANK	0.26	0.32	0.37	0.45	0.42	0.45	0.48	0.47	0.53	0.45	0.47	0.49
20	HEROHONDA	0.67	0.64	0.66	0.51	0.57	0.67	0.80	0.80	0.86	0.94	0.94	0.95
21	HINDALCO	0.14	0.17	0.22	0.20	0.27	0.41	0.52	0.60	0.63	0.74	0.75	0.73
22	HINDLEVER	0.97	0.95	0.95	1.00	0.97	0.97	0.93	0.92	0.88	0.85	0.82	0.75
23	HINDPETRO	1.20	1.12	1.08	1.04	1.06	0.89	0.83	0.83	0.69	0.69	0.74	0.78
24	ICICIBANK	0.67	0.67	0.59	0.63	0.72	0.72	0.73	0.75	0.78	0.80	0.81	0.82
25	INDHOTEL	0.55	0.53	0.69	0.64	0.71	0.66	0.64	0.64	0.66	0.71	0.70	0.69
26	INFOSYSTCH	1.92	2.05	2.00	2.03	1.85	1.61	1.55	1.51	1.50	1.35	1.28	1.24
27	IPCL	0.45	0.57	0.64	0.82	0.96	1.00	0.94	1.01	1.00	1.25	1.26	1.28
28	ITC	0.50	0.37	0.41	0.42	0.50	0.55	0.59	0.56	0.56	0.54	0.52	0.54
29	L&T	0.58	0.57	0.61	0.53	0.60	0.68	0.72	0.79	0.84	0.94	0.93	0.94
30	MARUTI	—	—	—	—	—	—	—	—	—	—	—	*1.23
31	M&M	1.25	1.16	1.03	0.97	1.01	1.08	1.19	1.23	1.21	1.26	1.25	1.27
32	MTNL	0.72	0.63	0.60	0.65	0.66	0.73	0.64	0.66	0.67	0.76	0.81	0.84
33	NATIONALUM	—	*1.19	1.14	1.05	1.19	1.19	1.15	1.23	1.09	1.23	1.31	1.28
34	ORIENTBANK	0.75	0.86	0.89	0.94	1.01	1.11	1.25	1.26	1.27	1.35	1.34	1.42
35	RANBAXY	0.46	0.27	0.28	0.24	0.30	0.42	0.48	0.52	0.55	0.61	0.61	0.62
36	REL	—	—	—	—	—	—	—	—	—	—	—	*1.08
37	RELIANCE	1.22	1.16	1.21	1.19	1.06	1.09	1.01	1.01	1.01	0.97	0.98	0.98
38	SAIL	—	—	—	—	*2.15	1.91	1.86	1.82	1.80	1.76	1.75	1.73
39	SATYAMCOMP	2.32	2.33	2.27	2.40	2.17	2.02	2.00	1.93	1.92	1.76	1.75	1.66
40	SBIN	0.68	0.77	0.73	0.80	0.81	0.90	0.92	0.91	0.90	1.00	1.04	1.07
41	SCI	1.33	1.23	1.20	1.18	1.36	1.29	1.35	1.34	1.24	1.29	1.26	1.29
42	SUNPHARMA	0.16	0.19	0.31	0.40	0.41	0.54	0.57	0.58	0.60	0.55	0.51	0.51
43	TATACHEM	1.16	1.15	0.96	0.74	0.84	0.83	0.94	0.91	0.89	0.94	1.02	1.11
44	TATAPOWER	0.89	0.85	0.74	0.73	0.84	0.95	1.05	1.06	1.07	1.13	1.18	1.23
45	TATATEA	0.82	0.72	0.61	0.59	0.65	0.73	0.82	0.80	0.78	0.99	0.98	1.09
46	TATAMOTORS	—	—	—	—	—	—	—	—	*1.13	1.24	1.27	1.32
47	TISCO	1.21	1.15	1.07	1.10	1.14	1.14	1.21	1.22	1.25	1.29	1.32	1.35
48	VSNL	0.76	0.88	0.97	1.00	0.83	0.73	0.71	0.68	0.69	0.67	0.63	0.61
49	WIPRO	1.82	1.99	2.04	2.03	1.82	1.78	1.79	1.77	1.75	1.55	1.50	1.44
50	ZEETELE	1.96	1.91	1.75	1.70	1.44	1.23	1.14	1.16	1.11	1.12	1.27	1.19

Beta is calculated for the 12 months ending on the last trading day of the respective month.

* Denotes the month in which the particular security was included in S&P CNX Nifty Index.

Source: IISL

Annexure 4-5: Monthly Returns of S&P CNX Nifty Securities: April 2003 - March 2004

(In per cent)

Sl. No.	Security	Apr-03	May-03	Jun-03	Jul-03	Aug-03	Sep-03	Oct-03	Nov-03	Dec-03	Jan-04	Feb-04	Mar-04
1	ABB	7.69	11.14	8.27	2.30	25.30	(0.01)	11.53	0.04	26.26	0.40	3.55	14.48
2	ACC	(5.56)	11.28	14.87	16.18	9.37	(4.26)	4.79	6.24	8.15	4.27	1.47	(1.72)
3	BAJAJAUTO	0.60	6.18	11.77	11.42	14.25	8.33	16.15	6.96	15.73	(12.08)	(9.36)	0.59
4	BHARTI	—	—	—	—	—	—	—	—	—	—	—	*9.41
5	BHEL	3.61	11.18	4.90	(1.78)	32.87	14.65	19.69	(7.91)	13.59	1.66	13.33	3.84
6	BPCL	4.10	15.73	6.30	(7.16)	26.34	10.21	(6.49)	4.23	25.76	3.14	(0.95)	4.15
7	BRITANNIA	3.53	2.98	(1.91)	4.42	3.20	(1.53)	3.11	(6.56)	28.88	(4.14)	0.87	(4.76)
8	CIPLA	(11.38)	8.23	10.51	8.29	23.09	2.11	26.17	(7.44)	9.51	(8.71)	(0.48)	(1.91)
9	COLGATE	6.57	2.12	3.89	6.36	0.10	(3.55)	(2.58)	1.02	14.81	(6.54)	(4.02)	(8.90)
10	DABUR	3.79	20.81	6.82	19.27	13.78	(5.48)	5.63	4.95	29.82	(4.25)	(4.15)	(1.05)
11	DIGITALEQP	(12.73)	(5.58)	(9.93)	3.06	9.63	6.31	2.66	18.98	13.03	12.79	0.13	0.42
12	DRREDDY	(4.76)	2.13	22.69	5.02	0.30	(8.16)	12.99	6.30	12.47	(2.16)	(11.26)	(21.48)
13	GAIL	—	*29.33	7.45	9.24	10.70	10.41	10.14	7.98	48.35	(15.13)	(8.41)	5.47
14	GLAXO	10.61	11.62	(1.30)	16.78	5.23	3.21	5.75	2.86	16.73	7.01	(1.94)	0.84
15	GRASIM	9.22	6.96	30.59	8.42	13.45	7.48	28.27	5.22	11.64	10.88	(3.93)	(0.14)
16	GUJAMBCEM	4.09	6.36	16.00	10.46	1.76	(0.54)	9.71	11.21	8.29	(4.66)	6.43	(4.06)
17	HCLTECH	(10.66)	(8.52)	25.11	5.79	13.25	(6.75)	25.73	24.15	13.40	(0.64)	(4.74)	(14.32)
18	HDFC	2.70	9.08	10.09	1.08	16.84	3.34	4.27	6.57	16.49	0.58	(6.10)	5.50
19	HDFCBANK	5.31	(0.77)	5.28	2.83	3.90	(0.25)	14.93	(4.26)	20.65	(5.52)	8.61	1.09
20	HEROHONDA	8.08	4.99	18.85	5.16	10.27	4.88	14.40	6.07	19.72	0.83	8.95	(0.40)
21	HINDALCO	15.28	10.86	9.37	9.47	11.51	0.86	19.39	12.81	13.63	(17.52)	7.29	(2.06)
22	HINDLEVER	(2.90)	9.27	13.02	(4.13)	8.82	(1.00)	(5.12)	2.24	14.70	(8.09)	(7.42)	(11.24)
23	HINDPETRO	(5.48)	8.88	15.21	(7.27)	33.01	(16.00)	(9.13)	11.44	19.28	1.90	1.82	11.74
24	ICICIBANK	(9.42)	13.87	8.84	5.99	12.91	13.80	20.78	1.26	18.13	(0.14)	(8.17)	9.36
25	INDHOTEL	(6.03)	11.44	30.92	3.62	(0.39)	1.88	34.08	7.52	18.47	(1.80)	(2.93)	(1.65)
26	INFOSYSTCH	(31.24)	(4.03)	22.43	10.02	8.98	15.34	4.65	3.95	12.97	(6.32)	(2.88)	(2.45)
27	IPCL	(1.37)	16.09	13.18	6.72	30.97	14.36	8.90	12.85	5.72	(20.70)	5.12	(3.19)
28	ITC	8.71	1.64	10.55	(6.50)	15.99	(3.77)	8.22	(1.07)	14.70	4.21	7.38	(5.22)
29	L&T	8.43	11.12	10.39	19.01	(0.75)	11.45	25.83	(1.39)	31.50	(4.87)	12.18	2.08
30	MARUTI	—	—	—	—	—	—	—	—	—	—	—	*(0.52)
31	M&M	11.88	16.61	14.13	35.48	0.32	17.99	43.76	3.49	10.22	5.26	13.56	(0.03)
32	MTNL	(4.48)	1.85	21.53	1.37	7.61	(3.03)	(9.71)	11.08	14.37	(3.71)	3.09	(6.15)
33	NATIONALUM	—	19.34	12.58	(1.43)	21.68	(11.93)	16.12	11.84	27.21	(23.67)	19.26	4.42
34	ORIENTBANK	34.56	57.10	18.12	6.87	1.61	19.48	22.71	(8.89)	10.36	(9.37)	21.73	6.62
35	RANBAXY	8.39	0.68	15.50	3.06	23.52	(3.54)	1.98	3.86	7.15	(9.29)	(5.53)	0.13
36	REL	—	—	—	—	—	—	—	—	—	—	—	*2.83
37	RELIANCE	(1.31)	8.80	8.81	10.16	11.96	10.76	9.61	0.12	17.62	(2.15)	(1.04)	(3.00)
38	SAIL	—	—	—	—	*78.04	(7.45)	18.07	(5.92)	21.38	(12.23)	(6.80)	(22.85)
39	SATYAMCOMP	(14.27)	10.20	15.19	6.74	10.42	11.94	20.33	7.69	10.99	(13.04)	(2.94)	(4.97)
40	SBIN	3.20	26.45	9.11	9.96	4.25	2.33	7.36	(2.86)	14.30	11.25	(2.27)	3.65
41	SCI	32.51	17.08	(4.59)	(8.68)	45.18	8.11	11.27	40.14	8.06	(16.25)	(4.19)	(12.37)
42	SUNPHARMA	2.69	6.23	18.31	14.49	25.92	(2.55)	9.05	11.65	(0.58)	2.54	6.49	0.17
43	TATACHEM	10.13	3.56	6.73	6.24	17.12	0.54	33.80	2.00	20.64	(19.84)	(6.14)	9.96
44	TATAPOWER	5.83	8.94	21.27	(8.82)	34.45	(4.74)	27.60	13.79	16.81	19.75	(7.54)	8.70
45	TATATEA	5.82	13.29	(0.44)	(7.71)	16.08	1.03	7.82	(1.67)	32.33	2.32	1.61	(6.97)
46	TATAMOTORS	—	—	—	—	—	—	—	—	*10.65	15.12	(2.22)	(4.52)
47	TISCO	(1.16)	19.56	7.18	22.85	21.77	7.10	31.88	0.85	22.83	(8.37)	5.21	(10.23)
48	VSNL	3.55	19.08	39.19	(7.89)	4.63	0.79	(0.29)	11.18	8.91	13.79	12.15	9.15
49	WIPRO	(29.73)	(6.99)	17.57	(0.02)	12.80	17.49	6.89	14.58	12.88	(10.21)	(6.69)	(6.42)
50	ZEETELE	23.03	11.55	3.16	37.59	(15.12)	19.85	11.10	(5.32)	15.52	1.03	(11.98)	0.41
	All Securities	**(4.51)**	**7.79**	**12.65**	**4.56**	**14.39**	**4.46**	**9.79**	**3.81**	**16.38**	**(3.72)**	**(0.52)**	**(1.58)**

Returns are calculated for the respective months.

* Denotes the month in which the particular security was included in S&P CNX Nifty Index.

Source: IISL

Annexure 4-6: Business Growth of CM Segment of NSE

Month/Year	No. of Trading Days	No. of Companies Traded	No. of Trades (mn.)	Traded Quantity (mn.)	Turnover (Rs. mn.)	Average Daily Turnover (Rs. mn.)	Turnover Ratio (%)	Demat Securities Traded (mn.)	Demat Turnover (Rs. mn.)	Demat Turnover as a % of Total Turnover	Market Capitalisa-tion (Rs. mn.)*
Nov 94-Mar 95	**102**	—	**0.3**	**139**	**18,050**	**177**	—	—	—	0	**3,633,500**
1995-96	**246**	—	**7**	**3,991**	**672,870**	**2,735**	—	—	—	0	**4,014,590**
1996-97	**250**	—	**26**	**13,556**	**2,954,030**	**11,816**	—	—	—	0	**4,193,670**
1997-98	**244**	—	**38**	**13,569**	**3,701,930**	**15,172**	—	—	—	0	**4,815,030**
1998-99	**251**	—	**55**	**16,533**	**4,144,740**	**16,513**	—	**854**	**238,180**	**5.75**	**4,911,751**
1999-00	**254**	—	**98**	**24,270**	**8,390,515**	**33,034**	—	**15,377**	**7,117,057**	**84.82**	**10,204,257**
2000-01	**251**	**1201**	**168**	**32,954**	**13,395,102**	**53,367**	—	**30,722**	**12,643,372**	**94.39**	**6,578,470**
Apr-01	19	951	11	2,078	356,160	18,745	5.45	2,073	356,051	99.97	6,537,200
May-01	22	954	14	2,572	483,290	21,968	8.16	2,571	483,290	99.98	5,924,370
Jun-01	21	963	13	2,234	427,830	20,373	7.51	2,193	426,254	99.63	5,697,965
Jul-01	22	924	10	1,314	272,278	12,376	4.74	1,314	272,266	99.98	5,742,599
Aug-01	21	931	11	1,594	294,172	14,008	5.11	1,593	294,150	99.99	5,752,425
Sep-01	20	917	14	1,734	353,230	17,662	6.94	1,734	353,227	10,099.91	5,091,050
Oct-01	21	917	14	1,980	353,260	16,822	6.59	1,980	353,240	99.99	5,358,460
Nov-01	20	920	15	2,535	421,320	21,066	7.25	2,530	421,210	99.97	5,813,860
Dec-01	19	895	18	3,178	544,680	28,667	9.85	3,178	544,646	99.99	5,529,080
Jan-02	23	896	21	3,438	687,190	29,878	12.19	3,422	686,063	99.84	5,636,830
Feb-02	20	840	18	2,855	495,640	24,782	7.97	2,855	495,640	100.00	6,215,230
Mar-02	19	840	16	2,329	442,625	23,296	6.95	2,329	442,624	100.00	6,368,610
2001-02	**247**	**1,019**	**175**	**27,841**	**5,131,674**	**20,776**	—	**27,772**	**5,128,661**	**99.94**	**6,368,610**
Apr-02	22	843	20	2,880	533,200	24,236	8.21	2,878	533,159	99.99	6,495,510
May-02	22	821	22	3,530	549,791	24,990	8.70	3,530	549,791	100.00	6,316,092
Jun-02	20	825	19	3,852	442,411	22,121	6.70	3,852	442,411	100.00	6,599,910
Jul-02	23	820	21	3,682	513,984	22,347	8.44	3,682	513,984	100.00	6,086,430
Aug-02	21	806	19	2,600	461,131	21,959	7.29	2,600	461,131	100.00	6,326,180
Sep-02	20	806	18	2,558	464,986	23,249	7.75	2,558	464,986	100.00	5,996,032
Oct-02	21	770	20	2,646	519,022	24,715	8.55	2,646	519,022	100.00	6,067,880
Nov-02	19	767	17	2,363	513,515	27,027	7.96	2,363	513,515	100.00	6,453,880
Dec-02	21	762	22	3,302	619,733	29,511	9.21	3,302	619,733	100.00	6,728,620
Jan-03	23	763	24	3,634	647,622	28,157	11.32	3,634	647,622	100.00	5,722,766
Feb-03	19	760	19	2,868	482,892	25,415	8.30	2,868	482,892	100.00	5,819,850
Mar-03	20	762	18	2,492	431,599	21,580	8.04	2,492	431,599	100.00	5,371,332
2002-03	**251**	**899**	**240**	**36,407**	**6,179,886**	**24,621**	—	**36,405**	**6,179,845**	**100.00**	**5,371,332**
Apr-03	20	749	21	3,145	489,713	24,486	9.23	3,145	489,713	100.00	5,306,304
May-03	21	743	25	4,400	546,902	26,043	8.94	4,400	546,902	100.00	6,120,303
Jun-03	21	744	27	5,190	615,857	29,327	9.08	5,190	615,857	100.00	6,785,500
Jul-03	23	755	32	6,491	788,776	34,295	10.97	6,491	788,776	100.00	7,191,449
Aug-03	20	752	32	8,455	853,466	42,673	10.20	8,455	853,466	100.00	8,366,505
Sep-03	22	761	35	7,185	1,033,456	46,975	11.97	7,185	1,033,456	100.00	8,634,805
Oct-03	23	728	36	7,177	1,155,953	50,259	12.47	7,177	1,155,953	100.00	9,267,479
Nov-03	20	738	31	5,672	928,858	46,443	9.48	5,672	928,858	100.00	9,795,410
Dec-03	22	754	38	7,175	1,103,726	50,169	9.46	7,175	1,103,726	100.00	11,670,287
Jan-04	21	761	40	7,334	1,342,687	63,937	12.03	7,334	1,342,687	100.00	11,161,500
Feb-04	19	763	31	4,648	1,087,181	57,220	9.79	4,648	1,087,181	100.00	11,109,543
Mar-04	22	769	32	4,459	1,048,765	47,671	9.36	4,459	1,048,765	100.00	11,209,760
2003-04	**254**	**804**	**379**	**71,330**	**10,995,339**	**43,289**	—	**71,330**	**10,995,339**	**100.00**	**11,209,760**

* At the end of the period.
Source: NSE

Secondary Market – Clearing and Settlement

"Systems for clearing and settlement of securities transaction should be subject to regulatory oversight and designed to ensure that they are fair, effective and efficient and that they reduce systemic risk" is one of the 30 principles of securities regulation enunciated by IOSCO.

Safe and stable securities settlement systems (SSSs) are important to preserve the health of the domestic and global financial markets. This is because they help in reducing the systemic risks. It is for this reason that the Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of IOSCO (International Organization of Securities Commissions) established the Task Force on Securities Settlement Systems in December 1999 to recommend measure aimed at improving safety and efficiency of SSSs.

In November 2001, the CPSS and the Technical Committee of IOSCO published the *Recommendations for Securities Settlement Systems*. It sets out and discusses 19 recommendations, which identifies minimum standards that securities settlement systems should meet to enhance safety and efficiency. The recommendations are designed to cover systems for all types of securities and markets across countries as well as cross-border trades. These recommendations have been included in the Key Standards for Sound Financial Systems highlighted by the Financial Stability Forum. National authorities responsible for the regulation and oversight of SSSs are encouraged to assess whether markets in their jurisdiction have implemented the recommendations and to develop action plans wherever necessary. The committee further put a report in November 2002 to develop a clear and comprehensive methodology for assessing whether the recommendations have been implemented. The methodology is intended primarily for use in self-assessments by national authorities or in peer reviews of such self assessments. It also is intended to serve as guidance for Financial Sector Assessment Program (FSAP) assessments and for other forms of technical assistance, possibly including financing of reform efforts by the World Bank.

The SSS in the corporate securities market in India have witnessed several innovations during the last one-decade in tune with the global developments. These include use of the state-of-art information technology, compression of settlement cycle, dematerialization, electronic transfer of securities, securities lending and borrowing, professionalisation of trading members, fine-tuned risk management system, introduction of straight through processing, emergence of clearing corporation (CC) to perform the role of central counter party etc., though many of these are yet to permeate to the entire market. However, in this chapter we restrict our discussion to only the settlement systems adopted by the National Securities Clearing Corporation Limited (NSCCL), the Clearing Corporation of NSE.

Policy Developments

SEBI has prescribed elaborate margining and capital adequacy norms to contain and manage risk in the market. It continuously reviews the working of clearing and settlement systems as well as the risk management practices being followed by stock exchanges and their clearing corporations. The year 2003-04 witnessed major improvements in the market practices e.g. introduction of Straight Through Processing (STP), reduction of settlement cycle to T+2 etc. The major policy developments during the period April 2003 to June 2004 is presented below:

I. Introduction of T+2 Rolling settlement in Equity Market

From April 1, 2003, the settlement cycle has been shortened from the T+3 rolling settlement to T+2 by SEBI to facilitate still easier flow of funds and securities. The activity schedule for which is presented below:

Sr. No.	Day	Time	Description of Activity
1.	T		Trade Day
2.	T+1	By 11.00 am	Custodians conform the trades. However, there is a facility for late confirmations.
		By 1.30 pm	Process and download obligation files to brokers/custodians
3.	T+2	By 11.00 am	Pay-in of securities and funds
		By 1.30 pm	Pay-out of securities and funds

On the advice of SEBI, the stock exchanges have put in place the following systems for effecting the settlement on T+2 basis:

(a) A facility for late confirmation of trades by the custodians. However, the time limit for late confirmation should be fixed in a manner that the download of the final obligation files to brokers is not delayed,

(b) Stock exchanges should levy an additional charge to discourage late confirmations by the custodians,

(c) The stock exchanges should provide a system for handling shortages of funds and securities in an expeditious manner to adhere to the schedule for pay-out,

(d) The stock exchanges should also amend their bye laws to mandate the pay-out of funds and securities to the clients by the broker within 24 hours of the payout,

(e) The stock exchanges should design an alternative clearing and settlement system in respect of companies whose shares have not been dematerialized,

(f) The stock exchanges should not normally permit changes in the client ID and should keep a strict vigil on cases of client code modification. The exchange should be put in place a monetary penalty structure that, which should be an increasing function of the number of such incidences,

(g) Stock exchanges should encourage members to adopt automatic downloading of pay-in files for securities and funds. The members should also be encouraged to adopt direct transfer of securities/funds to clients account on pay-out.

The stock brokers are required to adhere to the following schedule in T+2 rolling settlement.

S. No.	Day	Time	Description of activity
1.	T		Trade Day
2.	T+2	Until 10.30 am	Accept pay-in instructions from investors into pool account
		By 10.30 am	Submit final pay-in files to the depository and the clearing bank.

With the above schedule of activities, the stock exchanges have to provide facilities such as online confirmation of trades by custodians, a system for capturing details of the client's depository account and bank account, online transmitting the client wise pay-in obligation to depository. In addition a system wherein pay-out files will be sent to the clearing banks with a request to online credit to the bank accounts of the clients should be set up.

II. Composition of Capital and Margins

The SEBI, on recommendations of the Advisory Committee on Derivatives and Market Risk Management, decided to revise the compositions of additional capital, margins and the eligibility criteria for securities.

(a) The minimum cash component of the additional capital and margins should be increased from the existing level of 30% to 50%. The cash component may be in the form of cash or cash equivalents. Cash equivalents should include FDRs, bank guarantees, government securities and units of the schemes of liquid MFs or government securities MFs. However, the bank guarantees should be considered as cash equivalent only if the guarantees have been provided by the banks whose net worth is more than Rs. 500 crore. The exchanges should lay down exposure limits either in rupee terms or as percentage of the Trade Guarantee Fund (TGF)/Settlement Guarantee Fund (SGF) that can be exposed to a single bank directly or indirectly. In any case the exposure of the TGF/SGF to any single bank should not be more than 15% of the total liquid assets forming part of TGF/SGF of the exchange. The exposure as mentioned above would include guarantees provided by the bank for itself or for others as well as debt or equity securities of the bank which have been deposited by members for additional capital or margins.

(b) Equity shares classified in Group I at the stock exchange in accordance with the parameters of volatility and liquidity as prescribed by SEBI[1] would be eligible as security for the non-cash component of the additional capital and margin. This shall be subjected to a haircut equivalent to the respective VaR of the equity shares. Units of all MFs would also be eligible security for the purpose of non-cash component of additional capital and margin subject to a haircut *plus* any exit load charged by the mutual fund.

(c) The eligible shares for the purpose of the securities portion of the base minimum capital should only be those which are classified as Group I in terms of the parameters of volatility and liquidity as per SEBI circular, subject to a standard haircut of 15%. However, the smaller stock exchanges should accept the shares that are in the Group I of the BSE or the NSE for the purpose of base minimum capital. The valuation for these shares should be done at least once a week.

III. Refund of Base Minimum Capital

In view of the insignificant volumes at some of the exchanges, they have requested to SEBI for refund/withdrawal of the base minimum capital (BMC). Therefore the SEBI has reviewed its earlier prescription for capital requirement. The exchanges having average daily turnover of less than Rs. 1 crore for the past three consecutive months may maintain the BMC at Rs. 1 lakh. The excess of the BMC over Rs. 1 lakh may be refunded to the member subject to the following conditions:

(i) The member has been inactive at the stock exchange for the past 12 months;

1 SEBI circular no. SMD/POLICY/CIR-9/2003 dated March 11, 2003.

(ii) There are no investor complaints pending;

(iii) There are no arbitration cases pending;

(iv) The exchange should retain/deduct/debit from the BMC to be refunded, the amount of any complaints/claims of the investors against the member and for dues crystallized and contingent to the exchange/SEBI arising out of pending arbitration cases, appealed arbitration awards, administrative expenses, SEBI turnover fees, etc.

(v) The exchange should ensure that the member has paid the SEBI turnover fees and has obtained a No-Objection Certificate from SEBI in this regard.

IV. Risk Disclosure Document

NSE in coordination with SEBI designed a Risk Disclosure Document. This includes the risks involved in trading on a stock exchange e.g. risk of higher volatility, risk of lower liquidity, risk of wider spreads, risk-reducing orders, risk of new announcements, risk of rumours, systemic risk, and also the rights and obligations of the investors. Based on it, the other stock exchanges were directed to prepare their own Risk Disclosure Document. The exchanges were given the liberty to prescribe any additional clauses as may be considered necessary by them. The risk disclosure document should contain important information on trading in the equities segment and should be competent enough for any person to understand the basic risks involved in trading. A separate section of investors' rights and obligations should also be included in the disclosure document.

V. Electronic Contract Notes

SEBI advised the stock exchanges to prescribe a standard format for the electronic contract note in its bye laws, rules and regulations. This will streamline the issuance of electronic contract notes as a legal document like the physical contract note. The modification/ amendment should be with respect to signing of the electronic contract note with a digital signature so as to make the modified format a valid legal document. The mechanism of record keeping of electronic notes in a soft non-tamperable form should be prescribed in conformity with the IT Act 2000.

VI. Securities Lending and Borrowing

SEBI has permitted the Clearing Corporation/Clearing House (CC/CH) to get registered as an approved intermediary under the Securities Lending and Borrowing (SLB) scheme. Thereafter, the CC/CH may borrow securities on behalf of their members for the purpose of meeting short falls subject to the following conditions: (a) the CC/CH should borrow the required securities to meet the short fall on the day of settlement for a maximum period of 7 trading days, excluding the day of borrowing; (b) the defaulter selling broker may make the delivery within 3 trading days from the due date i.e. settlement date; (c) in the event of the defaulted selling broker failing to make the delivery within the aforesaid 3 trading days, the CC/CH should buy the securities from the open market and return the same to the lender within 7 trading days (d) cost, if any, incurred by the CC/CH in this regard should be recovered from the defaulted selling broker (e) the return of the borrowed securities by the CC/CH should be independent of the normal settlement.

VII. Straight Through Processing

The Straight Through Processing (STP) allows electronic capturing and processing of transactions in one pass from the point of order origination to the final settlement. STP thus streamlines the process of trade execution and settlement by avoiding manual entry and re-entry of the same details by different market intermediaries and participants. STP was launched in India in November 2002, but was used on a voluntary basis by market participants. To facilitate this, SEBI had issued various circulars permitting issue of electronic contract notes with digital signature obtained from a valid Certifying Authority provided under the IT Act, 2000. The exchanges were also directed to amend their bye-laws, rules and regulations for the equity and the debt segment to streamline the issuance of electronic contract notes as a legal document. While several STP Service Providers had been providing STP service to the market participants, there was no inter-operability between them. To resolve this issue, it was decided in consultation with the stock exchanges and the STP Service Providers, that a STP Centralised Hub would be setup. Currently this STP Centralised Hub has been setup and made operational by NSE. For this, NSE has obtained the necessary approvals from Department of Telecommunications (DoT) as an Internet Service Provider (ISP). In view of the aforesaid developments, it was decided that all the institutional trades executed on the stock exchanges would mandatorily be processed through the STP System w.e.f. July 01, 2004. SEBI also prescribed the framework for the system flow of the STP, which should be as follows:

(a) A STP user intending to send an instruction should send the message to his STP service provider after digitally signing the same.

(b) The STP service provider after verification of the signature should forward it to the (i) recipient user, if the recipient is availing services of the same STP service provider; or the (ii) STP centralized hub if the recipient is not with the same STP service provider. In such a case the STP service provider should be required to prepare a message as per the STP centralized hub prescribed message format, enclose the user's message, digitally sign it and then send it to the STP centralized hub.

(c) On receipt of the message by the STP centralized hub, it should (a) verify the signature of the sending STP service provider only (b) send an acknowledgment to the sending STP service provider.

(d) The STP centralized hub would then forward the message to the recipient STP service provider after digitally signing on the message.

(e) The recipient STP service provider on receipt of the message from the STP centralized hub, has to verify the signature of the STP centralized hub, verify if the recipient STP user is associated with itself and send an appropriate acknowledgment with digital signature to the STP centralized hub. The STP centralized hub would in turn forward the acknowledgment (received from the recipient STP service provider) duly signed to the sending STP service provider.

(f) The recipient STP service provider should forward the message to the recipient STP user. The recipient STP user should receive the message and verify the signature of the recipient STP service provider and sending STP user.

To enable inter-operations, the STP centralized hub should provide utility/client software to the STP service provider as a point of interface between them. The PKI (Public key infrastructure) system for the interface will be implemented at a later stage. To this effect, SEBI has also issued the SEBI (STP centralized hub and STP service providers) Guidelines, 2004, which prescribe the eligibility criteria, conditions of approval, obligations and responsibilities of the STP centralized hub and the STP service providers. Also, a code of conduct for them has been included in the guidelines.

VIII. Settlement of Transactions in Case of Holidays

The Advisory Committee on Derivatives and Risk Management, issued guidelines to facilitate the smooth completion of settlement process in cases where bank holidays are not in conformity with the stock exchanges holidays. The guidelines have set certain limits as enumerated herewith:

1. The stock exchanges should clear and settle the trades on a sequential basis i.e. the pay-in and the pay-out of the first settlement should be completed before the commencement of the next pay-in and pay-out. The cash/securities pay-out from the first settlement should be made available to the member for meeting his pay-in obligations for the subsequent settlements.

2. Further, in-order to meet his pay-in obligations for the subsequent settlement, the member may need to move securities from one depository to another. The depositories should, therefore facilitate the inter-depository transfers within one hour and before pay-in for the subsequent settlement begins.

The stock exchanges/depositories are also required to follow a strict time schedule, ensuring that the settlements are completed on the same day.

Clearing and Settlement Processes

The transactions in secondary market pass through three distinct phases, *viz*., trading, clearing and settlement. While the stock exchanges provide the platform for trading, the clearing corporation determines the funds and securities obligations of the trading members and ensures that the trade is settled through exchange of obligations. The clearing banks and the depositories provide the necessary interface between the custodians/clearing members for settlement of funds and securities obligations of trading members. The clearing process involves determination of what counter-parties owe, and which counter-parties are due to receive on the settlement date, thereafter the obligations are discharged by settlement. The clearing and settlement process for transaction in securities on NSE is presented in Chart 5-1.

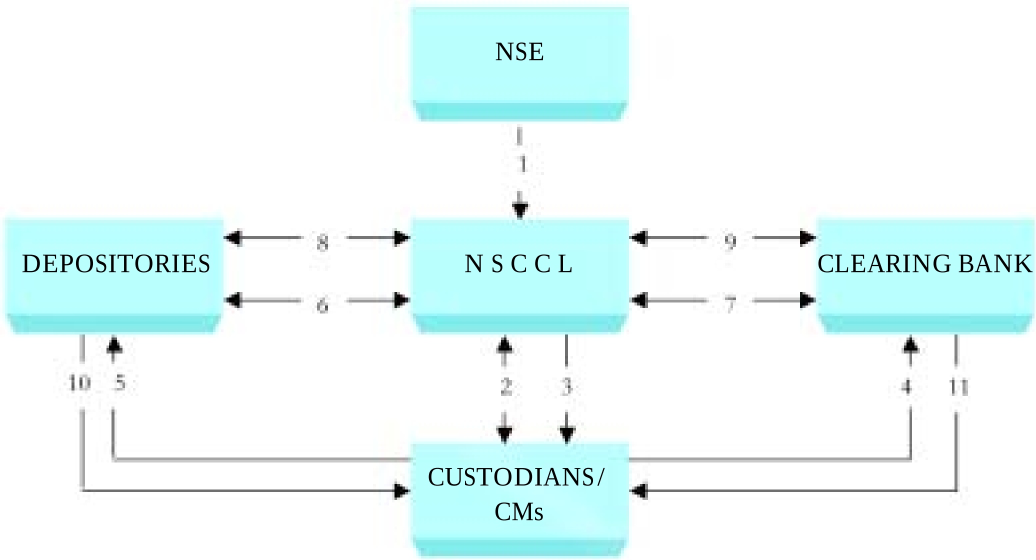
Several entities, like the clearing corporation, clearing members, custodians, clearing banks, depositories are involved in the process of clearing. The role of each of these entities is explained below:

- *Clearing Corporation:* The clearing corporation is responsible for post-trade activities such as the risk management and the clearing and settlement of trades executed on a stock exchange.

- *Clearing Members:* Clearing Members are responsible for settling their obligations as determined by the NSCCL. They do so by making available funds and/or securities in the designated accounts with clearing bank/depositories on the date of settlement.

- *Custodians:* Custodians are clearing members but not trading members. They settle trades on behalf of trading members, when a particular trade is assigned to them for settlement.

Chart 5-1: Clearing and Settlement Process at NSE



1. Trade details from Exchange to NSCCL (real-time and end of day trade file).
2. NSCCL notifies the consummated trade details to clearing members/custodians who affirm back. Based on the affirmation, NSCCL applies multilateral netting and determines obligations.
3. Download of obligation and pay-in advice of funds/securities.
4. Instructions to clearing banks to make funds available by pay-in time.
5. Instructions to depositories to make securities available by pay-in time.
6. Pay-in of securities (NSCCL advises depository to debit pool account of custodians/CMs and credit its account and depository does it).
7. Pay-in of funds (NSCCL advises Clearing Banks to debit account of custodians/CMs and credit its account and clearing bank does it).
8. Pay-out of securities (NSCCL advises depository to credit pool account of custodians/CMs and debit its account and depository does it).
9. Pay-out of funds (NSCCL advises Clearing Banks to credit account of custodians/CMs and debit its account and clearing bank does it).
10. Depository informs custodians/CMs through DPs.
11. Clearing Banks inform custodians/CMs.

The custodian is required to confirm whether he is going to settle that trade or not. If he confirms to settle that trade, then clearing corporation assigns that particular obligation to him. As on date, there are 11 custodians empanelled with NSCCL.

- *Clearing Banks:* Clearing banks are a key link between the clearing members and Clearing Corporation to effect settlement of funds. Every clearing member is required to open a dedicated clearing account with one of the designated clearing banks. Based on the clearing member's obligation as determined through clearing, the clearing member makes funds available in the clearing account for the pay-in and receives funds in case of a pay-out.

- *Depositories:* Depository holds securities in dematerialized form for the investors in their beneficiary accounts. Each clearing member is required to maintain a clearing pool account with the depositories. He is required to make available the required securities in the designated account on settlement day. The depository runs an electronic file to transfer the securities from accounts of the custodians/clearing member to that of NSCCL and visa-versa as per the schedule of allocation of securities.
- *Professional Clearing Member:* NSCCL admits special category of members known as professional clearing members (PCMs). PCMs may clear and settle trades executed for their clients (individuals, institutions etc.). In such cases, the functions and responsibilities of the PCM are similar to that of the custodians. PCMs also undertake clearing and settlement responsibilities of the trading members. The PCM in this case has no trading rights, but has clearing rights i.e. he clears the trades of his associate trading members and institutional clients.

Settlement Cycle

NSCCL clears and settles trades as per the well-defined settlement cycles (Table 5-1). Since the beginning of the financial year 2003, all securities are being traded and settled under T+2 rolling settlement. The NSCCL notifies the relevant trade details to clearing members/custodians on the trade day (T), which are affirmed on T+1 to NSCCL. Based on it, NSCCL nets the positions of counterparties to determine their obligations. A clearing member has to pay-in/pay-out funds and/or securities. The obligations are netted for a member across all securities to determine his fund obligations and he has to either pay or receive funds. Members' pay-in/pay-out obligations are determined latest by T+1 and are forwarded to them on the same day, so that they can settle their obligations on T+2. The securities/funds are paid-in/paid-out on T+2 day to the members' clients' and the settlement is complete in 2 days from the end of the trading day. (The activity schedule for the T+2 rolling settlement has already been discussed in the policy development section).

Table 5-1: Settlement Cycle in CM Segment

Activity	**T+2 Rolling Settlement (From April 1, 2003)**
Trading	T
Custodial Confirmation	T+1
Determination of Obligation	T+1
Securities/Funds Pay-in	T+2
Securities/Funds Pay-out	T+2
Valuation Debit	T+2
Auction	T+3
Bad Delivery Reporting	T+4
Auction Pay-in/Pay-out	T+5
Close Out	T+5
Rectified Bad Delivery Pay-in/Pay-out	T+6
Re-bad Delivery Reporting	T+8
Close Out of Re-bad Delivery	T+9

T+1 means one working day after the trade day. Other T+ terms have similar meanings.

Risk Management

A sound risk management system is integral to an efficient clearing and settlement system. The clearing corporation ensures that trading members' obligations are commensurate with their net worth. It has put in place a comprehensive risk management system, which is constantly monitored and upgraded to prevent market failures. It monitors the track record and performance of members in terms of their net worth, positions and exposure with the market, collects margins. If the prescribed limits on positions and exposures are breached, then automatically the members are disabled. To safeguard the interest of the investors, NSE administers an effective market surveillance system to detect excessive volatility and prevents price manipulation by setting up price bands. Further, the exchange maintains strict surveillance over market activities in illiquid and volatile securities. The robustness of the risk management system has been amply proved by the timely and default free settlement even on extreme volatile days like May 14th and 17th, 2004.

Risk Containment Measures

The risk containment measures have been repeatedly reviewed and revised to be up to date with the market realities. This section however discusses the measures prevailing as in June 2004.

Capital Adequacy Requirements

The capital adequacy requirements stipulated by the NSE are substantially in excess of the minimum statutory requirements as also to those stipulated by other stock exchanges. A person/entity seeking membership in the CM segment is required to have a net worth of Rs. 1 crore and keep an interest free security deposit of Rs. 1.25 crore and collateral security deposit of Rs. 0.25 crore with the Exchange/NSCCL. The deposits kept with the Exchange as part of the membership requirement are taken as base capital to determine the member's intra-day trading limit and/or gross exposure limit. Additional base capital is required to be deposited by the member for taking additional exposure. The capital adequacy norms to be followed by members are presented in Table 5-2.

Table 5-2: Capital Adequacy Norms for Membership on NSE

(All values in Rs. Lakh)

Requirement	Members of			Professional Clearing Members of	
	CM and F&O Segment	CM and WDM Segment	CM, WDM and F&O Segment	CM Segment	CM and F&O Segment
Net Worth	100	200	200	300	300
Interest Free Security Deposit (IFSD)	125	250	275	25	34
Collateral Security Deposit (CSD)	25	25	25	25	50

Note: A professional clearing member (PCM) is required to bring in IFSD of Rs. 6 lakh and CSD of Rs. 17.5 lakh (Rs. 9 lakh and Rs. 25 lakh respectively for corporate members) per trading member in the CM segment.

Source: NSE.

Trading and Exposure Limits

NSCCL imposes limits on turnover and exposure in relation to the base capital of a member. Gross intra-day turnover of a member should not exceed 25 times of the base capital. Similarly, gross exposure (aggregate of net cumulative outstanding positions in each security) of a member at any point of time should not exceed 8.5 times the total base capital (not utilized towards margin) up to Rs. 1 crore. If a member has free capital in excess of Rs. 1 crore, his exposure should not exceed Rs. 8.5 crore plus 10 times of the capital in excess of Rs. 1 crore. Members violating the intra-day gross turnover limit at any time on any trading day are automatically and instantaneously disabled by the trading system. Members trading facility is restored from the next trading day with a reduced intra-day turnover limit of 20 times the base capital till deposits in the form of additional base capital is deposited with NSCCL. A penalty of Rs. 5,000 is levied for each violation of gross exposure limit and intra-day turnover limit. In case of second and subsequent violation, the penalty in multiples of Rs. 5,000 for each such instance is charged. Non-payment of penalty on time attracts penal interest of 15 basis points per day till the date of payment.

Gross Exposure Limits

The gross exposure of a member is computed across all securities and across all open settlements. Open settlements are all those settlements for which trading has commenced and for which pay-in is yet to be completed. It is arrived at by adding up the absolute values of all the securities and the specified adjustment factor in which a member has an open position. For this purpose, scrips have been classified in to three groups on the basis of market capitalisation, impact cost and number of trades. Groups I, II and III have been assigned adjustment factors of 1.25, 2 and 8.5 respectively.

Members exceeding the gross exposure limit are not permitted to trade with immediate effect until their cumulative gross exposure is reduced to below the gross exposure limits (as defined by the guidelines) or they increase their limit by providing additional base capital.

Early pay-in of funds/securities

If members meet funds/securities obligations prior to the funds pay-in day, after satisfying the applicable conditions, then the margin payable by the member is re-computed. The value of the advance pay-in made is reduced from the cumulative net outstanding position of the member for the purpose of calculating gross exposure.

On-line Monitoring

NSCCL has put in place an on-line monitoring and surveillance system, whereby exposure of the members is monitored on a real time basis. A system of alerts has been built in so that both the member and the NSCCL are alerted as per pre-set levels (reaching 70%, 85%, 95% and 100%) as and when the members approach these limits. The system enables NSCCL to further check the micro-details of members' positions, if required and take pro-active action.

The on-line surveillance mechanism also generates alerts/reports on any price/volume movement of securities not in line with past trends/patterns. Open positions of securities are also analyzed. For this purpose the exchange maintains various databases to generate alerts. These alerts are scrutinized and if necessary taken up for follow up action. Besides this, rumors in the print media are tracked and where they are found to be price sensitive, companies are approached to verify the same. This is then informed to the members and the public.

Inspection and Investigation

There is a regulatory requirement that a minimum of 10% of the active trading members should be inspected every year to verify their level of compliance with various rules, byelaws and regulations of the Exchange. Usually, inspection of more members than the regulatory requirement is undertaken every year. The inspection randomly verifies if the investor interests are being compromised in the conduct of business by the members. On the basis of various alerts further analysis is carried out. If it suggests any possible irregularity such as deviations from the past trends/patterns, concentration of trading at NSE at the member level, then a more detailed investigation is undertaken. If the detailed investigation establishes any irregular activity, then a disciplinary action is initiated against the member. If the investigation suggests suspicions of possible irregular activity across the stock exchanges and/or possible involvement of clients, the same is informed to SEBI.

Margin Requirements

NSCCL imposes stringent margin requirements as part of its risk containment measures. The categorisation of stocks for imposition of margins is as given below:

- The stocks, which have traded at least 80% of the days during the previous 18 months, should constitute as the Group I and Group II.
- Out of the scrips identified above, those having mean impact cost of less than or equal to 1% should be under Group I and the scrips where the impact cost is more than 1, should be under Group II.
- The remaining stocks should be under Group III.
- The impact cost should be calculated on the 15th of each month on a rolling basis considering the order book snapshots of the previous six months. On the basis of the calculated impact cost, the scrip should move from one group to another group from the 1st of the next month. The impact cost is required to be calculated for an order value of Rs. 1 lakh.

The daily margin is the sum of Mark to Market Margin (MTM margin) and Value at Risk-based Margin (VaR-based margin). VaR margin is applicable for all securities in rolling settlement.

VaR Based Margins

All securities are classified into three groups for the purpose of calculating VaR margin. For the securities listed in Group I, scrip wise daily volatility is calculated using the exponentially weighted moving average should be 3.5 times the volatility. For the securities listed in Group II the VaR margin should be higher of scrip VaR (3.5 δ) or three times the index VaR, and it should be scaled up by root 3. For the securities listed in Group III, the VaR margin would be equal to five times the index VaR and scaled up by square root of 3. VaR margin rate for a security constitute the following:

1. VaR margin calculated as shown above. The index VaR would be the higher of the daily Index VaR based on S&P CNX NIFTY or BSE SENSEX. The index VaR would be subject to a minimum of 5%.

2. Additional VaR Margin of 6% as specified by SEBI.

3. NSCCL may stipulate security specific margins for the securities from time to time.

The VaR based margin would be rounded off to the next higher integer (For e.g., if the VaR based Margin rate is 10.01, it would be rounded off to 11.00) and capped at 100%.

The VaR margin rate computed as mentioned above will be charged on the net outstanding position (buy value *minus* sell value) of the respective clients on their securities across all open settlements. The net position at a client level for a member are arrived, thereafter it is grossed across all the clients of a member to compute gross exposure for margin calculation for him.

Mark-to-Market Margin

Mark to market margin is computed on the basis of mark to market loss of a member. Mark to market loss is the notional loss, which the member would incur in case the cumulative net outstanding position in all securities at the closing price of the securities as announced at the end of the day by the NSE. Mark to market margin is calculated by marking each transaction in scrip to the closing price of the scrip at the end of trading. In case the security has not been traded on a particular day, the latest available closing price at the NSE is considered as the closing price. In the event of the net outstanding position of a member in any security being nil, the difference between the buy and sell values would be considered as notional loss for the purpose of calculating the mark to market margin payable.

MTM profit/loss across different securities within the same settlement is set off to determine the MTM loss for a settlement. The MTM losses for settlements are computed at client level.

Non-payment of the margin attracts penal charge @ 0.07% per day of the amount not paid throughout the period of non-payment. Trades done by trading members on behalf of institutions are, however, exempt from margin and exposure requirements.

Index-based Market-wide Circuit Breakers

An index based market-wide circuit breaker system applies at three stages of the index movement either way at 10%, 15% and 20%. These circuit breakers bring about a coordinated trading halt in trading on all equity and equity derivatives markets across the country. The breakers are triggered by movements in either S&P CNX Nifty or Sensex, whichever is breached earlier.

- In case of a 10% movement in either of these indices, there would be a one-hour market halt if the movement takes place before 1:00 p.m. In case the movement takes place at or after 1:00 p.m. but before 2:30 p.m. there would be trading halt for ½ hour. In case movement takes place at or after 2:30 p.m. there will be no trading halt at the 10% level and market would continue trading.

- In case of a 15% movement of either index, there should be a two-hour halt if the movement takes place before 1 p.m. If the 15% trigger is reached on or after 1:00 p.m. but before 2:00 p.m., there should be a one-hour halt. If the 15% trigger is reached on or after 2:00 p.m. the trading should halt for remainder of the day.

- In case of a 20% movement of the index, trading should be halted for the remainder of the day.

Settlement Process

The settlement process begins as soon as members' obligations are determined through the clearing process. The settlement process is carried out by the Clearing Corporation with the help of clearing banks and depositories. The Clearing Corporation provides a major link between the clearing banks and the depositories. This link ensures actual movement of funds as well as securities on the prescribed pay-in and pay-out day.

This requires members to bring in their funds/securities to the Clearing Corporation. The CMs make the securities available in designated accounts with the two depositories (CM pool account in the case of NSDL and designated settlement accounts in the case of CSDL). The depositories move the securities available in the pool accounts to the pool account of the Clearing Corporation. Likewise CMs with funds obligations make funds available in the designated accounts with clearing banks. The Clearing Corporation sends electronic instructions to the clearing banks to debit designated CMs' accounts to the extent of payment obligations. The banks process these instructions, debit accounts of CMs and credit accounts of the Clearing Corporation. This constitutes pay-in of funds and of securities.

After processing for shortages of funds/securities and arranging for movement of funds from surplus banks to deficit banks through RBI clearing, the Clearing Corporation sends electronic instructions to the depositories/clearing banks to release pay-out of securities/funds. The depositories and clearing banks debit accounts of the Clearing Corporation and credit accounts of CMs. This constitutes pay-out of funds and securities.

Settlement is deemed to be complete upon declaration and release of pay-out of funds and securities. The settlement cycle for the CM segment are presented in Table 5-1.

Dematerialised Settlement

NSE along with leading financial institutions established the National Securities Depository Ltd. (NSDL), the first depository in the country, with the objective to reduce the menace of fake/forged and stolen securities and thereby enhance the efficiency of the settlement systems. This has ushered in an era of dematerialised trading and settlement. SEBI, too, has been progressively promoting dematerialisation by mandating settlement only through dematerialized form for more and more securities. The share of demats delivery in total delivery at NSE touched almost 99.99% in terms of value during 2003-04.

Settlement Guarantee

The Settlement Guarantee Fund provides a cushion for any residual risk and operates like a self-insurance mechanism wherein members themselves contribute to the Fund. In the event of a trading member failing to meet his settlement obligation, then the fund is utilized to the extent required for successful completion of the settlement. This has eliminated counter-party risk of trading on the Exchange.

As in case of NSCCL, other stock exchanges also have been allowed by the SEBI to use trade guarantee funds (TGFs) maintained by them for meeting the shortages arising out of non-fulfillment/partial fulfillment of funds obligations by members in a settlement before declaring the concerned member a defaulter, subject to the condition that: (a) in cases where the shortage was in excess of the BMC, the trading facility of the member was withdrawn and the securities pay out due to the member was withheld, (b) in cases where the shortage exceeded 20% of the BMC and was less than the BMC on six occasions within a period of three months, the trading facility of the member was withdrawn and the securities pay-out to the member was withheld. On recovery of the complete shortages, the member would be permitted to trade with a reduced exposure.

Settlement Statistics

The details of settlement of trades on CM segment of NSE are provided in Annexure 5-1. There has been a substantial reduction in short and bad deliveries. Short deliveries averaged around 0.6% of total delivery in 2003-04. The ratio of bad deliveries to net deliveries progressively declined to almost negligible in 2003-04.

During 2003-04, taking all stock exchanges together, 28.72% of securities accounting for 21.60% turnover were settled by delivery and the balance were squared up/netted out (Table 5-3). In the preceding year, 24.42% of shares accounting for 21.60% of turnover were settled by delivery. This indicates preference for non-delivery-based trades.

Table 5-3: Delivery Pattern in Stock Exchanges

(In per cent)

Exchange	2002-03		2003-04	
	Quantity	Value	Quantity	Value
NSEIL	22.62	14.23	24.47	20.04
Mumbai	32.13	16.02	37.18	25.73
Calcutta	13.23	6.13	27.98	13.79
Delhi	65.40	18.92	100.00	4.12
Ahmedabad	1.59	0.64	4.57	0.00
Uttar Pradesh	2.53	1.56	1.10	0.65
Bangalore	0.00	1.56	100.00	–
Ludhiana	0.00	0.00	0.00	0.00
Pune	5.88	0.00	0.00	0.00
OTCEI	0.00	0.00	0.00	0.00
Hyderabad	37.13	34.78	97.31	97.89
ICSEIL	0.33	0.19	66.67	60.00
Chennai	0.00	0.00	1.12	0.19
Vadodara	0.00	0.00	0.00	0.00
Bhubaneshwar	0.00	0.00	0.00	0.00
Coimbatore	0.00	0.00	0.00	0.00
Madhya Pradesh	0.00	0.00	0.00	0.00
Magadh	0.00	0.00	0.00	0.00
Jaipur	0.00	0.00	0.00	0.00
Mangalore	0.00	0.00	0.00	0.00
Gauhati	23.81	210.00	0.00	0.00
SKSE	0.00	0.00	0.00	0.00
Cochin	0.00	0.00	0.00	0.00
Total	**24.42**	**14.35**	**28.72**	**21.60**

* Delivery ratio represents percentage of delivery to turnover of a Stock Exchange

Source: SEBI.

Settlement Efficiency

During the past couple of years, the clearing and settlement mechanism in India has improved considerably and this has been corroborated in the Standards and Poor's Factbook. The benchmarks of settlement efficiency are expressed as a score out of 100 (Table 5-4).

Table 5-4: Benchmarks of Settlement Efficiency

(Score out of 100)

Benchmark	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Settlement	8.3	–16.8	–0.7	–1.2	10.0	41.9	59.6	75.8	89.3	93.6
Safekeeping	71.8	75.0	76.6	76.8	69.7	78.1	81.9	86.7	89.7	88.1
Operational Risk	28.0	0.0	16.8	23.5	47.3	43.6	51.4	59.1	65.2	66.0

Source: S&P Fact Book 2004

It provides an indication of the aggregate level of post-trade operational efficiency in securities markets. The Settlement Benchmark provides a means of tracking the evolution of settlement performance over a period of time. The Settlement Benchmark for India has improved from 8.30 in 1994 to 93.6 in 2003. The Safekeeping Benchmark provides the efficiency of a market in terms of collection of dividends and interest, reclamation of excess withheld taxes, and protection of rights in the event of a corporate action. India's score for it has improved from 71.80 in 1994 to 88.1 in 2003. The Operational Risk Benchmark takes into consideration the settlement and safekeeping benchmarks and takes into accounts other operational factors such as the level of compliance with the G30 recommendation, the complexity and effectiveness of the regulatory and legal structure of the market, and counterparty risk. India scored 66.0 out of 100 in it in 2003 as compared to 28.00 in 1994. The status of Implementation of G30 recommendations on the Corporate Securities market in India are presented in Table 5-5.

Table 5-5: Status of Implementation of G30 Recommendations

Recommendations	Corporate Securities Market
1a. All comparisons of trades between direct market participants (i.e. brokers broker/ dealers and other exchange member) should be accomplished by T+0. 1b. Matched trade details should be linked to the settlement system.	It is no more relevant as trades are matched on the screen and matched trade details are linked to settlement system of the Clearing Corporation electronically. Hence trade comparison and confirmation are instantaneous.
2 Indirect market participants (such as institutional investors and other indirect trading counterparties) should achieve positive affirmation of trade details by T+1.	The contract notes indicating execution of trades are issued by brokers to clients within 24 hours. The clients can also browse websites of the exchange to verify their trade details as soon as trades are executed. Institutional clients are issued electronic contract notes.

Contd.

Table 5-5: Status of Implementation of G30 Recommendations – Contd.

Recommendations	Corporate Securities Market
3a. Each country should have in place an effective and fully developed central securities depository, organised and managed to encourage the broadest possible direct and indirect industry participation. 3b. The range of depository eligible instruments should be as wide as possible. 3c. Immobilisation or dematerialisation of financial instruments should be achieved to the utmost extent possible. 3d. If several CSDs exist in the same market, they should operate under compatible rules and practices, with the aim of reducing settlement risk and enabling efficient use of funds and available cross-collateral.	There are in place two fully developed depositories which maintain and transfer ownership records in electronic form for the entire range of securities. They encourage broadest direct and indirect industry participation. A large variety of instruments including all securities and money market instruments are held in depositories. These are held in dematerialised form. The systems are in place for smooth inter-depository transfer of securities. Today about 100% of securities settlement takes place through depositories. The depositories operate under the Depositories Act, 1996 and the systems are in place for smooth inter-depository transfer of securities. Securities held in depositories are freely transferable and also are preferred collateral in the market.
4a. Each market is encouraged to reduce settlement risk by introducing either Real Time Gross Settlement or 4b. a trade netting system that fully meets the "Lamfalussy-recommendations"	RBI launched the RTGS system in March 2004. This system seeks to settle inter-bank transactions on transaction by transaction basis online at real time mode. The present capital market settlement system of the clearing coproration relies on multilateral netting the obligations to determine obligations of members who have security-wise net obligations to receive/deliver and a fund obligation to pay or receive.
5 Delivery based payment (D*v*P) should be employed as the method of settling all securities transactions. D*v*P means simultaneous, final, irrevocable and immediately available exchange of securities and cash on a continuous basis through out the day.	The CSA provides counter party guarantee for all trades executed on stock exchanges on the strength of the SGF/ TGF and a comprehensive risk management system. The settlement obligations (both securities and funds) for any settlement constitute about one-third of the funds available in SGF/TGF. The members pay-in funds/securities to the CSA which in turn pays-out funds/securities to the receiving members. The clearing corporation has full control over receipts and payments and does not make pay-out to receiving trading members unless the concerned trading members have fulfilled their respective pay-in obligations. This is akin to D*v*P in the sense that there is no principal risk, that is, a member making pay-in is guaranteed of pay-out by the clearing corporation.
6a. Payments associated with the settlement of securities transactions should be made consistent across all instruments and markets by adopting the "same day" funds convention. 6b. Payments associated with the servicing of securities portfolios should be made consistent across all instruments and markets by adopting the "same day" funds convention.	The pay-in and pay-outs for both funds and securities take place on the same day.

Contd.

Table 5-5: Status of Implementation of G30 Recommendations – Contd.

Recommendations	Corporate Securities Market
7a. A rolling settlement system should be adopted by all markets. 7b. Final settlement for all trades should occur no later than T+3.	Rolling settlement was introduced for all listed securities from December 31, 2001 while settlement of funds and securities on T+2 basis have been introduced from April 1, 2003.
8a. Securities lending and borrowing should be encouraged as a method of expediting the settlement of securities transactions. 8b. Existing regulatory and taxation barriers that inhibit the practice of lending and borrowing of securities should be removed.	SEBI has framed securities lending and borrowing scheme under which approved intermediaries can lend securities. These have been removed. It has been clarified that the lending of securities would not be treated as 'transfer' so as to attract the provisions relating to capital gains under the Income Tax Act, 1961.
9a. Each country should adopt the standard for securities message developed by the International Organisation of Standardisation (ISO Standard 7775). For Straight through processing, the common messaging standards is ISO 15022. 9b. In particular, countries should adopt the ISIN numbering system for securities issued as defined in the ISO Standard 6166.	The depositories and clearing corporations use message structure based on SWIFT standards. ISINs have been issued by SEBI. ISIN numbering system is being used by exchanges and depositories for settlement of securities in demat form.

ISSA Recommendations 2000

The international standards have been instrumental in improving safety and efficiency of the SSS. Table 5-6 attempts to assess Indian SSS for corporate securities in terms of ISSA recommendations, which have become universal benchmarks. The Indian SSS seems to have met most of the recommendations in spirit, if not in letter. For example, the SSS may have dominant shareholders or their boards may not be accountable to users directly, but there are systems in place in the form of Executive Committee or Committee on Settlement Issues to receive input from users. The key areas where substantial improvements are required to fully comply with ISSA standards are governance of SSS, messaging standards, and risk management. However it is important to note that the SSS model, as implemented by the clearing corporation of NSE (NSCCL), needs to be replicated for the whole market.

Table 5-6: Indian Securities Settlement System vis-à-vis ISSA Recommendations 2000

I. ***Governance:*** *The SSS (Depositories/CC) have a primary responsibility to their users and other stakeholders. They must provide effective low cost processing. Services should be priced equitably.*	
Are the boards that govern the SSS answerable to its users?	The boards are not explicitly answerable to its users, but to their promoters and the regulators.
Does any single organisation, or a sector have a large voting position at the board of the SSS?	There are dominant shareholders in the depositories/CC.

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Is there cross subsidisation of products (e.g. international services subsidised by local ones or transaction costs subsidised by asset servicing charges)?	The SSS do not render any international service and hence there is no cross-subsidisation between international service and domestic service. They, however, have international clients. They do not charge such international clients and domestic clients differently. The depositories do not charge the investors and clearing members directly but charge its participants uniformly, who are free to have their own charge structure for their clients. However, the charges levied by depositories from participants and by participants of the same depository from clients vary widely. The CC does not levy any fee directly from members, but shares the transaction fee levied by the exchanges. These charges have reduced drastically over time with increase in volumes.
What process is in place at the SSS to ensure that it meets the needs of all its stakeholders (e.g. institutions, broker dealers, retail investors, issuers)?	The SSS, being companies, set up under the Companies Act, 1956 are required to comply with provisions thereof for corporate governance and financial reporting. Besides, a depository is goverened by the Depositories Act, 1996 and the regulations made there under. A CC is governed by the rules and regulations made under the SCRA, 1956. They generally evolve policies in consultation with the regulator and various committees which comprise of representatives of users and eminent persons.
What is the communications strategy of the SSS to its stakeholders and how is this run?	The SSS maintain websites and disseminate information through press releases, circulars, communiques and newsletters. They hold annual general meetings and publish annual reports detailing its actions and plans as well as financials. They have electronic interactive communication system with participants.
II. ***Technology – Core Processing****: Securities Systems must allow the option of network access on an interactive basis. They should cope with peak capacity without any service degradation, and have sufficient standby capabilities to recover operations in a reasonably short period within each processing day.*	
How often, over the last twelve months, have the SSS been required to change its published settlement timetable?	There has been no disruption of settlement schedule drawn by CC. The depositories adhere to the settlement schedules.
Do the SSS operate real time or multiple batch processing for settlement?	The CC settles the trades in batches. But the depositories process the batches on real time. They also do real time settlement for spot trades and trades in respect of which both buy and sell orders have been routed through the same broker.
Do the SSS allow interactive communication (on line real time) with its users, enabling settlement input and amendment?	Though securities are settled in batches, there is online real time interactive communication between the CC and the depositories, clearing bank and clearing members/custodians. The depositories also have interactive communication with their participants, and allow demat account holders to submit delivery instructions directly on the internet. While the depositories have electronic communication with DPs, the CC, custodians, clients (BO) and exchanges, these CC have electronic communication with the brokers, exchanges, custodians, depositories and clearing banks.
Have the SSS ever failed to recover an outage within a reasonable time and what steps have been taken to prevent a similar event in the future?	This has never occurred. The depositories and the CC, however, maintain disaster recovery sites.

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III. ***Technology – Messaging and Standards:*** *The industry worldwide must satisfy the need for efficient, fast settlement by full adherence to the International Securities Numbering process (ISO 6166) and uniform usage of ISO 15022 standards for all securities messages. The industry should seek to introduce a global client and counterpart identification methodology (BIC-ISO 9362) to further facilitate straight through processing. Applications and programmes should be structured in such a way as to facilitate open inter-action between all parties.*

Does the market use ISIN as the primary securities identification code?	The market uses ISINs for all securities as primary identification code. However, trades are executed on the basis of scrip identity numbers which are mapped to ISIN.
Are the major participants in the market linked electronically?	The major exchanges provide nation-wide satellite links. The exchanges are also connected to CC which is connected to clearing banks, depositories, custodians and members electronically. Paper instructions are generally not used.
Do the SSS communicate using true (i.e. not bilaterally agreed on sub-standards) ISO standards for securities messaging?	The CC have bilaterally agreed automatic interfaces with one another. ISO 15022 messaging format has been prescribed for communication between member and custodian, member and client and client and custodian for post trading activity.
Does the market operate standard identification codes for counterparties or client accounts and, if so, how do these fit into a single global identification methodology?	The regulator has made it mandatory for all brokers to use unique client code for all clients. The depository participants have a unique identification numbers and they, in turn, allot client identification numbers. The market is yet to adopt universal client identification/ global identification methodology.

IV. ***Uniform Market Practices:*** *Each market must have clear rules assuring investor protection by safe guarding participants from the financial risks of failed settlement and ensuring that listed companies are required to follow sound policies on corporate governance, transfer of economic benefits and shareholder rights.*

Does the market have securities lending and borrowing schemes in place, and are these open to all market participants and their settlement agents?	There is a securities lending and borrowing scheme in place. Any market participants can lend or borrow securities through these approved intermediaries. The participants, who are not permitted to undertake short sales, do not have need for borrowing, though they may lend.
Does the settlement system mark fail trades to market and collect margin from the failing counterparty to protect the innocent counterpart's interest?	No trade executed on the exchanges fails. All trades executed on the exchanges are settled by the CC who provide guarantee of financial settlement. Failure at the stage of confirmation by custodians is insignificant, however, in such cases, the obligation devolve on the broker and the trades are subjected to usual risk containment measures including margins and exposure limits. Failure at delivery stage (short delivery) is less than 0.5% of delivery. The CC identifies the short deliveries and debits the CM on the pay-out day by an amount equivalent to the securities not delivered, and valued at the closing price on the settlement day. It conducts a buy-in auction on the day following the pay out day. If the buy-in auction price is more than the valuation price, the CM is liable for the difference. If the buy-in auction price is less than the valuation price, the difference is credited to IPF and not passed on to defaulting broker. All shortages not bought in the auction are deemed closed out at the highest price between the trading day and the settlement day, or closing price on the auction day plus 20%, whichever is higher. This amount is credited to the receiving members account on the auction pay-out day.

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Does the market operate a guarantee fund or have an equivalent procedure to protect against the cost of failed transactions; and which sectors of the market does it cover?	The exchanges maintain SGF/ TGF and use these funds for meeting shortages arising out of non-fulfillment/partial fulfillment of the funds obligations by the members in a settlement before declaring him a defaulter. There is no limit on pay-out per incident and all legitimate claims are honoured. The exchanges can use up to 25% of their guarantee funds to cover failures of payment during the allotment of IPOs for shares offered through them. Exchanges maintain an Investor Protection Fund to take care of investor claims arising out of non-settlement of obligations by a member. There is a limit on the amount payable per investor claim.
Are the stock transfer agents (share registrars) linked electronically to the depository?	Registrars and transfer agents, including issuers handling registration and transfer work in-house, are electronically linked to both the depositories. The depositories transfer securities electronically.
Is there a legal maximum time period to complete ownership transfers in the books of the issuer? If so, does market practice adhere to the deadline?	The Companies Act, 1956 requires companies to effect the transfers within 60 days. The listing agreement requires transfers to be affected within thirty days. However, the dematerialized securities are freely transferable and depositories effect such transfers instantaneously. Over 99% of securities transactions are currently settled in demat form.
Are investors entitled to all benefits arising on a security from the point of purchase; and how are these rules enforced?	Based on the record date/book closure, the exchanges determine 'no-delivery' period during which securities are traded ex-benefits and before that cum-benefits. The purchaser gets all the benefits from the date of purchase before no-delivery period. Physical securities require registration of transfer in favour of purchaser in order to entitle him to corporate actions.
Is proxy voting permissible in the market and can such proxies be lodged by post or other remote delivery method?	A proxy can attend and vote at the meeting of the company, but cannot participate in the deliberations. The document appointing a proxy need to be deposited at least 48 hours before the meeting. It is possible for a member to caste his vote by post also, for certain resolutions.
Are there binding rules in the market stating the minimum and maximum lapsed time between the announcement and completion of key events, including registration, the calling of shareholder meetings, the payment of dividends or interest, rights issues, tender offers and other voluntary corporate actions?	These are prescribed in the Companies Act, 1956 and the listing agreements. For example, a share transfer shall be registered within 60 days of presentation, the dividend shall be paid to shareholders within 30 days from the date of declaration, annual general meeting shall be held every year and not more than 15 months shall lapse between two such meetings, at least 21 days' notice shall be given for general meetings, etc. Under the listing agreement, the companies are required to report all corporate actions to exchanges within defined time limits and the exchange in turn disseminates the same to members/investors.
Are all voluntary corporate actions advised through a central mechanism assuring consistent information to all investors?	Ex-dates for voluntary corporate actions are announced by the exchanges. These may differ among exchanges and on the same exchange for physical and dematerialized shares. These are disseminated through the websites of the company, exchanges and depositories.

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	The regulator has put in place an integrated source of company information, which is accessible through a web site on lines similar to that of Electronic Data Gathering, Analysis and Retrieval (EDGAR). All company related information, which is mandatorily required to be filed by the companies with the exchanges under the listing agreement, are be available at one location in electronically interactive form.
Is information on corporate actions available electronically, and is the minimum lapsed time for responding to such actions sufficient to enable all domestic and foreign investors to respond in a timely and considered fashion?	The exchanges notify members of corporate actions through their websites and circulars. These are also available on the web site of the company and the depositories. Generally, sufficient time is available to all investors to respond to corporate actions.

V. ***Reduction of Settlement Risk:*** *The major risks in securities systems should be mitigated by five key measures, namely real delivery versus payment, trade date plus one settlement cycle, the minimisation of funding and liquidity constraints, scrip-less settlement, and mandatory trade matching and settlement performance measures.*

Does the market use DvP settlement procedures in accordance with one of the recognised BIS models?	The market uses a variant of BIS model 3 that settles transfer instructions for both securities and funds on a net basis, with final transfers of both securities and funds occurring at the end of the processing cycle. The CC applies multilateral netting to determine obligations of members who have a security wise net obligation to receive/deliver and a fund obligation to pay/receive. The members pay-in fund/securities to the CC which in turn pays-out funds/securities to them. The CC has full control over receipts and payments and does not make pay-out unless pay-in has been received. This is akin to DvP in the sense that there is no principal risk, that is, a member making pay-in is guaranteed of pay-out.
Does the market have a rolling settlement cycle of T+3 or shorter for all exchange traded instruments?	All other securities compulsorily moved to rolling settlement in December 2001 and the settlement cycles have been shortened to T+2 rolling settlement from April 1, 2003.
Could the market reduce the current settlement period to T+2 or below, without increasing fails rates? If so, how would this be achieved, and what plans are there to shorten the existing settlement cycle?	Limited availability of EFT constrains shorter settlement cycle. EFT is available only at 15 centres covering 8500 bank branches and that too, for values not exceeding Rs. 20 million per transfer. The market has moved to T+2 rolling settlement from April 2003 and is expected to switch to T+1 rolling settlement in the near futures.
Is matching of trade details achieved on trade date, at least for direct market participants; and by trade date plus one for indirect participants?	Trades are executed on screen and matched trade details are linked to settlement system electronically. Hence matching of trades for direct participants is instantaneous. The custodians affirm trade details on T+1 basis.
Is the depository scrip-less, and, if not, is it working to enable scrip-less settlement?	The depositories maintain ownership records of dematerialised securities and transfer the ownership electronically in book entry form.
Does the market allow partial settlements?	The participants accept partial deliveries.
Can the depository accommodate same day turnarounds?	The depositories do so for off-market transactions. Since institutions are required to do only delivery based transactions on exchanges and CC processes settlement in batches, same day turnaround is difficult.

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VI. ***Market Linkages:*** *Convergence of Securities Systems, both within countries and across borders, should be encouraged, where this eliminates operational risk, reduces cost and enhances market efficiency.*	
Is the depository linked electronically and in real time with other segments of the core market infrastructure (e.g. trading platforms, netting systems, payment systems)?	The depositories have secured real time linkages with CC which is connected with trading platform, netting and payment system.
Is there one or more depository or settlement system in the market?	Each stock exchange has its own clearing agency. There are two depositories which are linked to each other and to most of the exchanges/clearing agencies.
If there are several, has a consolidation been considered? If yes, by when?	The consolidation of trading and settlement system is left to market forces. There are 23 stock exchanges with equal number of clearing agencies and two depositories. The law encourages multiple agencies in the interest of competition.
Does the securities system allow foreign systems to establish direct links on an equal basis to local members?	The system does not allow external agencies to participate in the securities system.
Does the securities system allow foreign market participants to become direct participants?	The system does not allow foreign intermediaries to become direct market participants. They become direct participants through their local subsidiaries or joint ventures with local partners.

VII. ***Investor Protection****: Investor compliance with the laws and regulations in the home countries of their investments should be part of their regulators' due diligence process. Investors, in turn, should be treated equitably in the home country of their investments especially in respect to their rights to shareholder benefits and concessionary arrangements under double tax agreements.*	
Do domestic regulators monitor the procedures in place at their locally based cross-border custodians to assure compliance with the laws and regulations of the home countries of their investments?	SEBI regulates locally-based cross border custodians and RBI maintains oversight for foreign and local banks licensed to operate in India.
What are the areas (e.g. benefits, investor compensation) where foreign investors are not treated in the same way as local investors?	The foreign investors are generally treated at par with domestic investors. However, there are ceilings on investments by NRIs, PIOs, and FIIs. The FIIs can not engage in short selling, turnaround trading and securities borrowing, while they are exempted from exposure and margin requirements.
Can sales proceeds and income be repatriated without any restrictions?	These can be repatriated only after certain tax compliance.
Are double tax agreements simple to apply, and do foreign investors receive promptly their full entitlement to dividends and interest payments?	The double taxation agreements are simple to apply. The dematerialisation has helped foreign investors to receive their entitlements promptly.

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VIII. *Legal Infrastructure: Local laws and regulations should ensure that there is segregation of client assets from the principal assets of their custodian; and no possible claim on client assets in the event of custodian bankruptcy or a similar event.*	
Under local rules and regulations, what are the segregation requirements for keeping client assets and custodian assets in the depository?	The brokers and depository participants are required to segregate their assets from those of their clients and do not commingle the assets of the clients.
How are clients' assets protected in the event of insolvency of a custodian or depository?	The securities held with a custodian or depository can not be attached in case of insolvency, as they are not legal owners.
Does local law recognise the existence of beneficial owners who may differ from the legal owner of a security?	The Depositories Act, 1996 explicitly created legal owners and beneficial owners for dematerialized securities. While the depository is the registered owner of the securities, the investors are beneficial owners.
Does local law clearly define the point of time when a settlement, both for the security and the cash involved, achieves finality and thus cannot be unwound?	The settlement is complete with pay-out of securities/funds to members. In fact once a trade is executed; it is eventually settled and can not be unwound in between.
Does a pledgee have an absolute right to realise their security at all times?	The pledgee generally has such a right. On receipt of a notice from the pledgee, the depository records him as the beneficial owner in respect of pledged securities.
Does the depository have loss sharing provisions in its rules, and how would these be applied?	The depositories indemnify the beneficial owners of securities for any loss caused to them due to the negligence of the depositories or their participants. The depository can, however, recover the loss from the participant responsible for loss. Besides, the depositories have taken comprehensive insurance for business risk and system risk.

Annexure 5-1: Settlement Statistics in CM Segment

Month/Year	No. of Trades (mn.)	Traded Quantity (mn.)	Quantity of Shares Deliverable (mn.)	% of Shares Delivered to Total Shares Traded	Turnover (Rs. mn.)	Value of Shares Deliverable (Rs. mn.)	% of Delivery to Value of Shares Traded	Securities Pay-in (Rs. mn.)	Short Delivery (Auctioned quantity) (mn.)	% of Short Delivery to Delivery	Un-rectified Bad Delivery (Auctioned quantity) (mn.)	% of Un-rectified Bad Delivery to Delivery	Funds Pay-in (Rs. mn.)
Nov 94-Mar 95	**0.3**	**133**	**69**	**51.74**	**17,280**	**8,980**	**51.98**	**6,112**	**0.6**	**0.85**	**0.18**	**0.26**	**3,004**
1995-96	**6**	**3,901**	**726**	**18.62**	**657,420**	**117,750**	**17.91**	**58,045**	**18**	**2.46**	**3.22**	**0.44**	**32,583**
1996-97	**26**	**13,432**	**1,645**	**12.25**	**2,923,140**	**326,400**	**11.17**	**137,899**	**38**	**2.32**	**6.63**	**0.40**	**72,121**
1997-98	**38**	**13,522**	**2,205**	**16.31**	**3,700,100**	**597,748**	**16.15**	**217,125**	**33**	**1.51**	**7.29**	**0.33**	**108,272**
1998-99	**55**	**16,531**	**2,799**	**16.93**	**4,135,730**	**662,038**	**16.01**	**307,551**	**31**	**1.09**	**6.97**	**0.25**	**121,754**
1999-00	**96**	**23,861**	**4,871**	**20.42**	**8,030,497**	**826,070**	**10.29**	**797,828**	**63**	**1.30**	**11**	**0.23**	**279,921**
2000-01	**161**	**30,420**	**5,020**	**16.50**	**12,638,978**	**1,062,774**	**8.41**	**949,621**	**34**	**0.68**	**1.16**	**0.023**	**459,367**
Apr-01	9	1,632	564	34.57	282,261	60,829	21.55	52,139	2	0.28	0.0043	0.0008	19,155
May-01	15	2,776	643	23.15	518,350	73,711	14.22	37,519	2	0.24	0.0019	0.0003	19,758
Jun-01	13	2,280	513	22.52	431,360	59,601	13.82	40,579	1	0.27	0.0010	0.0002	16,260
Jul-01	10	1,315	297	22.59	290,920	37,210	12.79	40,205	2	0.70	0.0002	0.0001	18,300
Aug-01	11	1,551	302	19.46	285,720	39,620	13.87	35,313	3	1.03	0.0003	0.0001	18,470
Sep-01	12	1,655	314	18.94	337,180	39,330	11.66	38,074	2	0.51	0.0000	0.0000	20,680
Oct-01	15	1,978	349	17.62	352,250	42,470	12.06	41,360	4	1.15	0.0000	0.0000	19,540
Nov-01	14	2,265	487	21.48	374,710	56,790	15.16	54,678	5	0.95	0.0000	0.0000	23,110
Dec-01	17	2,922	593	20.29	530,976	71,844	13.53	69,244	5	0.81	0.0000	0.0000	30,347
Jan-02	23	3,833	573	14.95	713,290	79,400	11.13	78,486	4	0.65	0.0000	0.0000	34,400
Feb-02	17	2,687	660	24.57	488,230	79,820	16.35	79,353	4	0.59	0.0000	0.0000	30,160
Mar-02	17	2,576	636	24.69	475,962	77,034	16.18	76,577	4	0.62	0.0000	0.0000	30,301
2001-02	**172**	**27,470**	**5,930**	**21.59**	**5,081,208**	**717,658**	**14.12**	**643,525**	**36**	**—**	**0.01**	**0.0001**	**280,481**
Apr-02	21	3,011	751	24.95	561,302	89,325	15.91	88,556	6	0.81	0.00	0.0000	32,156
May-02	21	3,379	832	24.62	534,145	87,320	16.35	86,758	5	0.66	0.00	0.0000	31,617
Jun-02	20	3,914	1,023	26.14	463,339	80,005	17.27	79,551	6	0.62	0.00	0.0000	27,277
Jul-02	21	3,684	1,035	28.09	502,623	84,070	16.73	83,577	7	0.67	0.00	0.0000	29,420
Aug-02	19	2,682	509	18.96	454,430	53,115	11.69	52,748	3	0.59	0.00	0.0000	21,522
Sep-02	18	2,525	443	17.55	468,940	52,712	11.24	52,355	2	0.56	0.00	0.0000	23,364
Oct-02	20	2,659	460	17.30	513,820	57,340	11.16	57,043	2	0.46	0.00	0.0000	25,990
Nov-02	17	2,307	443	19.22	501,710	64,515	12.86	64,110	2	0.52	0.00	0.0000	26,353
Dec-02	22	3,377	757	22.43	638,722	88,595	13.87	88,233	4	0.46	0.00	0.0000	33,914
Jan-03	23	3,502	815	23.28	628,151	91,694	14.60	91,279	4	0.47	0.00	0.0000	33,549
Feb-03	19	2,859	603	21.10	487,172	67,367	13.83	67,092	2	0.38	0.00	0.0000	26,442
Mar-03	18	2,642	563	21.32	461,341	63,501	13.76	63,169	2	0.44	0.00	0.0000	29,316
2002-03	**240**	**36,541**	**8,235**	**22.54**	**6,215,694**	**879,560**	**14.15**	**874,470**	**47**	**—**	**0.00**	**0.0000**	**340,920**
Apr-03	21	3,249	783	24.10	511,586	83,281	16.28	82,749	9	1.11	0.00	0.00	37,834
May-03	24	4,050	1,089	26.88	517,203	99,069	19.15	98,564	6	0.59	0.00	0.00	35,839
Jun-03	25	5,005	1,403	28.03	575,238	125,391	21.80	124,805	8	0.55	0.00	0.00	42,917
Jul-03	33	6,694	1,851	27.65	814,224	175,812	21.59	174,886	12	0.62	0.00	0.00	59,148
Aug-03	32	8,130	2,058	25.31	827,344	177,980	21.51	176,928	15	0.71	0.00	0.00	54,646
Sep-03	34	7,292	1,681	23.05	1,012,286	206,250	20.37	205,376	9	0.53	0.00	0.00	74,122
Oct-03	37	7,244	1,616	22.30	1,167,489	229,572	19.66	228,598	8	0.49	0.00	0.00	89,915
Nov-03	31	5,615	1,342	23.90	943,760	190,570	20.19	189,809	7	0.48	0.00	0.00	71,573
Dec-03	37	6,816	1,898	27.84	1,078,981	258,245	23.93	256,872	11	0.57	0.00	0.00	91,706
Jan-04	40	7,351	1,861	25.32	1,327,514	283,449	21.35	282,202	10	0.53	0.00	0.00	96,770
Feb-04	31	4,722	981	20.78	1,100,700	196,811	17.88	196,276	3	0.33	0.00	0.00	84,376
Mar-04	31	4,285	993	23.18	1,033,307	187,211	18.12	186,346	4	0.44	0.00	0.00	77,036
2003-04	**376**	**70,453**	**17,555**	**24.92**	**10,909,632**	**2,213,640**	**20.29**	**2,203,411**	**101**	**—**	**0.00**	**0.00**	**815,882**

Debt Market

Introduction

The debt market in India comprises mainly of two segments *viz.*, the Government securities market and the corporate securities market*. Government securities (includes central, state and local) form the major part of the market in terms of outstanding issues, market capitalisation and trading value. It sets benchmark for the rest of the market. The main instruments in this market are dated securities that include floating rate bonds (FRBs), zero coupon bonds (ZCBs), treasury bills (T-bills) and the state Government bonds. The corporate debt segment on the other hand includes bonds issued by private corporates, public sector units (PSUs) and development financial institutions (DFIs). The market for debt derivatives have not yet developed appreciably though a market for OTC and exchange traded derivatives in interest rate products exists.

The year 2003-04 was a very eventful year with the operationalisation of real time gross settlement (RTGS) system, which is expected to reduce the settlement risks and cost of financial intermediation significantly. In the Government securities market, there was a switch to the delivery *versus* payment (D*v*P) III mode in which transaction in government securities could be settled on a net basis. The year also witnessed unprecedented volumes both in primary market and secondary market.

During 2003-04, the Government and corporate sector collectively mobilised Rs. 2,509,089 million from primary debt market, 6.73% higher than in the preceding year (Table 6-1). About 79% of these were raised by the government (Central and State Governments), while the balance amount was mobilised by the corporate sector through public and private placement issues. The turnover in secondary debt market during 2003-04 aggregated Rs. 27,214,706 million, 36% higher than that in the previous year. The share of NSE in total turnover in debt securities remained at about 47.6% during 2003-04.

Table 6-1: Debt Market: Selected Indicators

(In Rs. Mn.)

Issuer/Securities	Amount raised from Primary Market		Turnover in Secondary Market	
	2002-03	2003-04	2002-03	2003-04
Government	1,819,790	1,981,570	19,557,313	26,792,084
Corporate/Non-Government	531,166	527,519	360,387	422,622
Total	2,350,956	2,509,089	19,917,700	27,214,706

Source: Primedatabase, RBI and NSE.

* This chapter discusses the market design and outcome in the government securities market, both primary and secondary segment. Data availability for secondary market for corporate debt securities is limited. Wherever possible, the developments in the secondary market for corporate debt are also covered in this chapter. The developments in primary corporate debt market are presented in Chapter 2 of this publication.

Policy Developments

Various initiatives taken by the RBI and the Government during April 2003 to June 2004 are enumerated in this section.

I. Union Budget 2004-05

The investment ceiling for FIIs in debt funds has been increased from US$ 1 billion to US$ 1.75 billion in the Union Budget for 2004-05.

II. Annual and the Mid-term Monetary & Credit Policy, 2003-04

In the annual and mid-term review of Monetary and Credit Policy for 2003-04 the following measures have been taken:

Annual monetary credit policy

- CRR has been reduced from 4.75% to 4.50% w.e.f. fortnight starting June 14, 2003. The bank rate was also cut by 0.25% to 6.00% effective from the close of business of April 29, 2003.
- With the fortnight beginning May 3, 2003, RBI has mandated for all NDS members to report all their call/notice money market deals on NDS. Deals done outside NDS should also be reported within 15 minutes of its execution, irrespective of the size of the deal or whether the counter-party is a member of NDS or not.
- As per the recommendations of the Working Group on Rupee Derivatives, it has been proposed that: (a) less complex over-the-counter (OTC) interest rate rupee options should be permitted in the first phase which include vanilla caps, floors and collars, European swaptions, call and put options and unleveraged structured swaps based on overnight indexed swaps (OIS) and forward rate agreements (FRAs) (b) scheduled commercial banks (SCBs), financial institutions (FIs) and Primary Dealers (PDs) should be allowed to both buy and sell options, while corporate may sell options initially without being the net receivers of premium.
- RBI also proposed that non-bank entities including corporate may provide unconditional and irrevocable guarantee for credit enhancement for Commercial Paper (CP) issue as long as (i) the issuer fulfils the eligibility criteria prescribed for issuance of CP, (ii) the guarantor has at least one notch higher credit rating than the issuer, (iii) the offer document for CP should properly disclose the net worth of the guarantor company, the names of the companies to which the guarantor has issued similar guarantees, the extent of guarantees offered by the guarantor company.
- Indian corporates and resident individuals have also been permitted to invest in rated bonds/fixed income securities of listed eligible companies abroad subject to certain conditions.
- A new Government Security Act would replace the Public Debt Act, 1944.

The mid-term review of the Monetary and Credit Policy announced on November 3, 2003 envisaged the following:

- The Indian Banks Association (IBA) has been asked to advise its members regarding the system of benchmarking the prime lending rate (PLR).

- To move further towards a pure inter-bank call/notice money market, the non-bank participants have been allowed to lend in a reporting fortnight on an average 60% of their average daily lending in call/notice money market during 2000-01. The timetable for further phasing out of non-bank participants would be announced separately.
- In order to develop the repo market, from February 7, 2004 the PDs have been allowed to borrow up to 200% of their net owned funds (NOF) as at end-March of the preceding financial year. This limit is applicable on an average basis in a reporting fortnight.
- To deepen the government securities market, it has been permitted to contract a sale of a Government security already contracted for purchase. However, the purchase contract should be either guaranteed by an approved central counterparty like CCIL or the counterparty thereof should be RBI.
- A Standing Technical Advisory Committee on Financial Regulation has been proposed to be set up. It should consist of experts drawn from academia, financial markets, banks, non-bank financial institutions and credit rating agencies. The Committee should examine the issues referred to it by the RBI and advise the RBI on regulations covering banks and non-bank financial institutions and other market participants.
- The RBI in consultation with the SEBI and the IRDA, proposed to establish a special monitoring system for Systemically Important Financial Intermediaries (SIFIs) that would encompass (i) a reporting system on financial matters of common interest to RBI, SEBI and IRDA; (ii) the reporting of intra-group transactions; and (iii) the exchange of relevant information among the RBI, the SEBI and the IRDA.

III. Monetary & Credit Policy, 2004-05

The Monetary and Credit Policy for 2004-05 notified on May 18, 2004 proposed the following:

- In its endeavor to move towards a pure inter-bank call/money market, the limit on the lending by non-bank participants have been further reduced by the RBI from 60% to 45% w.e.f. June 26, 2004.
- With a view to encourage further development of the Collateralised Borrowing and Lending Obligation (CBLO) segment, it has been proposed to facilitate automated value-free transfer of securities between market participants and the Clearing Corporation of India Limited (CCIL).
- RBI proposed to constitute a working group to review the performance of negotiated dealing system (NDS).
- The clearing and settlement operations of CCIL are being considered to expand to OTC derivatives contracts and trades in listed as well as unlisted non-SLR debt instruments for NDS members.
- With a view to promote electronic fund transfer (EFT) and encourage electronic clearing services (ECS), waiver of service charges on banks for ECS and EFT transaction has been proposed till March 31, 2006.
- RBI has also set up a Board for Payment and Settlement Systems (BPSS), on lines of the Board for financial supervision. This will function as a Committee of the Central

Board, chaired by the Governor. The BPSS would lay down the policies for the regulation and supervision of payment and settlement systems.

- A working group, consisting of representatives of SEBI, Stock Exchanges, NSDL and IRDA, has been constituted to review electronic funds transfer for capital markets.

IV. Other Measures

The other developments during April 2003-June 2004 include:

1. Market Stabilisation Scheme

As per the recommendations of the Reserve Bank's working group on the Instruments of Sterilisation, a Market Stabilisation Scheme (MSS) has been introduced on April 1, 2004 under a Memorandum of Understanding (MoU) between the Government of India and the Reserve Bank. Under the MSS, Treasury Bills and dated securities of the Central Government are issued as an instrument of sterilisation. The Reserve Bank notifies the amount, tenure and timing of issuances under the MSS under a calendar of issuances. Treasury bills/dated securities issued under the MSS are similar to those issued under the normal borrowing programme.

2. Guidelines on Exchange Traded Interest Rate Derivatives

The RBI issued detailed guidelines for Banks and Institutions allowing them to participate in the exchange traded interest rate derivatives market in India to enable better risk management. Scheduled Commercial Banks (excluding RRBs & LABs), PDs and Specified Financial Institutions (SFIs) are allowed to deal in Interest Rate Derivatives (IRDs). In the initial phase, banks and FIs are allowed to transact for a limited purpose of hedging the risk, while PDs are allowed to take trading as well as hedging positions. The norms that will be applicable for transacting IRDs on the F&O segment of the stock exchanges are as follows:

(a) *Stock Exchange Regulation:* SCBs and AIFIs can seek membership of the F&O segment of the stock exchanges for the limited purpose of undertaking proprietary transactions for hedging interest rate risk. Those not seeking membership of Stock Exchanges, can transact IRDs through approved F&O members of the exchanges.

(b) *Settlement:* As trading members of the F&O segment, SCBs and AIFIs should settle their derivative trades directly with the clearing corporation/clearing house. Regulated entities participating through approved F&O members should settle proprietary trades as a participant clearing member or through approved professional/custodial clearing members.

(c) *Eligible underlying securities:* For the present, only the interest rate risk inherent in the Government securities classified under the Available for Sale (AFS) and Held for Trading (HFT) categories is allowed to be hedged.

(d) *Hedge criteria:* IRD transactions undertaken on the exchanges should be deemed as hedge transactions, if and only if, (i) the hedge is clearly identified with the underlying Government securities in the *AFS* and *HFT* categories, (ii) the effectiveness of the hedge can be reliably measured (iii) the hedge is assessed on an ongoing basis and is "highly effective" throughout the period. The hedge will be deemed to be "highly effective" if, at inception and throughout the life of the hedge, changes in the marked to market value of the hedged items with reference to the marked to market value at the time of the hedging are "almost fully offset". The actual results should be within a range of 80% to 125%. If changes in the marked to market values are outside this range, then the hedge would not be deemed as highly effective. The hedged portion of the AFS/HFT portfolio should be notionally marked to market, at least at monthly intervals, for evaluating the efficacy of the hedge transaction.

(e) *Capital adequacy*: The net notional principal amount in respect of futures position with same underlying and settlement dates should be multiplied by the conversion factor given below to arrive at the credit equivalent:

Original Maturity	Conversion Factor
Less than one year	0.5 %
One year and less than two years	1.0 %
For each additional year	1.0 %

The credit equivalent thus obtained should be multiplied by the applicable risk weight of 100%.

(f) Interest rate futures are treated as a combination of a long and short position in a notional Government security.

(g) *General Provisions:* The existing norm of 5% of total transactions during a year should be observed by SCBs and AIFIs, who participate through approved F&O members of the exchanges. The regulated entities undertaking interest rate derivatives on exchanges should disclose as a part of the notes on accounts to balance sheets details in the specified format.

3. Government Buy Back of Securities

In the Budget of 2003-04, a scheme was formulated to buy back high cost and illiquid securities from banks on a voluntary basis. The main features of this scheme are as follows: (a) the scheme should be structured as a switch with the Government of India offering for buy back pre-announced securities. The repurchase of securities should be through an auction process while the reissue of fresh securities in lieu of the auctioned securities should be at a pre-announced fixed price (b) the buy back of securities should be taking place through a multi-security auction. The auction should be on the basis of the percentage discount to market price offered by banks/financial institutions across securities (c) premium on the securities bought back by the Government should be paid in cash to successful offerers at the buy back auction (d) Government should accept a minimum discount (as a percentage to market price) of 7.5 per cent that must be offered by eligible institutions. The minimum discount rate should be uniform across securities offered for buy back (e) the cut-off discount at the auction should be arrived at on the basis of the target premium payable set by the Government for the buy back auction. The target premium should not be announced before the auction. The Government should however retain the right to accept offers with a discount below the cut-off level (and pay a premium larger than the target level) at its discretion (f) successful offerers at the buy back auction should be issued with fresh securities, at a pre-announced fixed price, for equivalent face value (g) accrued interest on securities should be paid in cash by the Government for repurchased securities and by the banks for reissued securities (h) settlement of reissued transactions should be as per the current re-issuance procedure followed by the Reserve Bank (i) buy back auction should be restricted to banks and financial institutions (FIs) connected to the Negotiated Dealing System (NDS) on the Indian Financial Network (INFINET).

4. *Secondary Market for Corporate Debt Securities*

In order to provide greater transparency and protect the interest of investors, SEBI decided that any listed company making issue of debt securities on a private placement basis should be required to comply with certain guidelines as stated herewith (a) company should make full disclosures (initial and continuing) in the manner as prescribed in the Schedule II of the Companies Act, 1956, SEBI (Disclosure and Investor Protection) Guidelines, 2000 and the Listing Agreement with the exchanges. However, if the privately placed debt securities are in standard denomination of Rs. 10 lakh, then the disclosures may be made only through websites of the stock exchange where the debt securities are sought to be listed. The issuer companies which make frequent private placements of debt securities should be permitted to file an umbrella offer document on the lines of a *"shelf prospectus"* as applicable for a public issue (b) debt securities should carry a credit rating of not less than investment grade from a Credit Rating Agency registered with the Board (c) company should appoint a debenture trustee registered with SEBI for the issue of debt securities. The debt securities should be issued and traded in demat form. The appointment of intermediaries other than debenture trustee for private placement of debt securities is not mandatory. There is no prohibition on SEBI registered intermediaries to be associated with the privately placed unlisted debt securities, however they should be accountable for their activities (d) company should sign a separate listing agreement with the exchange in respect of debt securities and thereby comply with its conditions (e) all trades with the exception of spot transactions, in a listed debt security, should be executed only on the trading platform of a stock exchange (f) the trading in privately placed debts should only take place between Qualified Institutional Investors (QIBs) and High Networth Individuals (HNIs), in standard denomination of Rs. 10 lakh in the order driven system of the stock exchanges in a separate trading segment (g) the requirement of Rule 19(2)(b) of the Securities Contract (Regulation) Rules, 1957 will not be applicable to listing of privately placed debt securities on exchanges, if all the above requirements are complied with (h) in case the intermediaries registered with SEBI associate themselves with the issuance of private placement of unlisted debt securities, they will be held accountable for such issues.

Further, unlisted companies/statutory corporations may also get their privately placed debt securities listed in the stock exchanges by complying with the above mentioned relevant provisions. However, the provisions as mentioned above should not be applicable for private placement of debt securities having a maturity of less than 365 days.

5. *Guidelines for Investments by Primary Dealers in Non-Government Securities*

RBI in consultation with Primary Dealers Association of India (PDAI) framed guidelines for investments in non-government securities by primary dealers. These guidelines cover

PDs' investments in non-government securities issued by corporates, banks, FIs and State and Central Government sponsored institutions, SPVs etc. This includes capital gains bonds, bonds eligible for priority sector status, bonds issued by central or state public sector undertakings with or without government guarantees and bonds issued by banks and financial companies. The guidelines are applicable to investments in both the primary market and the secondary market. They, however, are not applicable to (i) units of equity oriented MF schemes wherein any part of the corpus can be invested in equity (ii) Venture Capital Funds (VCFs) (iii) CP (iv) Corporate Debentures (CDs), and (v) investments in equity shares.

- *Regulatory Requirement:* PDs should not invest in non-government securities of original maturity of less than one-year, other than CP and CDs.
- *Listing and Rating Requirement:* PDs should not invest in unrated non-government securities and should abide by the requirements stipulated by SEBI in respect of corporate debt securities. In case of making fresh investments in government debt securities, the PDs should ensure that such investment is made only in listed debt securities.
- *Fixing of Prudential Limits:* PDs' investment in unlisted non-government securities should not exceed 10% of the size of their non-government securities portfolio on an on-going basis. The ceiling of 10% should be inclusive of investment in Security Receipts issued by Securitisation Companies/Reconstruction Companies and also the investment in Asset Backed Securities (ABS) and Mortgage Backed Securities (MBS).
- *Time Schedule of Operationalisation:* In view of the time required by issuers to get their unlisted debt issues listed, the following transition time has been provided (a) Investment in units of MF schemes, where the entire corpus is invested in debt securities should be outside the purview of the above guidelines until December 31, 2004 (b) w.e.f. January 01, 2005, PDs should invest in MF units of the schemes, which have an exposure to unlisted securities of less than 10% of the corpus of the fund. Such investments should be treated on par with listed securities for the purpose of compliance with the prudential limits prescribed in the above guidelines (c) PDs should invest in existing unlisted securities (issued prior to December 31, 2003) till December 31, 2004 provided that the issuers have applied to the stock exchange(s) for listing and the security(ies) is/are rated minimum investment grade.
- *Role of Boards:* PDs should ensure that their investment policies are formulated after taking into account all the relevant issues of the guidelines and are duly approved by their Board of Directors. PDs should put in place proper risk management systems for capturing and analysing the risk in respect of non-government securities before making investments. They should ensure that investment in privately placed instruments is made in accordance with the systems and procedures prescribed under respective PDs' investment policy. W.e.f. January 01, 2005 only those PDs whose investment in unlisted non-government securities are within the prudential limits may make fresh investment in such securities within the prudential limits.

- *Trading and Settlement in Debt Securities:* As per SEBI guidelines, all trades except spot transactions, in all listed debt securities should be executed only on the stock exchanges. In addition, to complying with these SEBI guidelines, PDs should also ensure that all spot transactions in listed and unlisted debt securities are reported on the NDS and settled through the CCIL.

6. Real-Time Gross settlement

As a part of reforms in payment system, RBI had initiated several measures to reduce risks. Most important among these initiatives is the RTGS system. This system facilitates settlement of inter-bank transactions online at real-time basis. The RTGS system has been operationalised on March 26, 2004.

7. Guidelines for Investments by Banks in Non-SLR Securities

With a view to contain the risks arising out of non-SLR investment portfolio, in particular through private placement, prudential guidelines have been issued for banks. It covers banks' investments in non-SLR securities issued by corporates, banks, FIs and State and Central Government sponsored institutions, and Special Purpose Vehicles (SPVs). They are not applicable to investments in securities issued directly by the Central and State Governments, which are not reckoned for SLR purpose, and investments in equity shares. These guidelines should apply to investments both in the primary market as well as the secondary market.

These guidelines came into effect from April 1, 2004. Its details are as follows:

(a) Banks should not invest in non-SLR securities of original maturity of less than one-year, other than Commercial Paper and Certificates of Deposits, which are covered under RBI guidelines. They should undertake usual due diligence in respect of investments in non-SLR securities.

(b) Banks should not invest in unrated non-SLR securities. SEBI vide its circular have stipulated requirements that listed companies are required to comply with, for making issue of debt securities on a private placement basis. Accordingly, while making fresh investments in non-SLR debt securities, banks should ensure that such investment are made only in listed debt securities of companies. This should also comply with the requirements of the SEBI circular dated September 30, 2003, except to the extent as indicated below; (a) bank's investment in unlisted non-SLR securities should not exceed 10 per cent of its total investment in non-SLR securities as on March 31, of the previous year. The unlisted non-SLR securities in which banks may invest up to the limit, should comply with the disclosure requirements as prescribed by the SEBI for listed companies (b) bank's investment in unlisted non-SLR securities may exceed the limit of 10 per cent, by an additional 10 per cent. But, then the investments have to be on account of investment in securities issued by SPVs for Mortgage Backed Securities (MBS), securitisation papers issued for infrastructure projects. In addition, the investments are also allowed in bonds/ debentures/Security Receipts/Pass Through Certificates issued by Securitisation Companies and Reconstruction Companies set up under the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002 and registered with RBI. In other words, investment exclusively in securities specified in this paragraph could be up to the maximum permitted limit of 20 per cent of non-SLR investment.

Banks, which have exposure to investments in unlisted non-SLR securities in excess of the prudential limit prescribed above as on March 31, 2003, should not make any fresh investment in such securities till they ensure compliance with the above prudential limit.

(c) Since non-SLR securities are mostly in the form of credit substitutes, banks were advised in June 2001 to (i) subject all their investment proposals relating to rated and non-rated non-SLR securities to credit appraisal on par with their credit proposals, (ii) make their own internal credit analysis and rating even in respect of rated issues. They should not entirely rely on the ratings of external agencies, and (iii) strengthen their internal rating system. This will enable the banks to regularly (quarterly or half-yearly) track the financial position of the issuer with a view to ensuring continuous monitoring of the rating migration of the issuers/issues.

(d) Banks should ensure that their investment policies are duly approved by the Board of Directors. These policies should be formulated after taking into account all the relevant issues specified in these guidelines on investment in non-SLR securities. Banks should put in place proper risk management systems for capturing and analysing the risk. Boards of banks should review the following aspects of non-SLR investment at least at quarterly intervals *viz.*, (i) total business (investment and divestment) during the reporting period (ii) compliance with the prudential limits and guidelines (iii) rating migration of the issuers/issues held in the bank's books and (iv) extent of non-performing investments in this category.

(e) In order to create a central database on private placement of debt, a copy of all the offer documents should be filed with the Credit Information Bureau (India) Ltd. (CIBIL) by the investing banks. Further, any default relating to interest/installment in respect of any privately placed debt should also be reported to CIBIL along with a copy of the offer document.

(f) As per the SEBI guidelines, all the trades in a listed debt security of banks, except spot transactions, should be executed only on the trading platform of a stock exchange. In addition, they should ensure that all spot transactions in listed and unlisted debt securities are reported on the NDS and settled through the CCIL from a date to be notified by RBI.

Market Design

Market Participants

Given the large size of the trades, the debt market has remained predominantly a wholesale market. In this market, the investors can also be the issuers of the securities. For example, a bank issues CDs and also invest in different banks CDs and also in other securities such as PSU bonds or government securities. Though some efforts have been undertaken to encourage the retail participation, it still remains rather subdued. The RBI regulates the Government securities market, while the corporate debt instruments traded on exchanges are regulated by the SEBI. The important market participants in the debt market are:

Regulators

The RBI operates both as the monetary authority and the debt manager to the government. In its role as a monetary authority, the RBI participates in the market through open-market operations as well as through Liquidity Adjustment facility (LAF) to regulate the money supply. It also regulates the bank rate and repo rate, and uses these rates as indirect tools for its monetary policy. The RBI as the debt manager issues the securities at the cheapest possible rate. Hence, in the debt market, the RBI plays a dual role of influencing the interest rates through its monetary policy and also issues government debt securities. Further, the RBI also supervises banks and development financial institutions.

The SEBI regulates the debt instruments listed on the stock exchanges. It issues guidelines for its issuance and also for their listing on stock exchanges. The secondary market trading is conducted as per the rules set by the SEBI.

Primary Dealers

Primary dealers (PDs) are important intermediaries in the Government securities markets. There were 18 PDs operating in the market at the end of March 2004. They act as underwriters in the primary market, and as market makers in the secondary market. PDs underwrite a portion of the issue of government security that is floated for a pre-determined amount. Normally, PDs collectively offer to underwrite up to 100% of the notified amount in respect of all issues. The underwriting commitment of each PD is broadly decided on the basis of its size in terms of its net owned funds, its holding strength, the committed amount of bids and the volume of turnover in securities.

Several facilities have been extended to PDs given their special role in the Government debt market. RBI provides liquidity support to the PDs through LAF against collateral of government securities and through repo operations/refinance. PDs are also given favoured access to the RBI's open market operations. They are permitted to borrow and lend in the money market. In addition, they can raise resources through CPs and also have access to finance from commercial banks as any other corporate borrower.

Brokers

Brokers play an important role in secondary debt market by bringing together counterparties and negotiating terms of the trade. It is through them that the trades are entered on the stock exchanges. The brokers are regulated by the stock exchanges and also by the SEBI.

Investors

Banks are the largest investors in the debt markets, particularly in the Government securities market. They are also the main participants in the call money market/term market and also repo market for their short term funding requirement. Banks also issue CDs and bonds in the debt markets. Further, they arrange CP issues of corporates.

MFs have emerged as important players in the debt market, owing to the growing number of debt funds that have mobilised significant amounts from the investors. Most MFs also have specialised debt funds such as gilt funds and liquid funds. They participate in the debt markets pre-dominantly as investors, and trade on their portfolios quite regularly.

Foreign Institutional Investors (FIIs) also are permitted to invest in treasury and corporate bonds, within certain limits.

Provident and pension funds are large investors in the debt markets. The prudential regulations governing the deployment of the funds mobilised by them mandate investments pre-dominantly in treasury and PSU bonds. They are, however, not very active traders in their portfolio. This is so because they are not permitted to sell their holdings, unless they have a funding requirement that cannot be met through regular accruals and contributions.

Charitable institutions, trusts and societies are also large investors in the debt markets. They are, however, governed by their rules and bye-laws with respect to the kind of bonds they can buy and the manner in which they can trade on their debt portfolios.

Since January 2002, retail investors have been permitted to submit non-competitive bids at primary auction through any bank or PD. They submit bids for amounts of Rs. 10,000 and multiples thereof, subject to the condition that a single bid does not exceed Rs. 1 crore. The non-competitive bids upto a maximum of 5% of the notified amount are accepted at the weighted average cut off price/yield.

The matrix of issuers, investors, instruments in the debt market and their maturities are presented in Table 6-2.

Table 6-2: Participants and Products in Debt Market

Issuer	Instruments	Maturity	Investors
Central Government	Dated Securities	2-30 years	RBI, Banks, Insurance Companies, Provident Funds, Mutual Funds, PDs
Central Government	T-Bills	91/364 days	RBI, Banks, Insurance Companies, Provident Funds, Mutual Funds, Individuals, PDs
State Government	Dated Securities	5-13 years	Banks, Insurance Companies, Provident Funds
PSUs	Bonds, Structured Obligations	5-10 years	Banks, Insurance Companies, Provident Funds, Mutual Funds, Individuals, Corporates
Corporates	Debentures	1-12 years	Banks, Mutual Funds, Corporates, Individuals
Corporates, PDs	Commercial Papers	15 days to 1 year	Banks, Mutual Funds, Financial Institutions, Corporates, Individuals, FIIs
Scheduled Commercial Banks, Select Financial Institutions (under umbrella limit fixed by RBI)	Certificates of Deposits	15 days to 1 year, whereas for FIs it is 1 year to 10 years	Banks, Companies, Individuals, FIIs, Corporations, Trusts, Funds, Associations, FIs, NRIs
Scheduled Commercial Banks	Bank Bonds	1-10 years	Corporations, Individuals, Companies, Trusts, Funds, Associations, FIs, Non-Resident Indians
PSU	Municipal Bonds	0-7 years	Banks, Corporations, Individuals, Companies, Trusts, Funds, Associations, FIs, Non-Resident Indians

Issuers of Securities

The dominant issuers in debt market consist of Governments, public sector units and corporates. However, there are other issuers who have not been tapping the market frequently such as the local governments and MFs. Recently, international financial institutions have also displayed interest in the domestic market.

- The Government securities form the oldest and the most dominant part of the debt market. It comprises of the securities issued by the Central Government and State Governments. In the recent past, local bodies such as municipalities have also tapped the market. The Central Government mobilises funds mainly through issue of dated securities and T-bills, while State Governments rely solely on state development loans.

- Bonds are issued by Government sponsored institutions like, Development Financial Institutions (DFIs), banks and public sector units. These bonds are generally treated at surrogates of sovereign paper, sometimes due to explicit guarantee and often due to the comfort of public ownership. Some of the PSU bonds are tax-free, while most bonds are not tax-free.

- The corporate bond markets comprise of commercial paper and bonds. These bonds typically are structured to suit the requirements of investors and the issuing corporate. They include a variety of tailor-made features with respect to interest payments and redemptions. Corporate bond market has seen a lot of innovations, including securitised products, corporate bond strips, and a variety of floating rate instruments with floors and caps. In the recent years, there has been an increase in issuance of corporate bonds with embedded put and call options. The major part of the corporate debt is privately placed with tenors of 1-12 years.

- In addition to above, there is another segment, which comprises of short-term paper issued by banks, mostly in the form of certificates of deposit (CDs) and commercial papers (CPs). While CDs are issued by banks and financial institutions, CPs are issued by corporates.

- Recently, international financial institutions such as Asian Development Bank have also tapped the debt market to mobilise funds.

Primary Issuance Process

Government Securities

The issue of government securities is governed by the terms and conditions specified in the general and the specific notification of the Government. The specific notifications are issued for each security issuance specifying its unique feature. The terms and conditions specified in the general notification are listed below:

- Any person including firm, company, corporate body, institution, State Government, provident fund, trust, NRI, OCB predominantly owned by NRIs and FII registered with SEBI and approved by RBI can submit offers for purchase of government securities.

- The payments can be done through a variety of means such as cash or cheque drawn on RBI or Banker’s pay order or by authority to debit their current account with RBI or by

Electronic Fund Transfer. Government securities are issued for a minimum amount of Rs. 10,000 (face value) and in multiples of Rs. 10,000 thereafter. These are issued to the investors by credit either in demat form in their SGL account or to a Constituents' SGL or to their Bond Ledger or in the form of stock certificate. These are repaid at Public Debt Offices of RBI or any other institution at which they are registered at the time of repayment.

Government issues securities through the auction, tap sale, pre-announced coupon rate etc. A brief about them are as given below:

Issue of securities through auction: The securities are issued through auction held either on price or on yield basis. If the issue is on price basis, the coupon is pre-determined, then the bidders should quote price per Rs. 100 of the face value of the security. If the issue is on yield basis, then the coupon of the security is decided in an auction and the security carries the same coupon till maturity. On the basis of the bids received, RBI determines the maximum rate of yield or the minimum offer price as the case may be at which offers for purchase of securities would be accepted.

The auctions are held either on 'Uniform price' method or on 'Multiple price' method. In 'Uniform price' method, competitive bids are tendered with rates up to and including the maximum rate of yield as determined by RBI. As per the bids received, RBI determines the maximum rate of yield. Bids quoted higher than the maximum rate of yield are rejected. For 'Multiple price' method, competitive bids offered at the maximum rate of yield or the minimum offer price, as determined by RBI, are accepted. Other bids tendered at lower than the maximum rate of yield or higher than the minimum offer price are accepted at the rate of yield or price as quoted in the respective bid. Bids quoted higher than the maximum rate of yield or lower than the minimum price are rejected.

Individuals and specific institutions, categoried by the RBI as 'retail investors', can participate in the auctions on 'non-competitive' basis. Allocation of the securities to non-competitive bidders are made at the discretion of RBI and at the weighted average price arrived at on the basis of the competitive bids accepted at the auction or any other price announced in the specific notification. The nominal amount of securities that would be allocated to retail investors on non-competitive basis is restricted to a maximum percentage of the aggregate nominal amount of the issue.

Issue of securities with pre-announced coupon rates: The coupon on securities is announced before the date of floatation and the securities are issued at par. In case the total subscription exceeds the aggregate amount offered for sale, RBI may make partial allotment to all the applicants.

Issue of securities through tap sale: No aggregate amount is indicated in the notification in respect of the securities sold on tap. Sale of such securities may be extended to more than one day and the sale may be closed at any time on any day.

Issue of securities in conversion of maturing treasury bills/dated securities: The holders of treasury bills of certain specified maturities and holders of specified dated securities are provided an option to convert their holding at specified prices into new securities offered for sale. The new securities could be issued on an auction/pre-announced coupon basis.

RBI may participate in auctions as a "non-competitor" or subscribe to the government securities in other issues. Allotment of securities to RBI are made at the cut off price/yield emerging in the auction or at any other price/yield decided by the government. In order to maintain a stable interest rate environment, RBI accepts private placement of government securities. Such privately placed securities and securities that devolve on RBI are subsequently offloaded through RBI's open market operations.

The following types of securities are issued by the Government:

Securities with fixed coupon rates: These securities carry a specific coupon rate remaining fixed during the term of the security and payable periodically. These may be issued at a discount, at par or at a premium to the face value, but are redeemed at par.

Floating Rate Bonds: These securities carry a coupon rate, which consists of a variable base and a spread. The most common base rate used is the weighted average of yield of 364 day-treasury bills. The spread is decided at the auction.

Zero Coupon Bonds: These are issued at a discount and redeemed at par. On the basis of the bids tendered, the RBI determines the cut-off price at which tenders would be accepted at the auction.

Securities with Embedded Options: These securities, where a "call option"/"put option" is specified, are repaid at the option before the specified redemption date.

Treasury Bills

Treasury bills (T-bills) are short-term debt instruments issued by the Central government. They have either 91-days or 364-days maturity. T-bills are sold through an auction process announced by the RBI at a discount to its face value. RBI issues an indicative calendar of T-bill auctions.

State Government Securities

The states have the choice of raising 5% to 35% of their allocation through auctions. Most of the States raise resources through tap issuances.

Secondary Market

Most of the secondary market trades in Government securities are negotiated between participants (Banks, FIs, PDs, MFs) having SGL accounts with RBI. These may be negotiated directly between counter parties or negotiated through brokers. NDS of RBI provides an electronic platform for negotiating trades in government securities. If a broker is involved, the trade is reported to the concerned exchange. Trades are also executed on electronic platform of the WDM segment of NSE. WDM segment of NSE provides trading and reporting facilities for government securities.

Negotiated Dealing System

Negotiated Dealing System (NDS) is an electronic platform for facilitating dealing in Government Securities and Money Market Instruments. It facilitates online reporting of transactions in the instruments available on the NDS. Government Securities (including T-bills), call money, notice/term money, repos in eligible securities, etc. are available for negotiated dealing through NDS. If the NDS members concludes deals outside the NDS system, then they are required to report the deal on NDS system within 15 minutes of concluding the deal. NDS interfaces with CCIL for settlement of government securities transactions for both outright and repo trades.

Wholesale Debt Market of NSE

NSE's Wholesale Debt Market (WDM) segment offers a fully automated screen based trading platform through the NEAT (National Exchange for Automated Trading) system. The WDM segment as the name suggest permits only high value transactions in debt securities. Hence, it is meant primarily for banks, institutional and corporate participants and intermediaries. All types of SLR (Government securities, T-bills etc.) and non-SLR (CPs, CDs etc.) securities are available for trading in the WDM segment of the NSE.

The trades on the WDM segment can be executed through the continuous market and negotiated market. In continuous market, the buyer and seller do not know each other and they put their best buy/sell orders, which are stored in order book with price/time priority. If orders match, it results into a trade. The trades in WDM segment are settled directly between the participants, who take an exposure to the settlement risk attached to any unknown counter-party. In the NEAT-WDM system, all participants can set up their counter-party exposure limits against all probable counter-parties. This enables the trading member/ participant to reduce/minimise the counter-party risk associated with the counter-party to trade. A trade does not take place if both the buy/sell participants do not invoke the counter-party exposure limit in the trading system.

In the negotiated market, the trades are normally decided by the seller and the buyer outside the exchange, and reported to the Exchange through the broker. Thus, deals negotiated or structured outside the exchange are disclosed to the market through NEAT-WDM system. In negotiated market, as buyers and sellers know each other and have agreed to trade, no counter-party exposure limit needs to be invoked.

The trades on the WDM segment could be either outright trades or repo transactions with settlement cycle of T+2 and repo periods (1 to 14 days). For every trade, it is necessary to specify the number of settlement days and the trade type (repo or non-repo), and in the event of a repo trade, the repo term and the repo rate.

The Exchange facilitates trading members to report off-market deals in securities in cases where the repo period is more than the permissible days in the trading system (14 days). These trades are required to be reported to the Exchange within 24 hours of the issuance of contract note.

All government securities are 'deemed' listed as and when they are issued. The other debt securities are traded either under the 'permitted to trade' or 'listed' category. All eligible securities, whether publicly issued or privately placed, can be made available for trading in the WDM segment. Amongst other requirements, privately placed debt paper of banks, institutions and corporates requires an investment grade credit rating to be eligible for listing. The listing requirements for securities on the WDM segment are presented in Table 6-3.

Table 6-3: Listing Criteria for Securities on WDM Segment

Issuer	Listing Criteria: Public Issue	Listing Criteria: Private Placement
a. Central/State Government	Deemed listed	
b. Public Sector Undertakings/ Statutory Corporations		
– Minimum 51% holding by Govt.	Eligible	
– Less than 51% holding by Govt.	As applicable to corporates	
c. Financial Institutions	– Eligible	– Investment Grade Credit Rating
d. Scheduled Commercial Banks	– Net worth of Rs. 50 crore or above	– Net worth of Rs. 50 crore or above – Investment Grade Credit Rating
e. Infrastructure Companies	Investment Grade Credit Rating	
f. Corporates	– Minimum paid-up capital of Rs. 10 crore, OR – Market capitalisation of Rs. 25 crore (Net worth in case of unlisted companies)	– Minimum paid-up capital of Rs. 10 crore, OR – Market capitalisation of Rs. 25 crore (Net worth in case of unlisted companies) – Investment Grade Credit Rating
g. Mutual Funds	SEBI registered Mutual Fund/Scheme having an investment objective to invest predominantly in debt instruments.	

Source: NSE.

Charges

NSE has specified the maximum rates of brokerage that can be levied by trading members for trades on WDM. The rate depends on the type of security and value of transactions. The rate for central government securities ranges from 5 paise to 25 paise for every Rs. 100 of transactions depending on the order value. Similarly, it ranges from 5 paise to 50 paise for state government securities and institutional bonds also depending on the order value. In case of PSU Bonds and FRBs and CP and Debentures the brokerage rate varies between 10 paise and 50 paise for every Rs. 100 of transaction depending on the order value. It is 1% of the order value for debentures, securitised debt and commercial paper.

A trading member is required to pay transaction charges @ 5 paise per Rs. 1 lakh gross trade value up to Rs. 25,000 crore and @ 2 paise per Rs. 1 lakh gross traded value above Rs. 25,000 crore subject to minimum of Rs. 10,000 per annum.

Corporate Debt Market

Corporate debt instruments are traded either as bilateral agreements between two counterparties or on a stock exchange through brokers. In the latter category, these are traded on BSE and on the CM and WDM segments of NSE. The difference between trading of government securities and corporate debt securities is that the latter are traded on the electronic limit order book. This is in view of SEBI mandate, which prohibits negotiated deals in respect of corporate listed debt securities. The SEBI regulation also prescribes that all such trades, should be executed on the basis of price and order matching mechanism of stock exchanges as in case of equities. The trades on BSE are settled through the clearing house. The trades on CM segment of NSE are settled through National Securities Clearing Corporation. Trades on WDM segment of NSE are settled on a trade-by-trade basis on the settlement day.

Dematerialisation of Debt Instruments

Dematerialised trading was earlier restricted only to the equity shares and units of MFs. With the passage of Finance Act 2000, stamp duty payable on transfer of debt instruments was waived, in case of the transfer taking place in the demat mode. In order to promote dematerialisation, RBI specified that repos on PSU bonds would be permitted only in demat form. From June 30, 2001, FIs, PDs and SDs have been permitted to make fresh investments and hold CP only in dematerialised form. The outstanding investments in scrip had to be converted into demat by October 2001. Since June 30, 2002, banks and FIs are required to issue CDs only in demat form. With these developments, NSDL and CDSL have admitted debt instruments such as debentures, bonds, CPs, CDs etc., irrespective of whether these debt instruments are listed, unlisted or privately placed.

Holding and trading in dematerialised form provides a number of benefits to the investors. As securities in demat form can be held and transferred in any denomination, it is possible for the participant to sell securities to corporate clients, provident funds, trusts in smaller lots. This was not possible in the physical environment, as splitting of securities involved considerable amount of time. In the demat form, it is possible for the participant to STRIP these securities and create a retail market for the same. It may be possible to create a special purpose vehicle and issue cosmetic securities (PTCs) to retail holders.

As on March 2004, debentures/bonds worth Rs. 2,472,680 million were available in demat form. 568 issuers have issued 12,797 debentures/bonds in demat form. 356 issuers have issued 4,982 commercial papers worth Rs. 104,550 million in demat form. Pass through certificates (PTCs) are also being issued in demat form.

Constituent SGL Accounts

Subsidiary General Ledger (SGL) account is a facility provided by RBI to large banks and financial institutions. This facility maintains records of investment in Government securities and T-bills in electronic book entry form. These institutions can settle their trades for securities held in SGL through a D*v*P mechanism, which ensures movement of funds and securities simultaneously. As all investors in government securities do not have an access to the SGL accounting system, RBI has permitted such investors to hold their securities in physical form. They are also permitted to open a constituent SGL account with any entity authorised by RBI for this purpose. These client accounts are referred to as constituent SGL accounts or SGL II accounts. Through a constituent SGL account, an entity can participate in the primary and secondary markets for government securities. It also avails of the dematerialised holding and D*v*P settlement facilities. RBI has permitted NSCCL, NSDL, CDSL, SCHIL, Banks and PDs to offer constituent SGL account facility. All entities regulated by RBI [including FIs, PDs, cooperative banks, RRBs, local area banks, NBFCs] should necessarily hold their investments in government securities in either SGL (with RBI) or CSGL account.

Clearing and Settlement

All trades in government securities are reported to RBI-SGL for settlement. The trades are settled on a net basis through the DvP-III system. In the DvP-III the settlement of Securities and Funds are carried out on a net basis. Central Government securities and T-bills are held as dematerialised entries in the SGL of RBI. The PDO, which oversees the settlement of transactions through the SGL, transfers securities from one participant to another. Transfer of funds is effected by crediting/debiting the current account of the seller/buyer, maintained with the RBI.

Clearing Corporation of India Limited

CCIL was incorporated in April 2001 to support and facilitate clearing and settlement of trades in government securities (and also trades in forex and money markets). It facilitates settlement of transactions in government securities on DvP-III basis. CCIL acts as a central counter-party for clearing and settlement of government securities transactions done on the NDS. It provides guaranteed settlement for transactions in government securities including repos through improved risk management practices *viz.*, daily mark to market margin and maintenance of settlement guarantee fund.

Only a Bank/FI/PD/MF or a Statutory Corporation or body corporate that is a member of NDS and has opened an SGL Account and a Current Account with RBI can apply for CCIL's membership for the Securities segment. The members pay a one-time membership fee of Rs. 1 lakh. In addition, the fees and charges levied for different services on the members are as under:

Fees for services of CCIL

Sr. No.	Particulars	Charges
Transaction Charges – (Payable latest by 10th of the subsequent month as per relative Bill, failing which penalty would be payable as per 5 below)		
1	Securities Settlement of Outright Trades (Payable by each counter-party)	Rs. 150 per crore of face value, Minimum Rs. 25/- Maximum Rs. 5000/- per trade
2	Treasury Bills Settlement of Outright Trades (Payable by each counter-party)	Rs. 75 per crore of face value, Minimum Rs. 25/- Maximum Rs. 5000/- per trade
3	Settlement of OVER NIGHT REPO Trades (Difference between first and second leg settlement dates is One Calendar Day) (Payable by each counter-party)	Rs. 10/- per crore of face value for over night repo trades subject to Minimum of Rs. 20/- and Maximum of Rs. 1000/- for each leg
4	Settlement of TERM REPO Trades (Difference between first and second leg settlement dates is more than One Calendar Day) (Payable by each counter-party)	Rs. 20/- per crore of face value of term repo subject to Minimum of Rs. 20/- and Maximum of Rs. 1000/- for each leg
5	Delayed payment of Transaction Charges and System Usage charges	5 basis point per day on the amount of charges

After trades have been concluded on the NDS, details are forwarded to the CCIL system, via INFINET, for settlement.

CCIL has in place a comprehensive risk management system. It encompasses strict admission norms, measures for risk mitigation (in the form of exposure limit, settlement guarantee fund, liquidity arrangements, continuous position monitoring and loss allocation procedure), penalties in case of default. During the settlement process, CCIL assumes certain risks, which may arise due to a default by a member to honour its obligations. Settlement being on DvP basis, the risk from a default is the market risk, i.e. change in price of the concerned security. The margining system in CCIL are so designed that they cover such risks. CCIL collects Initial Margin and Mark to Market (MTM) margin from members in respect of their outstanding trades. Initial Margin is collected to cover the likely risk from future adverse movement of prices of the concerned securities. Mark to Market margin is collected to cover the notional loss (i.e. the difference between the current market price and the contract price of the security covered by the trade) already incurred by any member. Both the margins are computed trade-wise and then aggregated member-wise. In addition, CCIL in case of unusual volatility in the market may also collect volatility margin. Each member contributes collaterals to a Settlement Guarantee Fund (SGF), against which CCIL avails of a line of credit from the bank. This enables CCIL to complete settlement in case a situation of shortage resulting from a member's default. A summary of the trades settled by CCIL are given below:

Settlement of Trades in Government Securities

(Amount in Rs. million)

Month	Outright Transactions		Repo Transactions		Total	
	No. of Trades	Amount (Face Value)	No. of Trades	Amount (Face Value)	No. of Trades	Amount (Face Value)
2001-02	7,131	389,190	524	159,300	7,655	548,480
2002-03	191,843	10,761,470	11,672	4,682,290	203,515	15,443,760
2003-04	243,585	15,751,330	20,972	9,431,890	264,512	25,183,220

Source: CCIL Quarterly Newsletter 'Rakshitra'

Collateralised Borrowing and Lending Obligation

Collateralised Borrowing and Lending Obligation (CBLO) was operationalised as a money market instrument through the CCIL on January 20, 2003. The CBLO is a discounted instrument issued in electronic book entry form for the maturity period ranging from one day to one year. CBLO is an obligation by the borrower to return the money borrowed, at a specified future date and an authority to the lender to receive money lent, at a specified future date with an option/privilege to transfer the authority to another person for value received and an underlying charge on securities held in custody (with CCIL) for the amount borrowed/lent. Activity in this segment has gradually picked up in recent months with increasing supply of funds from MFs and demand for funds by banks and PDs. The daily average turnover in CBLO increased from Rs. 470 million in April 2003 to Rs. 25,060 million in March 2004. As at end March 2004, 50 members were admitted to the CCIL's CBLO segment. To encourage activity in this segment, banks' borrowing through CBLO were exempted from CRR, subject to banks maintaining the minimum CRR of 3 per cent.

Interest Rate Derivatives

A Forward Rate Agreements (FRA) is a financial contract between two parties to exchange interest payments for a 'notional principal' amount on settlement date, for a specified period from start date to maturity date. An Interest Rate Swap (IRS) is a financial contract between two parties exchanging or swapping a stream of interest payments for a 'notional principal' amount on multiple occasions during a specified period. Such contracts generally involve exchange of a 'fixed to floating' rate of interest. FRAs/IRSs provide means for hedging the interest rate risk arising on account of lendings or borrowings made at fixed/variable interest rates.

There was a sharp increase in the volume in FRAs/IRSs market during 2003-04, both in terms of number of contracts and outstanding notional principal amounts. The number of contracts rose from 9,363 to 19,867, while the outstanding amount rose from Rs. 2,429,830 million to Rs. 5,182,600 million during the period April 9, 2003 to March 19, 2004. Activity in FRAs/IRS is expected to pick up after the regulatory and prudential norms for over-the-counter (OTC) and exchange traded derivatives are harmonised by the Reserve Bank of India.

Market Outcome

Primary Market

Resource Mobilisation

During 2003-04, the central government and state governments borrowed Rs. 1,476,360 million and Rs. 505,210 million, respectively. The gross borrowings of the central and state governments taken together increased by 8.69% from Rs. 1,822,980 million in 2002-03 to Rs. 1,981,570 million during 2003-04 (Table 6-4). Their net borrowings also increased by 1.47% from Rs. 1,332,300 million (in the previous year) to Rs. 1,351,920 million during 2003-04. The gross and net market borrowings of central government are budgeted to increase further to Rs. 1,508,170 million and Rs. 903,650 million, respectively during 2004-05, while those of the state governments are to increase to Rs. 420,710 million and Rs. 369,480 million in the same period.

The Central Government mobilised Rs. 1,215,000 million through issue of dated securities and Rs. 261,360 million through issue of T-bills. After meeting repayment liabilities of Rs. 326,930 million for dated securities, and redemption of T-bills of Rs. 261,260 million, net market borrowing of Central Government amounted to Rs. 888,160 million for the year 2003-04. Net borrowings financed 75.6% of gross fiscal deficit of central government in 2003-04 as against 74.4% in the preceding year. The state governments collectively raised Rs. 505,210 million during 2003-04 as against Rs. 308,530 million in the preceding year. The net borrowings of State Governments in 2003-04 amounted to Rs. 463,760 million.

Table 6-4: Market Borrowings of Governments

(Rs. million)

Security	Gross			Repayment			Net		
	2004-05*	2003-04	2002-03	2004-05*	2003-04	2002-03	2004-05*	2003-04	2002-03
1. Central Government (a+b)	1,508,170	1,476,360	1,511,260	604,520	588,190	470,080	903,650	888,160	1,041,180
(a) Dated Securities	1,248,170	1,215,000	1,250,000	343,160	326,930	274,200	905,010	888,070	975,800
(b) 364-day T-bills	260,000	261,360	261,260	261,360	261,260	195,880	-1,360	90	65,380
2. State Government	420,710	505,210	308,530	51,230	41,450	17,890	369,480	463,760	290,640
3. Institutions Sponsored by State Governments	–	–	3,190	–	–	2,710	–	–	480
Total	1,928,880	1,981,570	1,822,980	655,750	629,640	490,680	1,273,130	1,351,920	1,332,300

* Budget Estimates.

Source: : RBI Annual Report, 2003-04

Yields

The year 2003-04 witnessed a persistent decline in interest rates on market borrowings across maturities. This was largely due to comfortable liquidity position and subdued inflationary expectations. The yields on primary issues of dated government securities eased during the year with the cut-off yield varying between 4.69% and 6.35% during 2003-04 as against the range of 6.05% to 8.62% during the preceding year. The weighted average yield on government dated securities further declined to 5.71% in 2003-04 from 7.34% in 2002-03 (Table 6-5).

Table 6-5: Profile of Central Government Dated Securities

(Amount in Rs. mn.)

Items	2002-03	2003-04
1. Gross Borrowing	1,250,000	1,215,000
2. Repayments	274,200	326,930
3. Net Borrowings	975,800	888,070
4. Weighted Average Maturity (In years)	13.83	14.94
5. Weighted Average Yield (Per cent)	7.34	5.71
6. (A) Maturity Distribution (Amount)		
a. Upto 5 years	–	65,000
b. Above 5 and upto 10 years	455,000	220,000
c. Above 10 years	795,000	930,000
Total	1,250,000	1,215,000
(B) Maturity Distribution (Per cent)		
a. Upto 5 years	–	5
b. Above 5 and upto 10 years	36	18
c. Above 10 years	64	77
Total	100	100

Table 6-5: Profile of Central Government Dated Securities (Contd.)

(Amount in Rs. mn.)

Items	2002-03	2003-04
7. Price Based Auctions Amount	560,000	740,000
8. Yield - (Per cent)		
Minimum	6.05	4.69
	(12 years, 8 months)	(4 years)
Maximum	8.62	6.35
	(24 years, 3 months)	(18 years, 11 months)
9. Yield - Maturity Distribution-wise		
(A) Less than 10 years		
Minimum	6.57	4.62
	(8 years)	(9 years)
Maximum	7.72	5.76
	(9 years, 11 months)	(8 years, 10 months)
(B) 10 years		
Minimum	6.72	5.32
Maximum	8.14	5.32
(C) Above 10 years		
Minimum	6.05	5.09
	(12 years, 8 months)	(FRB, 11 years)
Maximum	8.62	6.33
	(24 years, 3 months)	(29 years, 4 months)

Note: Figures in brackets indicate residual maturity in years.
FRB is Floating Rate Bonds
Source: RBI Annual Report

Maturity Structure

Government has been consciously trying to lengthen maturity profile. During 2003-04, around 76.54% of central government borrowings were effected through securities with maturities above 10 years. The maximum maturity of primary issuance has been increased to 30 years. As a result, the weighted average maturity of dated securities issued during the year increased marginally to 14.94 years in 2003-04 from 13.83 years 2002-03.

Secondary Market

Turnover

The aggregate secondary market transactions in debt securities (including government and non-government securities) increased by 36.6% to Rs. 27,214,706 million in 2003-04, as against Rs. 19,917,700 million during 2002-03 (Table 6-6). Non-government securities accounted for a meager 1.6% of total turnover in debt market. NSE accounted for about 48.4% of total turnover in debt securities during 2003-04.

Table 6-6: Turnover of Debt Securities

(Rs. mn.)

Securities	2002-03	2003-04
Government Securities	19,557,313	26,792,084
WDM Segment of NSE	10,328,264	12,743,020
Rest of SGL	9,229,048	14,049,064
Non-Government Securities	360,387	422,622
CM Segment of NSE	683	2,220
WDM Segment of NSE	358,755	417,947
'F' Category of BSE	949	2,455
Total	19,917,700	27,214,706

Source: RBI, BSE and NSE.

The non-government securities are traded on the WDM and CM segments of the NSE, and on the BSE (F Category). Except WDM, the volumes are quite insignificant on other segments. The turnover in non-government securities on WDM of NSE was Rs. 417,947 million in 2003-04, 16.5% higher than that during the preceding year. BSE reported a turnover of Rs. 2,455 million during 2003-04. NSE accounted for over 99.4% of total turnover in non-government securities during the year.

The aggregate turnover in (central and state government dated securities and T-bills) through non-repo SGL transactions touched a level of Rs. 17,013,632 million, recording an increase of 22.2% over Rs. 13,923,834 million in the previous year (Table 6-7). The details of non-repo SGL transactions in government securities are presented in Annexure 6-1. The volume of transactions in state government securities increased to Rs. 171,957 million in 2003-04 from Rs. 94,456 million in 2002-03. The monthly turnover in non-repo transactions for the year 2003-04 ranged between Rs. 824,725 million and Rs. 2,188,569 million, with a monthly average of Rs. 1,417,803 million.

Table 6-7: Secondary Market Transactions in Government Securities

Year	Total SGL Non-Repo Turnover (Rs. mn.)	Share in Non-Repo Turnover (%)		
		Central Govt. Securities	State Govt. Securities	T-Bills
1995-96	295,300	59.44	1.57	38.99
1996-97	939,210	63.78	0.63	35.59
1997-98	1,610,900	73.59	0.84	25.58
1998-99	1,875,310	76.31	0.82	22.87
1999-00	4,564,910	88.78	0.80	10.42
2000-01	5,721,456	88.98	0.52	10.50
2001-02	12,119,658	93.94	0.51	5.56
2002-03	13,923,834	93.81	0.68	5.51
2003-04	17,013,632	91.93	1.01	7.06

Source: RBI.

The share of WDM segment of NSE in the total turnover of non-repo SGL transaction increased marginally from 74.01% in 2002-03 to 74.89% in 2003-04 (Table 6-8). The share of WDM in turnover of non-repo dated securities (central and state government securities) witnessed a decline to 49.01% in 2003-04 from 55.42% in 2002-03 (Chart 6-1). The turnover in T-bills has increased from 40.89% in the 2002-03 to 46.31% in 2003-04.

Table 6-8: Share of WDM in Transactions of Government Securities

(Amount in Rs. mn.)

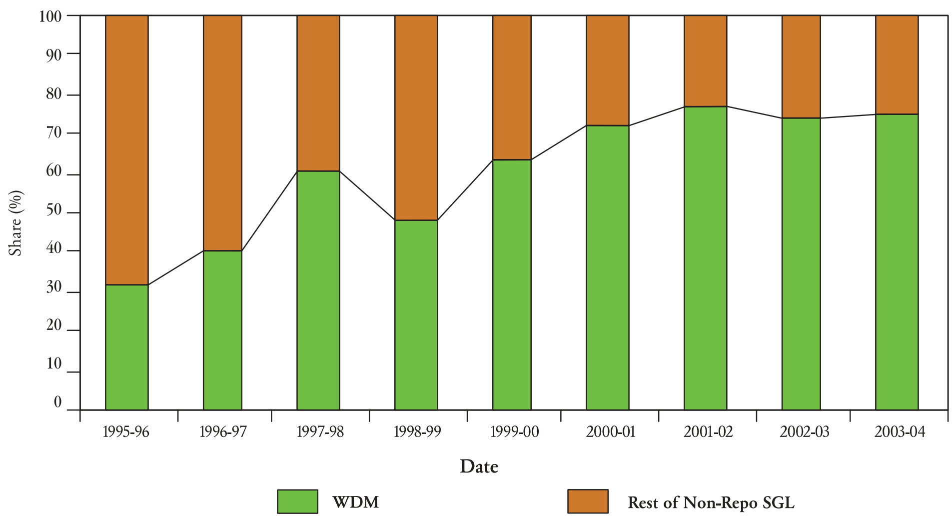
Year	Turnover of Non-Repo Govt. Securities			Turnover of Non-Repo Central & State Govt. Securities			Turnover of Non-Repo T-Bills		
	On SGL	On WDM	Share of WDM (%)	On SGL	On WDM	Share of WDM (%)	On SGL	On WDM	Share of WDM (%)
1995-96	295,300	92,433	31.30	180,170	69,885	38.79	115,130	22,548	19.58
1996-97	939,210	381,023	40.57	604,990	271,902	44.94	334,220	109,121	32.65
1997-98	1,610,900	975,152	60.53	1,198,890	804,943	67.14	412,010	170,209	41.31
1998-99	1,875,310	904,158	48.21	1,446,410	798,295	55.19	428,900	105,863	24.68
1999-00	4,564,910	2,915,915	63.88	4,089,160	2,809,475	68.71	475,750	106,440	22.37
2000-01	5,721,456	4,124,958	72.10	5,120,836	3,893,523	76.03	600,620	231,435	38.53
2001-02	12,119,658	9,269,955	76.49	11,446,342	9,015,121	78.76	673,316	254,834	37.85
2002-03	13,923,834	10,305,497	74.01	13,155,989	9,991,507	75.95	767,845	313,990	40.89
2003-04	17,013,632	12,741,190	74.89	15,813,076	12,185,221	77.06	1,200,556	555,969	46.31

Source: RBI & NSE.

Developments in WDM

During 2003-04, 1,128 more securities with a total outstanding debt of Rs. 2,092,549 million was made available for trading. As at end March 2004, 2,621 securities were available for

Chart 6-1: Share of WDM in Non-Repo Government Transaction



trading on the WDM Segment. A total of 1,078 securities were active during 2003-04 as compared to 1,123 in the previous year.

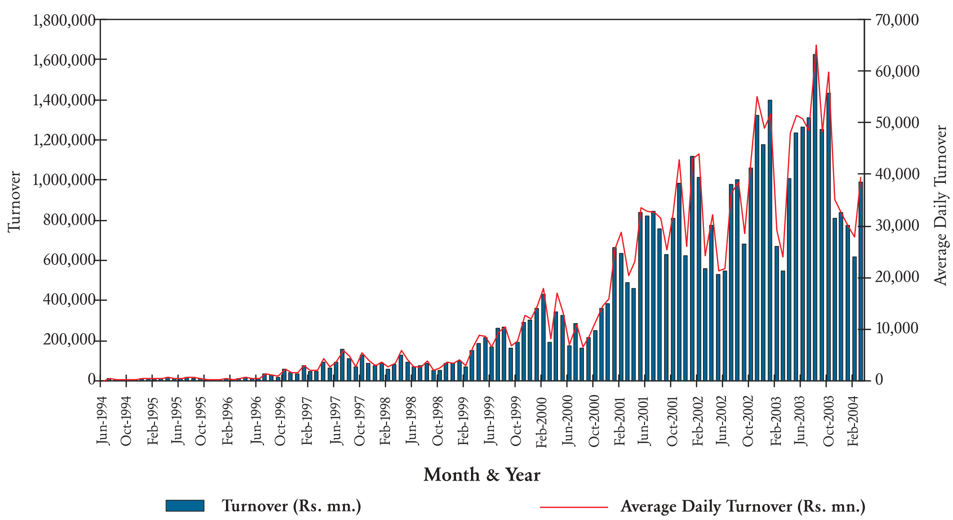
The turnover on WDM segment has been growing rapidly over time. The monthly turnover at times far exceeds the turnover in the equity market segment. It has registered an increase of 23.14% from Rs. 10,687,015 million during 2002-03 to Rs. 13,160,962 million during 2003-04. The average daily turnover increased from Rs. 35,983 million to Rs. 44,765 million during the same period, while the average trade size increased from 63.7 million to 69.4 million. The business growth of WDM segment is presented in Table 6-9, Chart 6-2 and Annexure 6-2.

Table 6-9: Business Growth of WDM Segment of NSE

Parameter	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
No. of Active Securities	304	524	719	1,071	1,057	1,038	979	1,123	1,078
No. of Trades	2,991	7,804	16,821	16,092	46,987	64,470	144,851	167,778	189,518
No. of Retail Trades	1,115	1,061	1,390	1,522	936	498	378	1,252	1,400
Turnover (Rs. mn.)	118,677	422,776	1,112,633	1,054,691	3,042,162	4,285,815	9,471,912	10,687,015	13,160,962
Average Daily Turnover (Rs. mn.)	408	1,453	3,850	3,650	10,348	14,830	32,775	35,983	44,765
Retail Turnover (Rs. mn.)	2,072	2,005	2,887	3,078	2,185	1,318	1,094	2,995	3,317
Share of Retail Trades (%)	1.75	0.47	0.26	0.29	0.07	0.03	0.01	0.03	0.03
Average Trade Size (Rs. mn.)	39.68	54.17	66.15	65.54	64.74	66.48	65.39	63.70	69.40
Average Size of Retail Trade (Rs. lakh)	1.86	1.89	2.08	2.02	2.33	2.65	2.89	2.39	2.37

Source: NSE.

Chart 6-2: Growth of WDM Segment



The market remained highly buoyant throughout the year (2003-04). Specifically the first six months of the fiscal witnessed huge volumes in this segment. The highest turnover of Rs. 139,120 million was witnessed in August 2003. The average daily turnover ranged between Rs. 27,954 million and Rs. 65,095 million.

Retail Trades

The number of retail trades had been increasing till 1998-99 thereafter it witnessed a decline. However, in the past two years there has been a turnaround in the number of retail trades. The number of retail trades increased from 1,252 in the previous year to 1,400 in 2003-04 a rise of by almost 12%. The retail trade market is picking up as a result of the efforts made by policy makers.

Securities Profile

Long-term securities dominated the market during 2003-04 revealing the interest of investors to hold on to long-term of assets. Dated government securities accounted for the bulk of trading with a turnover of Rs. 12,186,448 million. The turnover in government securities increased by 21.8% during 2003-04 as compared to previous year. Its share in total turnover, however, marginally decreased to 92.6% from 93.6% in the previous year (Table 6-10). The share of T-Bills in WDM turnover, which has been declining over a time, witnessed an upward trend registering 4.23% share in the total turnover. The PSU bonds witnessed a turnover of Rs. 158,946 million in 2003-04 as against Rs. 146,508 million in 2002-03 (Annexure 6-3). The share of institutional bonds increased marginally to 0.85% in the current year from 0.50% in the previous year (Chart 6-3).

Table 6-10: Security-wise Distribution of Turnover

Securities	Turnover (Rs. mn.)		% of Turnover	
	2002-03	2003-04	2002-03	2003-04
Government Securities	10,005,415	12,186,448	93.62	92.60
T-Bills	322,846	556,567	3.02	4.23
PSU Bonds	146,508	158,946	1.37	1.21
Institutional Bonds	52,964	111,950	0.50	0.85
Bank Bonds & CDs	29,471	43,756	0.28	0.33
Corporate Bonds & CPs	129,637	102,945	1.21	0.78
Others	175	350	0.00	0.00
Total	10,687,016	13,160,962	100.00	100.00

Source: NSE.

The share of top '10' securities over the past three years has been witnessing a decline and it decreased from 65.15% in 2002-03 to 54.43% in 2003-04 (Table 6-11). Top 50 securities accounted for over 90.66% of turnover.

Chart 6-3: Security-wise Distribution of Turnover, 2003-04

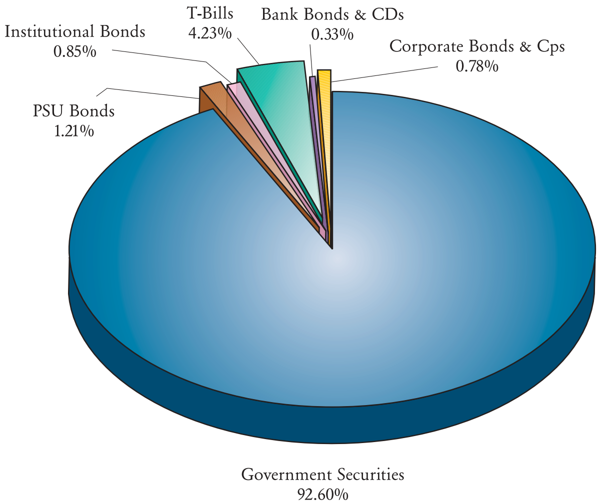


Table 6-11: Share of Top 'N' Securities/Trading Members/ Participants in Turnover in WDM Segment

Year	In Percent				
	Top 5	Top 10	Top 25	Top 50	Top 100
Securities					
1994-95	42.84	61.05	80.46	89.81	97.16
1995-96	57.59	69.46	79.60	86.58	93.24
1996-97	32.93	48.02	65.65	78.32	90.17
1997-98	30.65	46.92	71.25	85.00	92.15
1998-99	26.81	41.89	64.30	78.24	86.66
1999-00	37.11	55.57	82.12	90.73	95.28
2000-01	42.20	58.30	80.73	89.97	95.13
2001-02	51.61	68.50	88.73	94.32	97.19
2002-03	43.10	65.15	86.91	92.74	96.13
2003-04	37.06	54.43	81.58	90.66	95.14
Trading Members					
1994-95	51.99	73.05	95.37	100.00	–
1995-96	44.36	68.58	96.10	100.00	–
1996-97	30.02	51.27	91.57	99.96	100.00
1997-98	27.17	47.85	83.38	99.82	100.00
1998-99	29.87	50.45	86.55	99.98	100.00
1999-00	32.38	53.41	84.46	100.00	–
2000-01	35.17	54.25	86.82	100.00	–
2001-02	35.18	58.68	88.36	100.00	–
2002-03	31.77	53.71	85.49	100.00	–
2003-04	30.72	53.01	86.71	100.00	–

(Contd.)

Table 6-11: Share of Top 'N' Securities/Trading Members/ Participants in Turnover in WDM Segment (Contd.)

Year	In Percent				
	Top 5	Top 10	Top 25	Top 50	Top 100
Participants					
1994-95	18.37	27.38	38.40	42.20	–
1995-96	29.66	47.15	70.49	76.32	76.58
1996-97	25.27	44.92	67.00	76.33	77.10
1997-98	23.60	38.96	65.59	77.96	80.22
1998-99	22.47	37.39	62.79	79.27	84.51
1999-00	15.54	27.87	52.51	74.76	81.32
2000-01	17.51	28.85	50.64	69.72	76.78
2001-02	17.49	29.25	50.19	69.16	76.49
2002-03	17.27	28.29	49.22	68.14	75.20
2003-04	16.66	25.69	44.25	59.87	65.17

Source: NSE.

Participant Profile

Indian banks, foreign banks and PDs together accounted for over 60% of WDM turnover during 2003-04 (Table 6-12). Though the share of the Indian banks fell from 38.77% to 36.36% in 2003-04, it still continues to be market leader followed by trading members (Annexure 6-3). The share of trading member in the turnover witnessed a huge rise from 24.81% to 34.8% in 2003-04 (Chart 6-4).

Chart 6-4: Participant-wise Distribution of Turnover, 2003-04

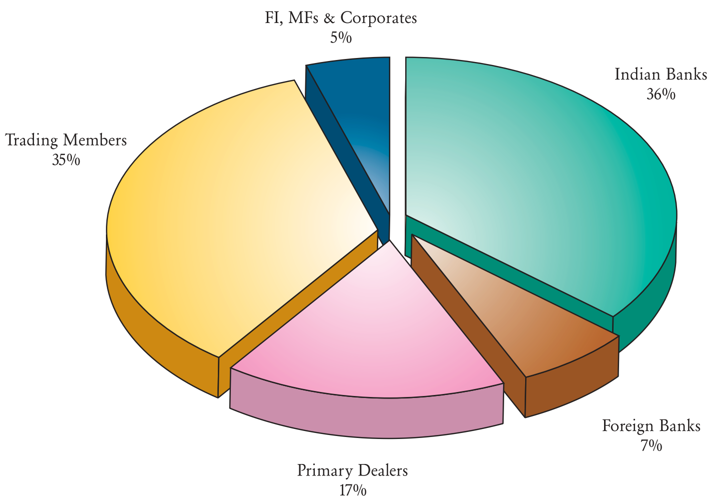


Table 6-12: Participant-wise Distribution of Turnover

Participants	2002-03	2003-04
Indian Banks	38.77	36.36
Foreign Banks	10.62	7.25
Primary Dealers	22.03	17.03
Trading Members	24.81	34.80
FI, MFs & Corporates	3.77	4.56
Total	100.00	100.00

Source: NSE.

Top '50' trading members accounted for the total turnover of WDM in 2003-04, which is indicative of the narrow membership structure of WDM segment (Table 6-11). As at March 31, 2004, there were 78 members on the WDM segment.

Market Capitalisation

Market capitalisation of the WDM segment has witnessed a constant increase indicating an increase in activity in the market. The total market capitalisation of securities available for trading on WDM segment stood at Rs. 12,158,638 million as at end-March 2004, registering a growth of 40.64% over end-March 2003 (Table 6-13). The relative shares of different securities in market capitalisation maintained the trend of 2002-03. Government securities accounted for 78.9% of total market capitalisation at the end of March 2004 (Chart 6-5). The growth of market capitalisation of WDM is presented in Annexure 6-4.

Chart 6-5: Market Capitalisation of WDM Segment at the end of March 2004

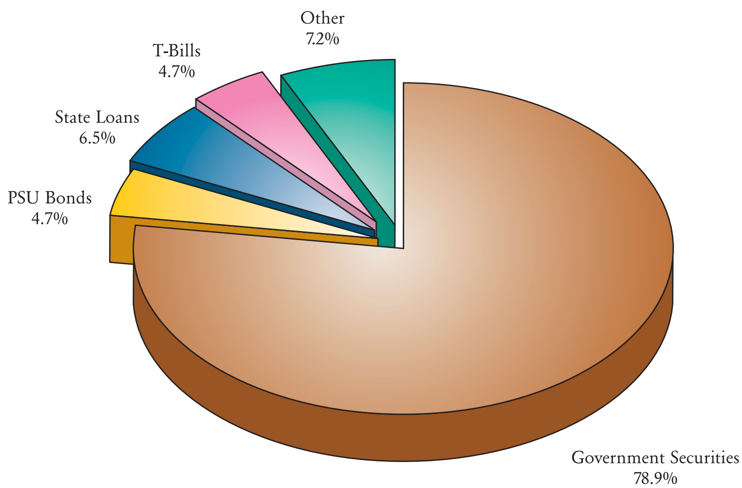


Table 6-13 : Market Capitalisation of WDM Segment

Security	Market Capitalisation (end of period) (In Rs. mn.)		% to total	
	March-03	March-04	March-03	March-04
Government Securities	6,580,017	9,593,017	76.12	78.90
PSU Bonds	383,828	568,319	4.44	4.67
State Loans	720,940	793,403	8.34	6.53
T-bills	349,188	326,920	4.04	2.69
Other	610,839	876,979	7.06	7.21
Total	8,644,812	12,158,638	100.00	100.00

Source: NSE.

Yields

The yields (yield-to-maturity) on government and corporate securities of different maturities of 0-1 year, 5-6 years, 9-10 years and above 10 years are presented in Table 6-14. The yields on government and corporate securities showed a downward trend through out 2003-04 except for February 2004 and August 2003.

Table 6-14: Yields on Government and Corporate Securities, 2003-04

(In per cent)

Month/ Year	Government Securities				Corporate Securities			
	0-1 year	5-6 years	9-10 years	Above 10 years	0-1 year	5-6 years	9-10 years	Above 10 years
Apr-03	5.34	5.76	5.97	6.15	5.49	6.67	6.88	7.25
May-03	4.91	5.55	5.86	6.04	5.61	6.33	6.62	6.95
Jun-03	5.07	5.43	5.74	5.94	5.76	5.94	6.71	6.78
Jul-03	5.02	5.35	5.66	5.90	5.54	6.19	6.79	6.84
Aug-03	4.76	5.15	5.42	5.74	5.50	6.14	6.41	7.61
Sep-03	4.72	4.96	5.24	5.64	5.66	5.87	6.35	6.59
Oct-03	4.58	4.77	5.04	5.43	5.62	5.55	6.02	6.86
Nov-03	4.54	4.89	5.09	5.50	5.12	5.71	6.18	6.81
Dec-03	4.46	4.89	5.17	5.61	5.03	5.75	6.41	6.80
Jan-04	4.42	4.86	5.12	5.50	5.47	5.99	6.23	6.65
Feb-04	4.27	5.05	5.25	5.62	5.16	5.87	6.36	7.25
Mar-04	4.42	4.97	5.17	5.56	5.17	5.75	6.12	6.25

Source: NSE.

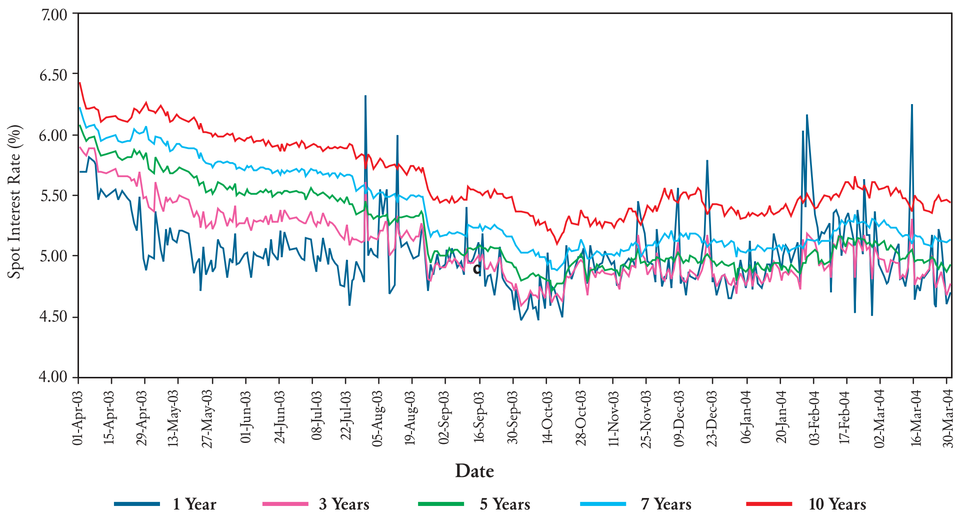
Zero Coupon Yield Curve

Keeping in mind the requirements of the banking industry, financial institutions, mutual funds, insurance companies, that have substantial investment in sovereign papers, NSE disseminates a 'Zero Coupon Yield Curve' (NSE Zero Curve). This helps in valuation of securities across all maturities irrespective of its liquidity in the market. This product has been developed by using Nelson-Siegel model to estimate the term structure of interest rate at any given point of time. This has been successfully tested by using daily WDM trades data. This is being disseminated daily.

The ZCYC depicts the relationship between interest rates in the economy and the associated terms to maturity. It provides daily estimates of the term structure of interest rates using information on secondary market trades in government securities from the WDM segment. The term structure forms the basis for the valuation of all fixed income instruments. Modeled as a series of cash flows due at different points of time in the future, the underlying price of such an instrument is calculated as the net present value of the stream of cash flows. Each cash flow, in such a formulation, is discounted using the interest rate for the associated term to maturity; the appropriate rates are read off the estimated ZCYC. Once estimated, the interest rate-maturity mapping is used to compute underlying valuations even for securities that do not trade on a given day. The daily ZCYC captures the changes in term structure, and is used to track the value of portfolios of government securities on a day-to-day basis.

The estimates of daily ZCYC are available from February 1998. Chart 6-6 plots the spot interest rates at different maturities for the year 2003-04.

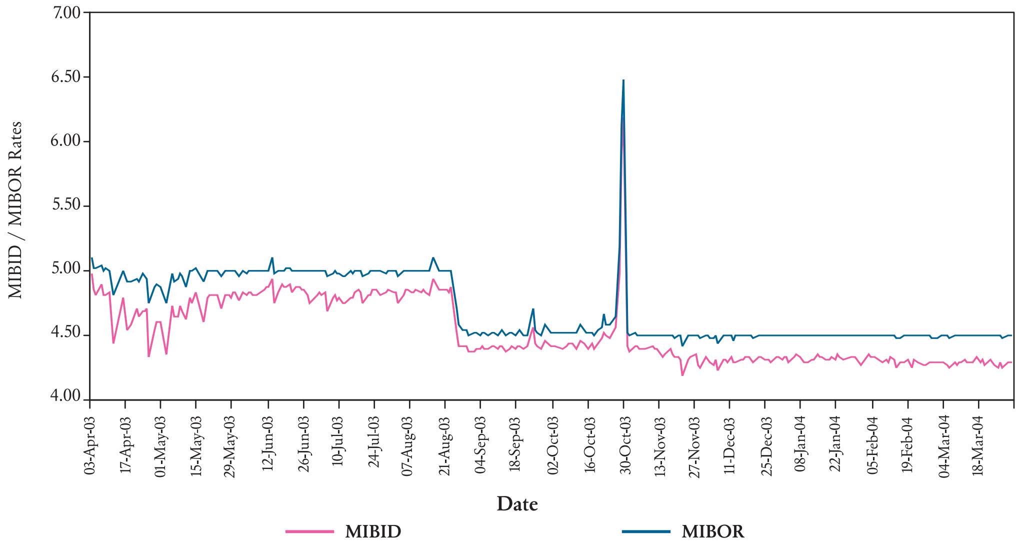
Chart 6-6: Zero Coupon Yield Curve, 2003-04



FIMMDA-NSE MIBID/MIBOR

A reference rate is an accurate measure of the market price. In the fixed income market, it is an interest rate that the market respects and closely matches. On these lines, NSE has been computing and disseminating the NSE Mumbai Inter-bank Bid Rate (MIBID) and NSE Mumbai Inter-bank Offer Rate (MIBOR) for the overnight money market from June 15, 1998, the 14-day MIBID/MIBOR from November 10, 1998 and the 1 month and 3 month MIBID/MIBOR from December 1, 1998. In view of the robust methodology of computation of these rates and their extensive use by market participants, these have been co-branded with Fixed Income and Money Market Dealers Association (FIMMDA) from March 4, 2002. These

Chart 6-7: Overnight NSE — FIMMDA MIBID / MIBOR Rates, 2003-04



are now known as FIMMDA-NSE MIBID/MIBOR. Chart 6-7 presents overnight FIMMDA-NSE MIBID/MIBOR from April 2003 to March 2004. The FIMMDA-NSE MIBID/MIBOR rates for month ends are presented in Annexure 6-5. The daily FIMMDA-NSE MIBID/MIBOR rates are available at www.nseindia.com.

The overnight MIBID/MIBOR rates ruled fairly steady within a narrow range during the year 2003-04. These rates touched the peak of 6.19% and 6.48%, respectively, on October 30, 2003 and the low of 4.19% and 4.41%, respectively, on November 22, 2003. The rates have been particularly stable during the current financial year, reflective of a stable interest rate environment, and have been hovering around 4-6%. The stability of the rates in overnight call market may be due to the guidelines issued by RBI moving non-banks from the call market in a phased manner.

FIMMDA-NSE MIBID/MIBOR rates are based on quotes polled by NSE from a representative panel of 29 banks/institutions/primary dealers. Currently, quotes are polled and processed daily by the Exchange at 0940 (IST) for overnight rate and at 1130 (IST) for the 14 day, 1 month and 3 month rates. The rates polled are then processed using the bootstrap method to arrive at an efficient estimate of the reference rates. The overnight rates are disseminated daily to the market at about 0955 (IST) and the 14 day, 1 month and 3 month rates at about 1145 (IST). These are broadcast through NEAT-WDM trading system immediately on release and also disseminated through websites of NSE and FIMMDA and through e-mail. The FIMMDA-NSE MIBID/MIBOR is used as a benchmark rate for majority of deals struck for interest rate swaps, forward rate agreements, floating rate debentures and term deposits.

NSE-VaR System

NSE has developed a VaR system for measuring the market risk inherent in Government of India (GOI) securities. NSE-VaR system builds on the NSE database of daily yield curves (ZCYC) and provides measures of VaR using 5 alternative methods (variance-covariance, historical simulation method, weighted normal, weighted historical simulation and extreme value method). Together, these 5 methods provide a range of options for market participants to choose from.

NSE-VaR system releases daily estimates of security-wise VaR at 1-day and multi-day horizons for securities traded on WDM segment of NSE and all outstanding GOI securities with effect from January 1, 2002. Participants can compute their portfolio risk as weighted average of security-wise VaRs, the weights being proportionate to the market value of a given security in their portfolio. 1-day VaR (99%) measure for GOI Securities traded on NSE-WDM on March 31, 2004 is presented in Annexure 6-6. The VaR for other GOI securities are available at www.nseindia.com.

Bond Index

Market participants are familiar with the equity indices such as the S&P CNX Nifty and the Sensex. These have been around for years and are very popular as benchmarks. These are comparatively easy to construct due to the high liquidity of many equities across several industry categories. In contrast, designing debt indices posed as a challenge in India as the breadth and depth of the debt market has not been very promising. There were also a few additional difficulties in construction and maintenance of debt indices. First, on account of the fixed maturity of bonds vis-à-vis the perpetuity of equity, the universe of bonds changes frequently (new issues come in while existing issues are redeemed). Secondly, while market prices for the constituents of an equity index are normally available on all trading days over a long period of time, market prices of constituent bonds in a bond index, irrespective of the selection criteria used, may not be available daily. This is on account of the fact that the liquidity of a security varies over its lifetime and, in addition, can witness significant fluctuations over a short period. However, market participants need an index to compare their performance with as well as the performance of different classes of assets.

A widely tracked benchmark in this context is the ICICI Securities' (Isec) bond index (i-BEX), NSE's G-Sec Index and NSE's T-Bills Index. These have emerged as the benchmark of choice across all classes of market participants - banks, financial institutions, primary dealers, provident funds, insurance companies, mutual funds and foreign institutional investors. It has two variants, namely, a Principal Return Index (PRI) and Total Return Index (TRI). The PRI tracks the price movements of bonds or capital gains/losses since the base date. It is the movement of prices quoted in the market and could be seen as the mirror image of yield movements. During 2003-04, the PRI of i-BEX and NSE G-Sec Index increased by 3.91% and 2.28% respectively. The TRI tracks the total returns available in the bond market. It captures both interest accruals and capital gains/losses. In a declining interest rate scenario, the index gains on account of interest accrual and capital gains, while losing on reinvestment income. As against this, during rising interest rate periods, the interest accrual and reinvestment income is offset by capital losses. Therefore, the TRI typically has a positive slope except during periods when the drop in market prices is higher than the interest accrual. During 2003-04, the TRI registered gains of 10.83% and 8.95% for i-BEX and NSE G-Sec Index respectively.

While constructing the NSE-Government Securities Index prices are used from NSE ZCYC so that the movements reflect returns to an investor on account of change in interest rates. The index provides a benchmark for portfolio management by various investment managers and gilt funds. The movement of popular fixed income indices at monthly rates are presented in Table 6-15.

Table 6-15: Debt Market Indices, 2003-04

At the end of the month	I Sec I-BEX (Base August 1, 1994=1000)		NSE-T-Bills Index		NSE G-Sec Index	
	TRI	PRI	TRI	PRI	TRI	PRI
Apr-03	3386.54	1405.28	180.02	180.02	233.36	131.04
May-03	3451.98	1424.11	180.72	180.72	236.48	131.88
Jun-03	3481.15	1427.32	181.34	181.34	238.61	132.24
Jul-03	3519.08	1434.20	182.18	182.18	240.94	132.56
Aug-03	3612.00	1463.83	182.88	182.88	246.10	134.66
Sep-03	3626.35	1461.00	183.90	183.90	249.15	135.49
Oct-03	3671.98	1471.15	184.34	184.34	249.64	135.12
Nov-03	3654.30	1455.32	184.74	184.74	246.95	133.10
Dec-03	3693.25	1462.26	185.88	185.88	250.61	134.49
Jan-04	3692.42	1453.09	185.28	185.28	249.08	132.90
Feb-04	3689.82	1443.72	186.88	186.88	249.43	132.31
Mar-04	3753.48	1460.25	188.13	188.13	254.25	134.03

Source: ICICI Securities and NSE

Policy Debates

Trading of Securities

The trading framework suffers from following deficiencies:

1. There are strong entry barriers to participate in trading of government securities. Like equity markets, any and everybody who complies with the specified criteria should be allowed to participate in the market.

2. Trades are negotiated bilaterally over phone or NDS. The enforcement of such trades, being in the nature of OTC, is difficult. It is necessary to ban OTC trades and prescribe that all trades in government securities should be subject to discipline of stock exchanges. NDS is expected to enforce market discipline, as the deals are required to be reported within 15 minutes of the same being negotiated.

3. The parties have to search for counterparties and negotiate for the best price. It is necessary to mandate that all trades will be executed on the basis of price and order matching mechanism of stock exchanges as in case of equities. NSE introduced automated screen based trading in debt securities, which is an anonymous order matching system. However, banks and institutions have shown little interest to use NSE's trading platform for executing their debt securities transactions. Regulatory fiat is needed to enforce transparency in financial deals. SEBI has taken the initiative in this regard by prohibiting

'negotiated deals' in respect of listed corporate debt securities and prescribing that all such trades would be executed on the basis of price and order matching mechanism of stock exchanges as in case of equities.

4. The knowledge of parties affects the terms of trade and can facilitate formulation of cartels. It is necessary to allow parties to participate in the market anonymously. However, there should be complete audit trail to resolve the disputes, if any, by logging in the trade execution process in entirety.

5. The market is not transparent. Only the parties to trade have information about the trade. It is necessary to enable market participants to see the full market and have all trade related information on real time basis.

6. The market is highly fragmented. A buyer from Chennai can not trade in the Mumbai market since securities held in his account with RBI books cannot be easily transferred to Mumbai and vice-versa. T-bills cannot be traded outside Mumbai. Since the order book is geographically fragmented, the quality of price discovery process is very poor. It is necessary to provide a facility enabling any body from any corner of the country to trade with ease and convenience.

7. NDS is a vastly superior system for negotiation of trades in government securities. However, it does not obviate the difficulties of an OTC market, nor does it provide the liquidity of an order matching market. As it does not consolidate all orders into an order book, the parties have to search for counter parties. Since it does not guarantee the best price for all trades, the parties have to negotiate with counterparties to arrive at an agreeable price. Further, there are strong entry barriers, the number of participants who can negotiate on NDS, is very limited.

Debt Derivatives

There are three sources of income from a fixed income security-coupon or interest payments, capital gains/losses, and re-investment income, which is income from the intermediate cash flows that are re-invested. An investor faces considerable risk from an adverse movement in interest rates. In situations of rise in interest rates, the price of the bond declines, posing the risk of capital loss to an investor who wants to sell off his security prior to maturity. The risk arising out of variations in interest rates could be hedged by using interest rate derivatives. The commonly used interest rate derivatives are forwards, futures, swaps and options. Of these, IRSs and FRAs are the most popular derivative instruments and account for the largest share of turnover in interest rate derivatives all over the world.

In India, IRSs/FRAs were introduced in June 1999 with a purpose to enable banks, PDs and FIs to hedge interest rate risks. The market for these derivatives, however, has not developed appreciably for lack of legal clarity. It is viewed in some circles that there is no suitable regulatory framework to govern trading of these derivatives. These are not derivatives under the Securities Contracts (Regulation) Act, 1956 as these are not derived from securities. It is desirable to have legislative provisions to provide for such contracts. It should cover the entities who can enter into such contracts, the broad parameters of such contracts, clearing corporation for settling these contracts, and a dispute resolution mechanism.

STRIPS

Separate Trading of Registered Interest and Principal of Securities (STRIPS) involves stripping a conventional security into a number of zero coupon securities, which can be traded separately. Such newly created securities are called STRIPS. For example, a 10-year government security, can be stripped into 21 zero coupon securities-20 carrying half-yearly coupons with maturities of 6 months, 12 months, 18 months and so on and 1 carrying final redemption amount with maturity of 10 years. A Rs. 100 crore government security carrying a coupon of 12% with 10 year maturity has cash flows of 20 semi-annual payments of Rs. 6 crore each and the repayment of principal of Rs. 100 crore after ten years. Each of these 21 cash flows can be treated as a zero coupon instrument which can be traded at varying yields. These 21 instruments are STRIPS of the underlying government security.

As one underlying security can be converted to 21 zero coupon securities, the breadth of the debt market would expand considerably. Increased supply of securities across maturities would provide a continuous market and consequently improve liquidity. The introduction of STRIPS in government securities would be good bait for small investors, as these are comparable to other fixed income instruments, which are their favourites. Besides, it would allow the issuer to issue securities with long-term maturity for any amount and allow stripping of these securities to meet the market appetite for short-term securities in convenient amounts.

The participants in the debt market normally purchase the securities and hold till maturity. This results in reduced supply of securities for secondary market activity. Further, some participants, like provident funds, bear the re-investment risk due to the interest receipts every six months. STRIPS would provide a solution to both these problems. Banks can issue STRIPS against the securities held by them. Thus they will earn returns against their investment and also increase the supply of securities to boost the secondary market activity. The provident funds can invest in STRIPS, which will mature on the required specified date. Thereby, the provident funds will be able to invest in government securities as required by law and also achieve the desired cash flow, without bearing the re-investment risk.

The Government security market in India has the necessary size to make STRIPS a success. The secondary markets volumes in Government securities were Rs. 26,792,084 million during 2003-04. Government and RBI have repeatedly expressed their intention to develop markets for STRIPS and are preparing ground for the same. RBI is consolidating outstanding government securities to ensure sufficient volumes and liquidity in any one issue, which would facilitate the emergence of benchmarks and development of STRIPS.

However, a few legal clarifications/relaxations are needed for issuance and trading of STRIPS. The Negotiable Instruments Act 1881 does not permit transfer of only a part of the amount appearing due on an instrument. Thus, a part of a security, for example, interest component of a security cannot be transferred unless the whole security along with other future interest payments are transferred simultaneously. STRIPS require the principal and the interest coupons to be uniquely identified as distinctive securities. Clarifications are required if the issuance and transfer of STRIPS, even though derived from government securities, would attract any stamp duty and at what rates. CBDT has clarified taxation issues relating to issuance of STRIPS. RBI is setting up a working group to suggest operational and prudential guidelines.

Annexure 6-1: Secondary Market Transactions in Government Securities

(Rs in mn.)

Month/ Year	SGL/NDS Non-Repo Transactions				WDM Non-Repo Transactions in Govt. Securities			
	Dated Securities	State Govt. Securities	Treasury Bills	Total (2+3+4)	Dated Securities	State Govt. Securities	Treasury Bills	Total (6+7+8)
1	2	3	4	5	6	7	8	9
1994-95	113,830	2,030	97,210	213,070	29,471	793	26,337	56,601
1995-96	175,530	4,640	115,130	295,300	68,130	1,755	22,548	92,433
1996-97	599,030	5,960	334,220	939,210	268,914	2,988	109,121	381,023
1997-98	1,185,410	13,480	412,010	1,610,900	795,638	9,305	170,209	975,152
1998-99	1,430,970	15,440	428,900	1,875,310	789,692	8,603	105,863	904,158
1999-00	4,052,850	36,310	475,750	4,564,910	2,788,655	20,820	106,440	2,915,915
2000-01	5,091,125	29,711	600,620	5,721,456	3,880,972	12,551	231,435	4,124,958
Apr-01	572,670	4,987	64,732	642,389	421,103	2,919	28,881	452,903
May-01	945,131	4,039	60,061	1,009,231	795,156	1,335	25,943	822,434
Jun-01	1,000,593	1,507	59,236	1,061,336	787,944	550	23,440	811,934
Jul-01	1,075,785	2,936	68,321	1,147,042	799,445	1,204	28,343	828,992
Aug-01	1,008,556	4,476	58,833	1,071,865	725,426	680	15,460	741,566
Sep-01	789,052	3,000	56,683	848,735	597,040	999	21,368	619,407
Oct-01	926,959	5,526	43,444	975,929	776,108	1,600	16,564	794,272
Nov-01	1,170,438	5,508	62,654	1,238,600	943,478	1,093	26,506	971,077
Dec-01	835,320	4,920	49,563	889,802	598,539	234	16,152	614,925
Jan-02	1,253,373	6,734	81,510	1,341,618	1,061,480	1,142	31,639	1,094,261
Feb-02	1,182,630	8,044	40,248	1,230,922	967,120	1,234	11,910	980,264
Mar-02	624,529	9,631	28,030	662,189	528,162	1,130	8,628	537,920
2001-02	11,385,035	61,307	673,316	12,119,658	9,001,001	14,120	254,834	9,269,955
Apr-02	968,211	10,330	42,250	1,020,791	723,591	3,083	15,970	742,644
May-02	641,634	3,405	63,889	708,928	476,942	1,771	25,530	504,243
Jun-02	589,797	2,766	37,275	629,839	491,233	1,335	16,991	509,559
Jul-02	1,185,803	4,103	62,341	1,252,246	913,169	610	24,598	938,377
Aug-02	1,226,311	5,845	65,138	1,297,294	935,939	1,289	29,326	966,554
Sep-02	856,335	10,806	37,021	904,162	639,788	5,941	13,501	659,230
Oct-02	1,247,920	6,794	63,164	1,317,878	1,000,312	2,340	25,372	1,028,024
Nov-02	1,679,093	9,856	71,117	1,760,066	1,261,576	3,281	26,600	1,291,457
Dec-02	1,482,500	10,312	61,380	1,554,192	1,115,357	1,479	24,489	1,141,325
Jan-03	1,798,496	9,405	102,338	1,910,239	1,305,575	1,014	45,701	1,352,290
Feb-03	706,114	5,696	72,848	784,658	616,413	893	29,865	647,171
Mar-03	679,318	15,140	89,084	783,542	485,930	2,646	36,047	524,623
2002-03	13,061,533	94,456	767,845	13,923,834	9,965,825	25,682	313,990	10,305,497
Apr-03	1,154,892	5,744	112,712	1,273,348	918,570	908	50,009	969,487
May-03	1,515,036	11,042	69,404	1,595,482	1,149,241	2,491	37,896	1,189,628
Jun-03	1,525,599	15,887	73,261	1,614,747	1,205,540	7,315	28,835	1,241,690
Jul-03	1,548,600	9,724	106,354	1,664,678	1,234,260	3,525	41,824	1,279,609
Aug-03	2,057,602	19,766	111,201	2,188,569	1,531,213	7,134	42,358	1,580,705
Sep-03	1,357,323	14,553	125,795	1,497,671	1,137,665	5,543	64,704	1,207,912
Oct-03	1,789,154	15,559	111,741	1,916,454	1,326,757	3,176	56,189	1,386,122
Nov-03	903,041	6,373	87,211	996,625	738,047	3,220	46,308	787,575
Dec-03	945,347	14,053	90,647	1,050,047	763,458	2,678	44,796	810,932
Jan-04	892,785	11,521	86,428	990,734	699,090	4,216	46,392	749,698
Feb-04	724,382	14,498	85,845	824,725	556,191	2,774	39,453	598,418
Mar-04	1,227,358	33,237	139,956	1,400,551	878,361	3,848	57,205	939,414
2003-04	15,641,119	171,957	1,200,556	17,013,632	12,138,393	46,828	555,969	12,741,190

Source: NSE

Annexure 6 -2: Business Growth of WDM Segment

Month/Year	All Trades					Retail Trades		
	No. of Active Securities	No. of Trades	Average Daily Turnover (Rs. mn.)	Turnover (Rs. mn.)	Average Trade Size (Rs. mn.)	No. of Trades	Turnover (Rs. mn.)	Share in Total Turnover (%)
1994-95 (June-March)	183	1,021	304	67,812	66.42	168	306	0.45
1995-96	304	2,991	408	118,677	39.68	1,115	2,072	1.75
1996-97	524	7,804	1,453	422,776	54.17	1,061	2,005	0.47
1997-98	719	16,821	3,850	1,112,633	66.15	1,390	2,887	0.26
1998-99	1,071	16,092	3,650	1,054,691	65.54	1,522	3,078	0.29
1999-00	1,057	46,987	10,348	3,042,162	64.74	936	2,185	0.07
2000-01	1,038	64,470	14,830	4,285,815	66.48	498	1,318	0.03
Apr-01	213	6,606	23,143	462,855	70.07	17	59	0.01
May-01	220	12,220	33,593	839,823	68.73	52	79	0.01
Jun-01	200	11,936	32,932	823,294	68.98	28	49	0.01
Jul-01	223	12,575	32,549	846,285	67.30	25	48	0.01
Aug-01	215	11,622	31,577	757,842	65.21	44	189	0.02
Sep-01	207	9,526	25,280	631,990	66.34	28	43	0.01
Oct-01	196	12,636	32,344	808,603	63.99	17	44	0.01
Nov-01	216	15,300	42,902	986,739	64.49	36	157	0.02
Dec-01	167	10,135	26,004	624,107	61.58	21	57	0.01
Jan-02	228	17,011	42,975	1,117,361	65.68	36	130	0.01
Feb-02	254	16,127	44,050	1,013,135	62.82	44	153	0.02
Mar-02	216	9,157	24,343	559,878	61.14	30	86	0.02
2001-02	979	144,851	32,775	9,471,912	65.39	378	1,094	0.01
Apr-02	254	12,164	32,222	773,337	63.58	32	73	0.01
May-02	206	8,662	21,298	532,461	61.47	30	99	0.02
Jun-02	237	8,875	21,791	544,774	61.38	22	68	0.01
Jul-02	230	14,996	36,195	977,254	65.17	46	158	0.02
Aug-02	232	15,483	38,548	1,002,256	64.73	56	164	0.02
Sep-02	251	10,439	28,446	682,692	65.40	81	209	0.03
Oct-02	265	16,587	42,457	1,061,424	63.99	143	406	0.04
Nov-02	260	21,052	55,092	1,322,216	62.81	172	349	0.03
Dec-02	245	18,807	48,909	1,173,826	62.41	152	359	0.03
Jan-03	253	21,335	51,747	1,397,180	65.49	131	322	0.02
Feb-03	229	10,728	29,119	669,736	62.43	115	238	0.04
Mar-03	276	8,650	23,907	549,858	63.57	272	550	0.10
2002-03	1,123	167,778	35,983	10,687,014	63.70	1,252	2,995	0.03
Apr-03	282	15,512	48,120	1,010,522	65.10	180	412	0.04
May-03	290	18,651	51,400	1,233,590	66.14	148	305	0.02
Jun-03	310	18,400	50,669	1,266,717	68.84	127	290	0.02
Jul-03	271	18,220	48,528	1,310,268	71.91	122	298	0.02
Aug-03	306	22,753	65,095	1,627,371	71.50	127	255	0.02
Sep-03	334	17,152	48,153	1,251,987	72.99	115	251	0.02
Oct-03	275	20,465	59,752	1,434,039	70.07	81	265	0.02
Nov-03	233	11,737	35,175	809,029	68.93	89	282	0.03
Dec-03	247	12,529	32,272	839,059	66.97	57	142	0.02
Jan-04	280	11,407	29,820	775,328	67.97	123	338	0.04
Feb-04	241	8,675	27,954	614,989	70.89	79	211	0.03
Mar-04	372	14,017	39,523	988,064	70.49	152	268	0.03
2003-04	1,078	189,518	44,765	13,160,962	69.44	1,400	3,317	0.03

Source: NSE

Annexure 6-3: Security-wise and Participant-wise Distribution of WDM Trades

(In per cent)

Month/Year	Security-wise Distribution				Participant-wise Distribution				
	Government Securities	T-Bills	PSU/ Inst. Bonds	Others	Trading Members	FIs/MFs/ Corporates	Primary Dealers	Indian Banks	Foreign Banks
1994-95 (June-March)	44.63	38.84	12.15	4.38	57.82	6.43	0.02	14.16	21.57
1995-96	65.13	19.04	9.69	6.14	23.48	7.60	1.16	30.07	37.69
1996-97	64.70	25.92	6.55	2.84	22.95	3.81	6.10	30.01	37.13
1997-98	76.14	16.96	3.64	3.26	19.75	4.30	12.06	41.24	22.65
1998-99	80.19	10.15	4.78	4.88	15.48	4.93	14.64	42.12	22.83
1999-00	92.99	3.62	1.60	1.79	18.63	4.18	19.42	42.72	15.05
2000-01	91.22	5.40	1.84	1.54	23.24	4.18	22.14	33.54	16.90
Apr-01	91.61	6.24	1.43	0.72	18.82	3.01	25.17	36.81	16.19
May-01	94.84	3.09	1.36	0.71	19.55	3.99	25.28	38.4	12.78
Jun-01	95.77	2.85	0.88	0.50	19.92	3.58	22.88	41.31	12.31
Jul-01	94.86	3.35	1.14	0.65	20.51	4.78	20.60	41.66	12.45
Aug-01	95.99	2.04	1.19	0.78	21.71	3.53	24.49	39.05	11.22
Sep-01	94.63	3.38	1.31	0.68	25.33	4.17	24.19	31.78	14.53
Oct-01	96.21	2.11	1.03	0.65	26.98	4.19	23.74	34.58	10.51
Nov-01	95.76	2.70	0.67	0.87	25.96	3.97	24.49	34.66	10.92
Dec-01	96.02	2.59	0.83	0.56	26.51	4.65	23.11	33.89	11.84
Jan-02	95.11	2.83	0.88	1.18	25.43	4.46	19.19	36.09	14.83
Feb-02	95.58	1.18	1.59	1.65	25.16	4.53	19.78	34.26	16.27
Mar-02	94.68	1.54	2.03	1.75	24.23	4.61	19.43	35.84	15.89
2001-02	95.24	2.70	1.16	0.91	23.52	4.16	22.50	36.60	13.22
Apr-02	94.22	2.10	1.97	1.71	25.45	5.11	22.33	34.45	12.66
May-02	90.38	4.79	1.89	2.94	24.42	2.71	22.08	33.70	17.09
Jun-02	90.81	3.17	1.91	4.11	22.59	3.05	19.17	39.29	15.90
Jul-02	93.55	2.52	1.58	2.35	22.64	2.83	22.19	40.27	12.07
Aug-02	93.65	3.03	2.23	1.09	22.44	3.6	21.83	41.67	10.46
Sep-02	94.7	2.21	1.76	1.33	22.46	4.27	24.02	39.06	10.19
Oct-02	94.49	2.53	1.64	1.34	24.52	4.18	23.92	39.11	8.27
Nov-02	95.78	2.02	1.24	0.96	23.73	3.53	21.01	44.01	7.72
Dec-02	95.26	2.12	1.58	1.04	24.7	3.88	24.78	41.31	5.33
Jan-03	93.59	3.38	2.17	0.86	26.37	3.67	22.96	39.02	7.98
Feb-03	92.17	4.46	2.42	0.95	28.87	4.82	17.75	31.83	16.73
Mar-03	88.97	6.93	2.75	1.35	32.12	3.49	17.67	30.13	16.59
2002-03	93.62	3.02	1.87	1.49	24.81	3.77	22.03	38.77	10.62
Apr-03	91.01	4.95	2.67	1.37	32.55	3.40	18.65	35.91	9.49
May-03	93.36	3.07	2.09	1.48	32.28	3.83	18.74	36.89	8.26
Jun-03	95.80	2.32	1.11	0.77	33.59	3.58	19.03	37.08	6.72
Jul-03	94.48	3.20	1.67	0.65	33.15	5.10	17.77	37.37	6.61
Aug-03	94.53	2.60	2.15	0.72	33.34	4.97	16.34	39.09	6.26
Sep-03	91.32	5.17	2.56	0.95	36.13	5.33	15.32	37.01	6.21
Oct-03	92.74	3.92	2.40	0.94	35.78	5.81	16.38	35.86	6.17
Nov-03	91.62	5.72	1.68	0.98	40.68	5.16	14.61	33.90	5.65
Dec-03	91.31	5.34	2.24	1.11	35.49	4.25	16.00	37.65	6.61
Jan-04	90.71	5.98	1.66	1.65	35.78	4.47	17.38	34.85	7.52
Feb-04	90.89	6.42	1.78	0.91	36.32	3.93	17.28	32.54	9.93
Mar-04	89.29	5.79	2.48	2.44	36.21	3.96	16.30	33.82	9.71
2003-04	92.60	4.23	2.06	1.11	34.80	4.56	17.03	36.36	7.25

Source: NSE

Annexure 6-4: Market Capitalisation of WDM Securities

Month/Year (end of period)	(In Rs. mn.)						(In per cent)				
	Govt. Securities	PSU bonds	State loans	T-bills	Others	Total	Govt. securities	PSU bonds	State loans	T-bills	Others
Mar-95	861,748	256,750	58,674	171,294	233,344	1,581,810	54.48	16.23	3.71	10.83	14.75
Mar-96	1,254,925	300,740	138,497	84,523	299,150	2,077,835	60.40	14.47	6.67	4.07	14.40
Mar-97	1,698,298	362,111	188,914	134,599	543,797	2,927,719	58.01	12.37	6.45	4.60	18.57
Mar-98	1,962,904	353,226	239,892	174,973	700,910	3,431,905	57.20	10.29	6.99	5.10	20.42
Mar-99	2,600,017	349,936	305,161	112,918	746,665	4,114,697	63.19	8.50	7.42	2.74	18.15
Mar-00	3,198,650	393,570	394,770	153,450	799,890	4,940,330	64.75	7.97	7.99	3.11	16.19
Mar-01	3,972,280	363,650	446,240	177,250	848,940	5,808,360	68.39	6.26	7.68	3.05	14.62
Apr-01	4,241,610	361,990	450,950	186,670	852,510	6,093,730	69.61	5.94	7.40	3.06	13.99
May-01	4,382,030	363,150	469,400	185,380	853,740	6,253,700	70.07	5.81	7.51	2.96	13.65
Jun-01	4,422,900	388,650	473,020	210,560	849,170	6,344,300	69.71	6.13	7.46	3.32	13.38
Jul-01	4,613,830	394,420	478,100	222,720	832,730	6,541,800	70.53	6.03	7.31	3.40	12.73
Aug-01	4,701,480	427,190	507,110	230,410	828,350	6,694,540	70.23	6.38	7.57	3.44	12.37
Sep-01	4,747,790	427,810	502,170	233,470	870,370	6,781,610	70.01	6.31	7.40	3.44	12.83
Oct-01	4,907,810	423,430	523,670	236,520	877,760	6,969,190	70.42	6.08	7.51	3.39	12.59
Nov-01	5,127,020	432,600	538,290	235,860	878,560	7,212,330	71.09	6.00	7.46	3.27	12.18
Dec-01	5,141,710	418,230	547,710	242,660	874,670	7,224,980	71.17	5.79	7.58	3.36	12.11
Jan-02	5,298,960	415,660	579,550	240,040	880,870	7,415,080	71.46	5.61	7.82	3.24	11.88
Feb-02	5,414,010	411,300	596,750	243,660	895,200	7,560,920	71.61	5.44	7.89	3.22	11.84
Mar-02	5,426,010	399,440	613,850	238,490	890,160	7,567,950	71.70	5.28	8.11	3.15	11.76
Apr-02	5,553,940	407,160	631,060	242,180	890,790	7,725,130	71.89	5.27	8.17	3.13	11.54
May-02	5,541,370	403,330	640,650	247,450	894,100	7,726,900	71.72	5.22	8.29	3.20	11.57
Jun-02	5,622,420	397,590	666,490	251,880	890,980	7,829,360	71.81	5.08	8.51	3.22	11.38
Jul-02	5,867,902	396,432	667,181	260,652	876,039	8,068,205	72.73	4.91	8.27	3.23	10.86
Aug-02	6,014,100	398,720	664,240	265,800	864,930	8,207,790	73.27	4.86	8.09	3.24	10.54
Sep-02	6,022,010	400,030	670,740	271,010	862,640	8,226,430	73.20	4.86	8.15	3.29	10.50
Oct-02	6,178,400	401,270	685,890	277,970	862,760	8,406,290	73.50	4.77	8.16	3.31	10.26
Nov-02	6,363,920	399,020	695,000	283,770	652,800	8,394,510	75.81	4.75	8.28	3.38	7.78
Dec-02	6,551,476	394,310	703,679	308,519	650,582	8,608,567	76.10	4.58	8.17	3.58	7.57
Jan-03	6,627,659	395,881	709,317	349,341	652,099	8,734,297	75.88	4.53	8.12	4.00	7.47
Feb-03	6,590,778	384,043	711,151	361,557	632,263	8,679,792	75.93	4.42	8.19	4.17	7.29
Mar-03	6,580,017	383,828	720,940	349,188	610,839	8,644,812	76.12	4.44	8.34	4.04	7.06
Apr-03	6,849,121	396,611	722,953	328,804	621,630	8,919,119	76.79	4.45	8.11	3.69	6.96
May-03	7,104,199	420,145	702,136	321,470	621,100	9,169,050	77.48	4.58	7.66	3.51	6.77
Jun-03	7,435,606	421,653	718,456	328,090	635,140	9,538,945	77.95	4.42	7.53	3.44	6.66
Jul-03	7,838,750	424,775	719,503	325,150	638,590	9,946,768	78.81	4.27	7.23	3.27	6.42
Aug-03	7,988,496	449,448	746,743	365,203	651,400	10,201,290	78.31	4.41	7.32	3.58	6.39
Sep-03	8,070,012	444,392	763,531	402,549	619,900	10,300,384	78.35	4.31	7.41	3.91	6.02
Oct-03	9,562,953	445,440	770,372	407,028	610,920	11,796,713	81.06	3.78	6.53	3.45	5.18
Nov-03	9,542,587	444,861	771,543	365,070	602,230	11,726,291	81.38	3.79	6.58	3.11	5.14
Dec-03	9,599,031	464,356	772,923	326,392	626,560	11,789,262	81.42	3.94	6.56	2.77	5.31
Jan-04	9,673,514	461,211	783,046	322,324	680,600	11,920,695	81.15	3.87	6.57	2.70	5.71
Feb-04	9,681,552	492,235	790,358	322,291	715,071	12,001,507	80.67	4.10	6.59	2.69	5.96
Mar-04	9,593,017	568,319	793,403	326,920	876,979	12,158,638	78.90	4.67	6.53	2.69	7.21

Source: NSE

Annexure 6-5: FIMMDA NSE MIBID/MIBOR Rates

Month/Date	Overnight at 9.40 a.m.*		14 Day at 11.30 a.m.**		1 Month rate at 11.30 a.m.***		3 Month rate at 11.30 a.m.***	
	MIBID	MIBOR	MIBID	MIBOR	MIBID	MIBOR	MIBID	MIBOR
29-Jun-98	6.81	7.12	–	–	–	–	–	–
31-Jul-98	3.25	4.18	–	–	–	–	–	–
31-Aug-98	8.59	8.88	–	–	–	–	–	–
30-Sep-98	8.18	8.38	–	–	–	–	–	–
30-Oct-98	8.63	8.81	–	–	–	–	–	–
30-Nov-98	8.00	8.06	8.44	9.06	–	–	–	–
31-Dec-98	–	–	8.87	9.45	9.45	10.24	10.43	11.28
30-Jan-99	8.33	8.51	8.80	9.34	9.32	10.04	10.40	11.08
27-Feb-99	9.12	9.27	9.23	9.82	9.87	10.46	10.94	11.45
31-Mar-99	10.87	12.97	9.09	10.06	9.44	10.35	10.30	11.20
29-Apr-99	8.25	8.45	8.25	9.01	8.93	9.72	9.83	10.63
31-May-99	8.04	8.19	8.44	8.93	9.01	9.78	9.80	10.72
30-Jun-99	–	–	8.48	9.11	9.11	9.84	9.89	10.68
31-Jul-99	8.18	8.31	8.36	8.86	8.79	9.37	9.36	10.09
31-Aug-99	9.93	10.09	9.24	9.83	9.46	10.11	9.86	10.57
30-Sep-99	–	–	9.11	9.64	9.57	10.20	10.06	10.70
30-Oct-99	8.10	8.26	8.82	9.62	9.45	10.17	10.31	11.08
30-Nov-99	7.95	8.04	8.40	9.02	9.08	9.75	10.05	10.70
31-Dec-99	7.07	7.57	8.61	9.27	9.12	9.89	9.76	10.53
31-Jan-00	8.09	8.19	8.33	8.85	8.78	9.32	9.60	10.31
29-Feb-00	8.99	9.10	8.76	9.66	8.98	9.80	9.38	10.24
31-Mar-00	14.10	16.52	9.98	10.93	9.90	10.82	9.96	10.96
29-Apr-00	6.96	7.06	7.35	8.11	8.03	8.68	8.78	9.47
31-May-00	6.92	7.02	7.76	8.66	8.25	9.12	8.92	9.64
30-Jun-00	–	–	9.80	11.25	9.71	10.92	9.78	11.13
31-Jul-00	8.20	8.33	9.14	10.11	9.62	10.49	10.28	11.11
31-Aug-00	13.94	14.31	13.02	14.33	12.54	13.61	11.58	12.67
30-Sep-00	10.10	10.28	10.29	11.23	10.55	11.49	10.75	11.76
31-Oct-00	8.10	8.26	8.77	9.48	9.34	10.16	9.89	10.73
30-Nov-00	7.98	8.06	8.68	9.33	9.12	9.82	9.73	10.54
29-Dec-00	8.24	8.46	9.21	9.96	9.49	10.20	9.85	10.64
31-Jan-01	9.66	9.85	9.41	10.05	9.63	10.28	10.00	10.57
28-Feb-01	7.71	7.84	8.11	8.80	8.67	9.38	9.40	10.10
31-Mar-01	10.22	12.18	9.03	9.89	9.08	9.86	9.26	10.25
30-Apr-01	7.25	7.39	7.55	8.33	8.15	8.83	8.83	9.54
31-May-01	6.79	6.95	7.40	8.04	7.89	8.57	8.41	9.08
29-Jun-01	7.20	7.34	7.25	7.85	7.69	8.41	8.16	8.87

(Contd.)

Annexure 6-5: FIMMDA NSE MIBID/MIBOR Rates – Contd.

Month/Date	Overnight at 9.40 a.m.*		14 Day at 11.30 a.m.**		1 Month rate at 11.30 a.m.***		3 Month rate at 11.30 a.m.***	
	MIBID	MIBOR	MIBID	MIBOR	MIBID	MIBOR	MIBID	MIBOR
31-Jul-01	6.91	7.04	7.29	7.88	7.58	8.17	7.99	8.66
31-Aug-01	6.92	7.03	7.01	7.40	7.34	7.82	7.82	8.32
28-Sep-01	7.77	8.21	7.52	8.14	8.07	8.70	8.33	8.98
31-Oct-01	8.47	8.77	7.15	7.72	7.39	8.03	7.61	8.37
29-Nov-01	6.42	6.59	6.74	7.23	7.26	7.80	7.77	8.32
31-Dec-01	7.80	8.11	7.42	8.04	7.63	8.26	7.88	8.57
31-Jan-02	6.51	6.64	6.89	7.40	7.15	7.73	7.73	8.41
28-Feb-02	6.94	7.16	6.84	7.33	7.23	7.78	7.79	8.37
30-Mar-02	7.44	11.09	7.41	8.06	7.39	8.05	7.63	8.29
30-Apr-02	6.45	6.61	6.58	7.13	7.01	7.63	7.53	8.19
31-May-02	6.01	6.16	6.64	7.29	7.17	7.79	7.48	8.24
28-Jun-02	4.99	5.35	6.04	6.56	6.35	6.98	6.80	7.50
31-Jul-02	5.65	5.75	5.80	6.16	6.01	6.42	6.35	6.84
31-Aug-02	5.67	5.75	5.73	6.02	5.98	6.34	6.37	6.81
28-Sep-02	5.70	5.77	5.73	6.07	5.91	6.32	6.28	6.81
31-Oct-02	5.45	5.53	5.50	5.71	5.65	5.87	5.85	6.23
30-Nov-02	5.21	5.39	5.45	5.65	5.59	5.82	5.77	6.10
31-Dec-02	5.59	5.71	5.50	5.69	5.60	5.90	5.80	6.21
31-Jan-03	6.02	6.20	5.60	5.97	5.67	6.04	5.82	6.30
28-Feb-03	6.29	6.52	5.62	5.92	5.66	6.13	5.73	6.27
31-Mar-03	6.69	7.13	5.66	6.30	5.83	6.37	5.73	6.36
30-Apr-03	4.61	4.88	5.00	5.32	5.18	5.51	5.33	5.76
31-May-03	4.78	4.96	4.93	5.26	5.03	5.36	5.19	5.60
30-Jun-03	4.76	4.99	4.91	5.14	4.96	5.30	5.14	5.52
31-Jul-03	4.83	5.00	4.97	5.13	5.01	5.23	5.06	5.39
31-Aug-03	4.37	4.50	4.50	4.66	4.53	4.73	4.69	4.94
30-Sep-03	4.45	4.59	4.41	4.63	4.49	4.73	4.64	4.94
31-Oct-03	4.42	4.53	4.69	4.96	4.73	5.02	4.82	5.21
30-Nov-03	4.25	4.48	4.47	4.62	4.54	4.70	4.66	4.93
31-Dec-03	4.31	4.50	4.45	4.62	4.50	4.72	4.66	4.91
31-Jan-04	4.27	4.49	4.47	4.67	4.57	4.77	4.70	5.00
29-Feb-04	4.29	4.47	4.45	4.63	4.56	4.72	4.72	5.00
31-Mar-04	4.30	4.51	4.44	4.68	4.57	4.82	4.73	5.05

Source: NSE

Note:

* Overnight : Disseminated since June 15, 1998.
** 14 Day : Disseminated since November 10, 1998.
*** 1 month : Disseminated since December 1, 1998.
*** 3 month : Disseminated Since December 1, 1998.

Annexure 6-6: 1-day VaR (99%) for GoI Securities Traded on NSE-WDM as on March 31, 2004

Security Type	Security Name	Issue Name	Normal	Weighted Normal	Historical Simulation	Weighted Historical Simulation	EVT	Clean Price (off NSE-ZCYC)
GS	CG2007	11.90%	0.746	0.911	0.926	1.173	0.726	120.462
GS	CG2007	13.05%	0.733	0.928	0.923	1.201	0.73	123.121
GS	CG2008	11.40%	0.86	0.658	0.934	0.894	0.712	125.378
GS	CG2008	12.25%	0.854	0.657	0.936	0.889	0.701	128.893
GS	CG2009	11.99%	0.92	0.55	0.942	0.381	0.71	130.861
GS	CG2009	6.65%	0.999	0.516	1.036	0.36	0.745	107.346
GS	CG2009	6.96%	0.991	0.52	1.028	0.72	0.74	108.694
GS	CG2010	11.30%	1.091	0.381	1.053	0.324	0.749	133.316
GS	CG2010	12.25%	1.065	0.392	1.028	0.313	0.748	138.084
GS	CG2010	12.29%	1.013	0.436	0.997	0.62	0.727	136.269
GS	CG2010	6%	1.137	0.402	1.117	0.336	0.79	104.729
GS	CG2010	6.20%	1.14	0.398	1.122	0.338	0.797	105.747
GS	CG2010	6.40%	1.159	0.384	1.131	0.304	0.806	106.838
GS	CG2010	7.55%	1.147	0.379	1.11	0.31	0.788	112.904
GS	CG2011	10.95%	1.206	0.349	1.14	0.269	0.825	134.402
GS	CG2011	12.32%	1.134	0.357	1.076	0.277	0.76	141.092
GS	CG2011	9.39%	1.259	0.353	1.187	0.324	0.86	125.309
GS	CG2011 A	11.50%	1.253	0.355	1.166	0.287	0.86	139.455
GS	CG2012	11.03%	1.346	0.388	1.22	0.318	0.893	138.557
GS	CG2012	6.85%	1.463	0.427	1.24	0.316	1.001	110.415
GS	CG2012	7.40%	1.449	0.422	1.234	0.33	0.982	114.059
GS	CG2013	7.27%	1.645	0.542	1.43	0.375	1.091	113.999
GS	CG2013	9.81%	1.493	0.464	1.275	0.357	0.983	132.258
GS	CG2014	11.83%	1.581	0.524	1.419	0.399	1.016	151.327
GS	CG2014	6.72%	1.745	0.597	1.536	0.635	1.153	109.997
GS	CG2014	7.37%	1.722	0.587	1.53	0.4	1.126	115.058
GS	CG2015	10.47%	1.659	0.562	1.549	0.399	1.042	140.86
GS	CG2015	11.43%	1.671	0.569	1.574	0.401	1.062	149.964
GS	CG2015	7.38%	1.892	0.67	1.805	0.479	1.21	115.684
GS	CG2015	9.85%	1.758	0.609	1.68	0.437	1.114	136.895
GS	CG2016	10.71%	1.768	0.613	1.728	0.975	1.125	145.273
GS	CG2016	12.30%	1.724	0.593	1.667	1.144	1.094	159.847
GS	CG2017	7.46%	2.096	0.758	2.058	0.556	1.369	116.928
GS	CG2017	7.49%	2.058	0.738	2.011	0.543	1.337	117.128
GS	CG2017	8.07%	1.99	0.709	1.891	0.52	1.271	122.384
GS	CG2018	10.45%	1.961	0.711	1.916	0.558	1.247	146.282

(Contd.)

Annexure 6-6: 1-day VaR (99%) for GoI Securities Traded on NSE-WDM as on March 31, 2004 – Contd.

Security Type	Security Name	Issue Name	Normal	Weighted Normal	Historical Simulation	Weighted Historical Simulation	EVT	Clean Price (off NSE-ZCYC)
GS	CG2018	5.69%	2.383	0.911	2.42	1.478	1.552	99.521
GS	CG2018	6.25%	2.246	0.826	2.233	1.479	1.469	105.34
GS	CG2019	10.03%	2.083	0.82	2.108	1.306	1.385	143.713
GS	CG2019	5.64%	2.417	0.943	2.451	0.726	1.6	98.85
GS	CG2019	6.05%	2.404	0.971	2.444	0.722	1.605	102.777
GS	CG2020	6.35%	2.415	1.031	2.472	1.355	1.697	105.667
GS	CG2021	10.25%	2.198	1.048	2.295	1.006	1.581	148.009
GS	CG2022	8.35%	2.386	1.34	2.427	1.788	1.82	127.489
GS	CG2023	6.17%	2.683	1.851	2.835	2.616	2.154	102.451
GS	CG2023	6.30%	2.653	1.781	2.782	2.049	2.137	104.029
GS	CG2028	6.01%	2.982	3.454	3.556	2.919	2.665	98.827
GS	CG2028	6.13%	2.976	3.481	3.552	2.936	2.663	100.305
GS	CG2032	7.95%	2.978	4.174	3.585	4.268	2.806	124.071
TB	364D	20404	0.006	0.008	0.008	0.013	0.007	99.974
TB	364D	40205	0.494	0.836	0.669	0.59	0.582	96.081
TB	364D	40305	0.517	0.877	0.729	0.63	0.607	95.736
TB	364D	70105	0.469	0.79	0.634	0.558	0.554	96.428
TB	364D	101204	0.442	0.738	0.607	1.051	0.514	96.776
TB	364D	121104	0.412	0.682	0.568	0.973	0.472	97.125
TB	364D	150504	0.118	0.173	0.162	0.267	0.134	99.418
TB	364D	170904	0.342	0.553	0.478	0.769	0.392	97.827
TB	364D	180305	0.527	0.896	0.747	0.633	0.614	95.563
TB	364D	280504	0.147	0.219	0.198	0.146	0.167	99.251
TB	364D	300404	0.082	0.117	0.11	0.079	0.092	99.612

Source: NSE

Derivatives Market

Introduction

By their very nature Financial markets are volatile. Through the use of derivative products, it is possible to manage volatility and risks of faced by the financial agents. Given the different risk bearing capacity of them, with some of the agents being risk-averse and some risk-lover, derivatives emerged essentially to satisfy both of them. Derivatives are financial contracts whose values are derived from the value of an underlying primary financial instrument, commodity or index, such as: interest rates, exchange rates, commodities, and equities. Derivatives include a wide assortment of financial contracts, including forwards, futures, swaps and options. As per the definition of the International Monetary Fund, derivatives are "*financial instruments that are linked to a specific financial instrument or indicator or commodity and through which specific financial risks can be traded in financial markets in their own right. The value of a financial derivative derives from the price of an underlying item, such as an asset or index. Unlike debt securities, no principal is advanced to be repaid and no investment income accrues.*" Derivatives allow financial institutions and other participants to identify, isolate and manage separately the market risks in financial instruments and commodities for the purpose of hedging, speculating, arbitraging price differences and adjusting portfolio risks.

The emergence of the market for derivative products, most notably forwards, futures and options, can be traced back to the 12th century. At that time these were used exhaustively in agricultural markets. The primary motivation for pre-arranging a buyer/seller for a stock of commodities in early forward contracts was to lessen the possibility that large swings would inhibit marketing the commodity after a harvest. Subsequently, in the past few decades (post 1970s) derivatives have been used extensively in financial markets to respond to the increased volatility in exchange rates, interest rates. Through the use of derivative products, it has been possible to partially or fully transfer price risks by locking-in asset prices. As instruments of risk management, derivative products generally do not influence the fluctuations in the underlying asset prices. However, by locking-in asset prices, derivative products minimise the impact of fluctuations in asset prices on the profitability and cash flow situation of risk-averse investors.

In recent years, the market for financial derivatives, both OTC as well as exchange traded, has grown both in terms of variety of instruments available, their complexity and also turnover.

Need for a Derivatives Market

The derivatives market performs a number of economic functions.

1. The prices in an organised derivatives market reflect the perception of market participants about the future and lead the prices of underlying to the perceived future level. The prices of derivatives normally would converge with the prices of the underlying at the expiration of derivative contract. Thus derivatives help in discovery of future as well as current prices.

2. The derivatives market helps to transfer risks from those who have them but may not like them to those who have appetite for them i.e. transferring the risk from risk averse people to risk oriented people.

3. Derivatives due to their inherent nature are linked to the underlying cash markets. With the introduction of derivatives, the underlying market may witness higher trading volumes because of participation by more players who would not otherwise participate for lack of an arrangement to transfer risk.

4. Speculative trades may shift to a more controlled environment of derivatives market. In the absence of an organised derivatives market, speculators trade in the underlying cash markets. Margining, monitoring and surveillance of the activities of various participants become extremely difficult in such mixed markets.

5. Derivatives markets help increase savings and investment in the long run. Transfer of risk enables market participants to expand their volume of activity.

Products, Participants and Functions

Derivative contracts have several variants. Some of them have been described herewith:

Forward contract is a customised contract between two entities, where settlement takes place on a specific date in the future at today's pre-agreed price.

Futures contract is an agreement between two parties to buy or sell an asset at a certain time in the future at a certain price. Futures contracts are special types of forward contracts in the sense that the former are standardized exchange-traded contracts.

Option contract are of two types – calls and puts. Call option give the buyer the right but not the obligation to buy a given quantity of the underlying asset, at a given price on or before a given future date. Whereas put option give the buyer the right, but not the obligation to sell a given quantity of the underlying asset at a given price on or before a given date.

Swaps are private agreements between two parties to exchange cash flows in the future according to a pre-arranged formula. The two commonly used swaps are:

- Interest rate swaps: These entail swapping only the interest related cash flows between the parties in the same currency.
- Currency swaps: These entail swapping both principal and interest between the parties, with the cash flows in one direction being in a different currency than those in the opposite direction.

Warrants: All options having maturity above one year are called warrants. These are generally traded over-the-counter.

LEAP the acronym for Long-term Equity Anticipation Securities are options having a maturity of up to three years.

Swaptions are options to buy/sell a swap that will become operative at the expiry of the option. Thus a swaption is an option on a forward swap. Rather than having calls and puts, the swaptions market has receiver swaptions and payer swaptions. A receiver swaption is an option to receive fixed and pay floating, whereas a payer swaption is an option to pay fixed and receive floating.

There are three broad categories of participants who trade in the derivatives market. They are as discussed below:

Hedgers use futures or options markets to reduce or eliminate the risk associated with price of an asset.

Speculators use futures and options contracts to get extra leverage in betting on future movements in the price of an asset. They can increase both the potential gains and potential losses by usage of derivatives in a speculative venture.

Arbitrageurs are in business to take advantage of a discrepancy between prices in two different markets. If, for example, they see the futures price of an asset getting out of line with the cash price, they will take offsetting positions in the two markets to lock in a profit.

Exchange-traded vs. OTC Markets

The OTC market for derivative contracts has existed in some form or other since many years. It is a negotiated and client specific market. The features of this market are as below:

i. The management of counter-party (credit) risk is decentralised and located within individual institutions;

ii. There are no formal centralised limits on individual positions, leverage, or margining;

iii. There are no formal rules for risk and burden-sharing;

iv. There are no formal rules or mechanisms for ensuring market stability and integrity, and for safeguarding the collective interests of market participants; and

v. OTC contracts are generally not regulated by a regulatory authority although they are affected indirectly by national legal systems, banking supervision and market surveillance.

Some of the features of OTC derivatives markets can give rise to financial instability affecting not only institutions but also the overall domestic financial markets. Thus it poses to be a threat to the stability of the entire international financial system. Few of them are: (i) the dynamic nature of gross credit exposures; (ii) information asymmetries; (iii) the effects of OTC derivative activities on available aggregate credit; (iv) the high concentration of OTC derivative activities in major institutions; and (v) the central role of OTC derivatives markets in the global financial system. Sharp movements in underlying asset prices and counter-party defaults give rise to instability, which apart from significantly altering the perceptions of current, also alters potential future credit exposures. If the asset prices change rapidly, the size and configuration of counter-party exposures may become unsustainably large and provoke a rapid unwinding of positions.

There has been some progress in addressing these risks and perceptions. However, the progress has been limited in implementing reforms in risk management, including counter-party, liquidity and operational risks as they are outside the regulatory purview. In view of the inherent risks associated with OTC derivatives, Indian law considers them illegal except for specific contracts under FRAs/IRS on domestic currency as allowed by RBI.

Development of Derivatives Market in India

The prohibition on options in securities was withdrawn with the promulgation of the Securities Law (Amendment) Ordinance, 1995. This paved the way for introduction of derivatives in the

Indian financial markets. On November 18, 1996, SEBI set up a 24-member Committee under the Chairmanship of Dr. L. C. Gupta to develop appropriate regulatory framework for derivatives trading in India. The Committee was of the view that derivatives should be declared as 'securities' so that regulatory framework applicable to trading of 'securities' could be extended to govern derivatives. Under the Chairmanship of Prof. J. R. Varma, SEBI set up another group in June 1998 to recommend measures for risk containment in derivatives market. The Report worked out the operational details of margining system, methodology for charging initial margins, broker net worth, deposit requirement and real-time monitoring requirements.

In December 1999, the Securities Contract Regulation Act [SC(R)A] was amended to include derivatives within the ambit of 'securities'. Thereafter a regulatory framework was developed for governing the trading in derivatives. Derivatives were formally defined to include: (a) *a security derived from a debt instrument, share, loan whether secured or unsecured, risk instrument or contract for differences or any other form of security, and (b) a contract which derives its value from the prices, or index of prices, or underlying securities.* The Act also made it clear that derivatives are legal and valid, but only if such contracts are traded on a recognised stock exchange. The Government also rescinded in March 2000 the three-decade old notification, which prohibited forward trading in securities.

Derivatives trading commenced in India after SEBI granted the final approval to commence trading and settlement in approved derivative contracts on the NSE and BSE. NSE started operations in the derivatives segment on June 12, 2000. Initially, NSE introduced futures contracts on S&P CNX Nifty index. However, the basket of instruments has widened considerably. Now trading in futures and options is based on not only on S&P CNX Nifty index, but also on CNX IT Index as well as options and futures on single stocks (currently on 51 stocks) and also futures on interest rates.

Global Derivatives Markets[1]

As per the *FIA Annual Volume Survey* the global overall futures and options trading volume recorded a rise of 30.5% in 2003. The futures and options volume registered a growth of 27.7% and 32%, respectively, in the year 2003.

Year Wise Trend of Derivatives Trading (in terms of contracts)

(in millions)

Year	US Exchanges	Non-US Exchanges	Global
1992	550.39	387.83	938.22
1993	523.36	538.36	1,061.72
1994	807.87	779.83	1,587.70
1995	776.64	905.99	1,682.63
1996	793.63	975.34	1,768.97
1997	905.16	1,025.07	1,930.23
1998	1,033.20	1,142.65	2,175.81
1999	1,100.86	1,301.98	2,405.84
2000	1,313.65	1,675.80	2,989.45
2001	1,578.62	2,768.70	4,347.32
2002	1,844.90	4,372.38	6,217.28
2003	2,172.52	5,940.22	8,112.74

[1] Data source is Futures Industry Magazine, March/April 2004.

The trading in equity derivatives has grown by 42% in 2003 as compared to the previous year, followed by Interest rates registering growth of 27%.

Volume by Category

(in millions)

GLOBAL	2003	2002	% Change
Equity Indices	3,960.87	2,791.18	41.91
Interest Rate	1,881.27	1,478.44	27.25
Individual Equities	1,558.52	1,354.70	15.05
Energy Products	261.15	199.39	30.97
Ag Commodities	217.56	209.37	3.91
Non-Precious Metals	90.39	71.57	26.30
Foreign Currency/Index	77.85	60.56	28.55
Precious Metals	64.46	51.26	25.75
Other	0.66	0.80	-17.50
Total Volume	8,112.73	6,217.28	30.49

The details for the top 20 contracts for the year 2003 are presented in Table 7-1. Kospi 200 options of KSE led the table with more than 2.8 billion contracts in 2003 followed by Euro-Bond Futures of Eurex.

Table 7-1: Top 20 Contracts for the year 2003

(in millions – net of individual equities)

Sl. No.	Contract	Exchange	2003	2002	Volume Change	% Change
1	Kospi 200 Options	KSE	2,837.72	1,889.82	947.90	50.16
2	Euro-Bond Futures	Eurex	244.41	191.26	53.15	27.79
3	3 Month Eurodollar Futures	CME	208.77	202.08	6.69	3.31
4	TIIE 28 Futures	MexDer	162.08	80.60	81.48	101.09
5	E-Mini S&P 500 Index Futures	CME	161.18	115.74	45.44	39.26
6	Euro-Bobl Futures	Eurex	150.09	114.68	35.41	30.88
7	10 Year T-Note Futures	CBOT	146.75	95.79	50.96	53.20
8	3 Month Euribor Futures	Euronext	137.69	105.76	31.93	30.19
9	Euro-Schatz Futures	Eurex	117.37	108.76	8.61	7.92
10	DJ Euro Stoxx 50 Futures	Eurex	116.04	86.35	29.69	34.38
11	3-Month Eurodollar Options	CME	100.82	105.58	-4.76	-4.51
12	5-Year T-Note Futures	CBOT	73.75	50.51	23.24	46.01
13	CAC 40 Index Options	Euronext	73.67	84.34	-10.67	-12.65
14	E-Mini Nasdaq 100 Futures	CME	67.89	54.49	13.40	24.59
15	30-Year T-Bond Futures	CBOT	63.52	56.08	7.44	13.27
16	Kospi 200 Futures	KSE	62.20	42.87	19.33	45.09
17	DJ Euro Stoxx 50 Options	Eurex	61.79	39.48	22.31	56.51
18	No. I Soybean Futures	DCE	60.00	12.69	47.31	372.81
19	3-Month Euribor Options	Euronext	57.73	33.48	24.25	72.43
20	Interest Rate Futures	BM&F	57.64	48.57	9.07	18.67

Source: FI Futures Industry, March/April 2004. The monthly magazine of the FIA.

NSE, too, has been making huge strides by moving upwards in the global ranking. NSEIL ranked second (2nd) next only to RTS Stock Exchange in the single stock future category (Table 7-2). NSE has been ranked 20th in the global futures and options volume in 2003 against its rank of 33rd in the previous year (Table 7-3). In the top 40 Futures Exchanges of the World, NSE stands at the 14th position (Table 7-4).

Table 7-2: Futures on Individual Equities (Stock Futures)

(Number of Contracts)

Exchange	2002	2003
RTS Stock Exchange	21,320,434	31,782,174
National Stock Exchange of India	8,587,332	25,572,505
Spanish Exchange (BME)	12,645,186	12,492,568
Euronext	7,570,175	7,004,235
JSE South Africa	2,224,042	4,585,919
Helsinki	2,157,347	1,675,025
Stockholm	1,290,181	1,424,890
Budapest	452,638	618,261
Athens Derivatives Exchange	202,730	477,464
Borsa Italiana	59,853	468,083
Australian	412,535	267,630
Mumbai	28,339	103,936
Warsaw	92,097	93,055
SFE Corporation	29,286	47,822
Hongkong	21,056	18,654
Singapore	13,690	549
Copenhagen	1,170	310

Source: WFE 2003 Annual Report and Statistics.

Table 7-3: Global Futures and Options Volume

Rank		Exchange	Volume		% Change
2003	2002		2002	2003	
1	1	Korea Stock Exchange	1,932,749,868	2,899,937,895	50.04
2	2	Eurex	801,200,873	1,014,932,312	26.68
3	3	Euronext	696,323,560	694,970,981	-0.19
4	4	Chicago Mercantile Exchange	558,447,820	640,209,634	14.64
5	5	Chicago Board of Trade	343,882,529	454,190,749	32.08
6	6	Chicago Board Options Exchange	267,616,496	283,946,495	6.10
7	8	International Securities Exchange	152,399,279	244,968,190	60.74
8	7	American Stock Exchange	186,039,445	180,074,778	-3.21
9	11	Bovespa	90,884,897	177,223,140	95.00
10	14	Mexican Derivatives Exchange	84,274,979	173,820,944	106.25
11	9	New York Mercantile Exchange	133,744,435	137,225,439	2.60
12	10	BM&F	101,615,788	120,785,602	18.86
13	12	Philadelphia Stock Exchange	88,955,247	112,705,597	26.70
14	15	Tokyo Commodity Exchange	75,413,190	87,252,219	15.70

Table 7-3: Global Futures and Options Volume (Contd.)

Rank		Exchange	Volume		% Change
2003	2002		2002	2003	
15	13	Pacific Exchange	85,426,649	86,152,637	0.85
16	18	Dalian Commodity Exchange	48,407,404	74,973,493	54.88
17	17	London Metal Exchange	58,634,004	72,308,327	23.32
18	16	OM	60,920,817	72,137,347	18.41
19	21	Sydney Futures Exchange	36,243,524	44,755,340	23.49
20	33	National Stock Exchange of India	13,287,113	43,081,968	224.24
21	34	Shanghai Futures Exchange	12,173,083	40,079,750	229.25
22	19	Tel-Aviv Stock Exchange	41,419,705	38,098,479	-8.02
23	22	Singapore Exchange	32,887,395	35,648,224	8.39
24	24	International Petroleum Exchange	30,441,474	33,341,244	9.53
25	23	JSE Securities Exchange South Africa	30,966,583	33,001,743	6.57
26	36	Taiwan Futures Exchange	7,944,254	31,874,934	301.23
27	25	Central Japan Commodity Exchange	30,011,863	31,538,530	5.09
28	20	MEFF	41,382,257	31,471,330	-23.95
29	27	Osaka Securities Exchange	20,584,972	28,235,033	37.16
30	26	New York Board of Trade	20,928,479	24,832,158	18.65
31	28	Tokyo Grain Exchange	18,728,266	21,120,468	12.77
32	29	Italian Derivatives Market	17,246,629	17,731,994	2.81
33	32	Bourse de Montreal	14,491,971	17,682,999	22.02
34	30	Tokyo Stock Exchange	14,759,690	17,035,830	15.42
35	58	Australian Stock Exchange	N/A	16,955,039	N/A
36	35	Hong Kong Exchanges & Clearing	11,029,404	14,546,213	31.89
37	31	Korea Futures Exchange	14,623,295	12,956,139	-11.40
38	37	Osaka Mercantile Exchange	5,207,652	6,162,589	18.34
39	51	Budapest Stock Exchange	1,072,966	4,939,893	360.40
40	39	Tokyo International Finance Futures Exchange	4,470,763	4,771,917	6.74
41	41	Oslo Stock Exchange	3,175,729	3,823,814	20.41
42	46	Budapest Commodity Exchange	1,624,401	3,673,978	126.17
43	38	Kansai Commodities Exchange	4,491,954	3,444,296	-23.32
44	40	Kansas City Board of Trade	3,326,836	3,099,805	-6.82
45	55	Rosario Futures Exchange	408,470	2,842,496	595.89
46	42	Fukuoka Futures Exchange	3,170,986	2,739,383	-13.61
47	49	Malaysia Derivatives Exchange	1,276,787	2,009,460	57.38
48	43	Helsinki Exchanges	2,644,358	1,968,343	-25.56
49	47	Yokohama Commodity Exchange	1,507,210	1,852,158	22.89
50	44	Winnipeg Commodity Exchange	2,193,283	1,842,776	-15.98
51	56	OneChicago	184,081	1,619,194	779.61
52	48	Wiener Borse	1,327,084	1,392,529	4.93
53	45	Broker Tec Futures Exchange	2,109,670	1,356,825	-35.69
54	50	Minneapolis Grain Exchange	1,262,769	1,133,731	-10.22
55	57	NQLX	90,091	858,900	853.37
56	53	Copenhagen Stock Exchange	536,796	762,050	41.96
57	52	New Zealand Futures Exchange	627,018	493,250	-21.33
58	54	MidAmerica Commodity Exchange	483,253	142,298	-70.55

Source: FI Futures Industry, March/April 2004. The monthly magazine of the FIA.

Table 7-4: Top 40 Futures Exchanges *(Volume figures do not include options on futures)*

Rank 2003	Rank 2002	Exchange	Volume 2002	Volume 2003	% Change
1	1	Eurex	536,013,920	668,650,028	24.74
2	2	Chicago Mercantile Exchange	444,537,987	530,989,007	19.45
3	3	Chicago Board of Trade	276,316,047	373,669,290	35.23
4	4	Euronext	221,275,462	267,822,143	21.04
5	7	Mexican Derivatives Exchange	84,274,979	173,820,944	106.25
6	6	BM&F	95,912,579	113,895,061	18.75
7	5	New York Mercantile Exchange	107,359,719	111,789,658	4.13
8	8	Tokyo Commodity Exchange	75,413,190	87,252,219	15.70
9	10	Dalian Commodity Exchange	48,407,404	74,973,493	54.88
10	9	London Metal Exchange	56,303,779	68,570,154	21.79
11	11	Korea Stock Exchange	42,868,164	62,204,783	45.11
12	12	Sydney Futures Exchange	33,987,967	41,831,862	23.08
13	22	Shanghai Futures Exchange	12,173,083	40,079,750	229.25
14	**25**	**National Stock Exchange of India**	**10,199,111**	**36,141,561**	**254.36**
15	13	Singapore Exchange	32,623,190	35,356,776	8.38
16	14	International Petroleum Exchange	30,233,664	33,258,385	10.00
17	15	Central Japan Commodity Exchange	30,011,863	31,538,530	5.09
18	16	OM	20,208,149	22,667,198	12.17
19	17	Tokyo Grain Exchange	18,670,931	21,084,727	12.93
20	19	New York Board of Trade	16,272,144	18,822,048	15.67
21	18	MEFF	17,314,065	17,110,745	-1.17
22	21	Tokyo Stock Exchange	13,630,046	15,965,175	17.13
23	23	JSE Securities Exchange South Africa	11,233,002	14,947,523	33.07
24	24	Osaka Securities Exchange	11,134,754	13,231,287	18.83
25	20	Korea Futures Exchange	14,596,861	12,954,907	-11.25
26	26	Bourse de Montréal	8,058,498	10,676,279	32.48
27	28	Taiwan Futures Exchange	6,377,808	9,953,118	56.06
28	29	Hong Kong Exchanges & Clearing	6,228,037	8,174,652	31.26
29	27	Italian Derivatives Market	7,071,028	7,302,565	3.27
30	30	Osaka Mercantile Exchange	5,207,652	6,162,589	18.34
31	45	Budapest Stock Exchange	1,072,566	4,939,893	360.57
32	32	Tokyo International Financial Futures Exchange	4,470,763	4,771,917	6.74
33	31	Kansai Commodities Exchange	4,488,914	3,441,365	-23.34
34	42	Budapest Commodity Exchange	1,338,846	3,237,088	141.78
35	35	Fukuoka Futures Exchange	3,170,986	2,739,383	-13.61
36	50	Rosario Futures Exchange	399,432	2,708,313	578.04
37	36	Kansas City Board of Trade	2,755,949	2,634,424	-4.41
38	43	Malaysia Derivatives Exchange	1,276,787	2,009,460	57.38
39	41	Yokohama Commodity Exchange	1,507,210	1,852,158	22.89
40	39	Winnipeg Commodity Exchange	2,155,796	1,811,616	-15.97

Source: FI Futures Industry, March/April 2004. The monthly magazine of the FIA.

Policy Developments

This section discusses the policy developments initiated by the regulators and the Government during April 2003 to June 2004.

I. Introduction of Exchange Traded Interest Rate Derivatives

A scheme for introduction of futures contracts on dated Government Security and Treasury Bills and its risk containment measures have been framed by the SEBI in consultation with the Government and the RBI. The product specifications and the risk containment measures are as follows:

Product Specifications

i. The Exchange should initially introduce notional long bond (10-years maturity) and T-bills futures. The notional underlying should be a coupon bond or/and a zero coupon bond. The exchange should specify the coupon rate and disclose the same to the market prior to introduction of the contracts. The minimum contract size of any interest rate derivative contract should not be less than Rs. 2,00,000 at the time of the launch.

ii. The bonds should be quoted on the basis of prices, yields or 100-yield, initially up to 2 decimal points and after a period of two months since the introduction of the contract up to 4 decimal points. Both the futures have to be initially settled in cash.

iii. The Exchanges are also permitted to introduce futures contracts on the notional bonds up to a maturity of one year. They are given freedom to determine the maturity structures of the contracts. There can either be quarterly contracts beyond the first three months, and whether the quarters should be fixed or rolling months of the year.

iv. The final settlement price of the futures should be determined using a **"zero coupon yield curve (ZCYC)".** The ZCYC should be computed from the prices of government securities traded on the Exchange/s or reported on the NDS of RBI or both.

Risk Containment Measures

The parameters for risk containment model include the following:

i. Initial Margin: The Initial Margin requirements should be based on the worst scenario loss on a portfolio of a client to cover 99% VaR over one day horizon across different possible price changes, based on the volatility estimates, and volatility changes. The (σ_t) (sigma) should be estimated at the end of day using the previous volatility estimate i.e. as at the end of t-1 day (σ_{t-1}), and the return (r_t) observed in the futures market during day t.

   The formula should be $(\sigma_t)^2 = \lambda\,(\sigma_{t-1})^2 + (1 - \lambda)(r_t)^2$ where (i) λ is a parameter which determines how rapidly volatility estimates changes. The value of λ is fixed at 0.94 and (ii) σ (sigma) means the standard deviation of daily returns in the interest rate futures contract. In case of long bond futures, the price scan range should be 3.5σ and in no case the initial margin should be less than 2% of the notional value of the contract. For T-Bill futures, the price scan range should be 3.5σ and in no case the initial margin should be less than 0.2% of the notional value of the contract.

ii. Calendar Spread Charge: The Calendar spread margin is charged in addition to the initial margin. For interest rate futures contracts a calendar spread margin should be at a flat rate of 0.125% per month of spread on the far month contract subject to minimum margin of 0.25% and a maximum margin of 0.75% on the far side of the spread with legs up to 1 year apart.

iii. Exposure Limits: The notional value of gross open positions at any point in futures contracts on the Notional 10 year bond and T-bill should not exceed 100 times and 1000 times the available liquid net worth of a member, respectively.

iv. Real Time Computation: Initially, the zero coupon yield curve should be computed at the end of the day. However, the Exchange/yield curve provider should endeavour to compute the ZCYC on a real time basis or at least several times during the course of the day.

v. Margin Collection and Enforcement: The mark to market settlement margin should be collected before start of the next day's trading. If mark to market margins is not collected before start of the next day's trading, the clearing corporation/house should collect correspondingly higher initial margin to cover the potential for losses over the time elapsed in the collection of margins. The higher initial margin should be calculated as specified in the Prof. J.R. Varma committee reports on risk containment measures for index futures. The mark to market margin is to be paid in cash.

vi. Position Limits: The positions limits for interest rate futures contracts should be specified at the client level and for the near month contracts. It should be Rs. 100 crore or 15% of open interest whichever is higher.

II. Investments by FIIs/NRIs in Exchange Traded Derivative Contracts

The Foreign Exchange Management (Transfer or Issue of security by a Person Resident outside India) Regulations 2000 have been amended to include that (i) a registered FII having a valid account under FERA 1973 or under FEMA 1999 may trade in all SEBI approved exchange traded derivative contracts (ii) a Non-Resident Indian (NRI) may also invest in exchange traded derivative contracts out of INR funds held in India on non-repatriable basis. These investments will however not be eligible for repatriation benefits.

In addition, the investments by FIIs/NRIs should be subject to the position limits as specified by SEBI.

The FII position limit, which came into effect from October 31, 2003, is as follows:

- For stocks, in which the market wide position limit is less than or equal to Rs. 250 crore, the FII position limit in such stock should be 20% of the market wide limit.
- The FII position limit in stock, in which the market wide position limit is greater than Rs. 250 crore, should be Rs. 50 crore.

The position limits for NRIs should be as follows:

- For index based contracts, a disclosure is required for any person or persons acting in concert who together owns 15% or more of the open interest of all derivative contracts on a particular underlying index.

- For stock option and single stock futures contracts, the gross open position across all derivative contracts on a particular underlying stock of a NRI should not exceed the higher of 1% of the free float market capitalization (in terms of number of shares) OR 5% of the open interest in the derivative contracts on a particular underlying stock (in terms of number of contracts).

This position limits would be applicable on the combined position in all derivative contracts on an underlying stock at an exchange. The Exchange should monitor the position limits for both of them. The NRI would be required to notify the Exchange the names of the Clearing Member/s who will clear his derivative trades. The Exchange would then assign a unique client code to the NRI.

III. Interest Rate Future Contracts

As per the recommendations of the SEBI Advisory Committee on Derivatives and Market Risk Management, SEBI has also decided to permit interest rate futures contract on a "10 year coupon bearing notional bond" which would be priced off a basket of bonds. The scheme for introduction of such futures contract and the risk containment measures are as follows: -

Product Specification

a. With the prior approval of SEBI, the interest rate derivatives (IRD) contract could be traded on the derivative exchange/segment and settled through the Clearing house/ corporation of the Exchange. The contracts should comply with the relevant requirements as specified by SEBI.

b. The minimum contract size of the IRD contract should not be less than Rs. 2,00,000 at the time of its introduction in the market.

c. The interest rate futures contract on a 10 year coupon bearing notional bond should be priced on the basis of the 'Yield To Maturity' (YTM) of a basket comprising bonds with maturity ranging from 9 to 11 years. The basket should comprise of at least three bonds and the YTM of the basket should be a simple average of each bond's YTM in the basket. The Exchanges have to prescribe the precise formula, including the day count and other conventions, for arriving at the YTM's of the bonds constituting the basket.

d. The interest rate futures contract should be with a maximum maturity of 12 months and be settled through cash. The Exchange should decide the nature of contracts; it can have quarterly contracts beyond the first three months, or the quarters could be fixed months of the year or rolling quarterly horizon from the contract introduction date.

e. The features of the notional bond including, the coupon rate should be disclosed to the market in advance and should form a part of the contract specification.

f. The composition of the basket of bonds should be disclosed to the market prior to the launch of the futures contract. The Exchange should specify the eligibility criteria for selecting the bonds constituting the basket. It should also review the eligibility criteria and the basket at periodic intervals. The eligibility criteria should be based on volume, turnover etc., and should be disclosed to the market.

g. The price of the futures contract should be quoted and traded as 100 *minus* the YTM of the basket.

h. For the purpose of computing the final settlement price, the Exchange should disclose, in advance, the methodology for arriving at the YTMs of the bonds, comprising the basket.

i. The final settlement price of the notional bond should be obtained by discounting the cash flows of the notional bond at the YTM of the basket. The precise formulas for arriving at the settlement price, including, the day count and other conventions, should be fully disclosed to the market.

j. The Exchange should specify the parameters to determine whether a bond constituting the basket is illiquid. For this purpose an illiquid bond should be one where, in the opinion of the Exchange, the volumes and/or turnover in a bond are not sufficient to reflect the fair price of the bond. In the event that bonds comprising the basket become illiquid during the life of the contract the following measures should be adopted:

 - In case a bond is illiquid for 7 consecutive days excluding the shut period, reconstitution of the basket should be attempted. In case reconstitution of the basket is not possible, the YTM of the basket should be determined from the YTMs of the remaining bonds for arriving at the final settlement price and the daily closing price.
 - Polled prices should be used for determining the final settlement price and the daily closing price, when at least 2 out of the 3 bonds comprising the basket become illiquid. Polling should be carried out by the Exchange in a transparent manner and the prices of bond constituting the basket should be regularly polled and published. The methodology of polling should also be disclosed to the market.

Risk Containment Measures

The portfolio based margining system presently applicable to the exchange traded equity and interest rate derivative contracts is to be extended to the interest rate futures contracts. The margins should be computed by taking an integrated view comprising positions of a client in all the derivative contracts.

IV. Issuance of Offshore Derivative Instruments by Registered FIIs

In February 2004, SEBI amended the SEBI (FII) Regulations, 1995 to include a new regulation which states that “a FII or sub-account may issue, deal in or hold, offshore derivative instruments such as Participatory Notes (P-Notes), Equity Linked Notes (ELN) or any other similar instruments against underlying securities, listed or proposed to be listed on any stock exchange in India, only in favour of those entities which are regulated by any relevant authority in the countries of their incorporation or establishment, subject to compliance of “Know your client” requirement, provided that if any such instrument has already been issued, prior to February 2004, to a person other than a regulated entity, contract for such transaction should expire on maturity of the instrument or within a period of five years from February 3, 2004 whichever is earlier”.

V. Minimum Contract Size for Exchange Traded Derivative Contracts

It was observed that with the increase/decrease in prices of underlying stock, the contract size/value of most derivative contracts far exceeded or fell below the stipulated value of

Rs. 2 lakh. To address these concerns, SEBI revoked the stipulation that the lot size/multiplier should be in the multiple of 100. Earlier, SEBI vide its circulars had stipulated that the minimum contract size of derivative contracts and its value should not be less than Rs. 2 lakh. The lot size should be in the multiples of 100 and the fractions, if any should be rounded off to the next higher multiple of 100. Therefore, SEBI decided that the lot size/multiplier should be reduced for contracts with value exceeding Rs. 2 lakh and should be increased for contracts with value less than Rs. 2 lakh. For instance, the derivative contracts, which have a contract size/ value of Rs. 4 lakh and above, the lot size/multiplier should be reduced to one-half of the existing lot size/multiplier and for derivative contracts that have a contract size/value of Rs. 8 lakh and above, the lot size/multiplier should be reduced to one-fourth of the existing lot size/multiplier.

Similarly, where the contract size of the derivative contracts is less than Rs. 2 lakh, for the sake of standardization, the existing lot size/multiplier should be increased so as to bring the contract size to Rs. 2 lakh. The increase should be carried out by increasing the lot size/multiplier in multiples of 2. For the purpose of revising the contract size, the contract size/value should be determined on the basis of the closing prices of the underlying on the day prior to the beginning of the notice period.

Market Design

Only the NSE and the BSE offer a platform for trading in derivatives contracts. Over the years, however, statistics show that the BSE's contribution to the total derivatives turnover in the market has been declining. Hence, the market design enumerated in this section is the derivative segment of NSE (called Futures and Options (F&O) segment).

Trading Mechanism

The derivatives trading system at NSE is called NEAT-F&O system, which provides a fully automated screen-based, anonymous order driven trading system for derivatives on a nationwide basis. It provides tremendous flexibility by allowing users to place orders with their own time and price related conditions. Nevertheless, trading in derivatives segment is essentially similar to that of CM segment.

There are four entities in the trading system:

1. *Trading members:* Trading members can trade either on their own account or on behalf of their clients including participants. They are registered as members with NSE and are assigned an exclusive Trading member ID.
2. *Clearing members:* Clearing Members are members of NSCCL. They carry out risk management activities and confirmation/inquiry of trades through the trading system. These clearing members are also trading members and clear trades for themselves and/ or others.
3. *Professional clearing members:* A professional clearing member (PCM) is a clearing member who is not a trading member. Typically, banks and custodians become PCMs and clear and settle for their trading members.
4. *Participants:* A participant is a client of trading members like financial institutions. These clients may trade through multiple trading members, but settle their trades through a single clearing member only.

Membership Criteria

The members are admitted by NSE for its F&O segment in accordance with the rules and regulations of the Exchange and the norms specified by the SEBI. NSE offers a composite membership of two types for trading in the derivatives segment *viz.*, membership of 'CM and F&O segment' or of 'CM, WDM and F&O segment'. Trading and clearing members are admitted separately. While, the trading members (TMs) execute the trades, the clearing members (CM) do the clearing for all his TMs, undertake risk management and perform actual settlement. The eligibility criteria for membership on F&O segment are summarized in Table 7-5(a & b). The trading members are required to have qualified users and sales persons, who have passed a certification programme approved by SEBI. At the end of March 2004, there were 589 members in the F&O segment.

Table 7-5 A: Eligibility Criteria for Membership on F&O Segment of NSE

Particulars	New Members		Existing Members
	CM and F&O Segment	CM, WDM and F&O Segment	
Net Worth[1]	Rs. 100 lakh	Rs. 200 lakh	Rs. 100 lakh
Interest Free Security Deposit (IFSD)[2]	Rs. 125 lakh	Rs. 275 lakh	Rs. 8 lakh
Collateral Security Deposit (CSD)[2]	Rs. 25 lakh	Rs. 25 lakh	–
Annual Subscription	Rs. 1 lakh	Rs. 2 lakh	Rs. 1 lakh

Note: 1. Net worth of Rs. 300 lakh is required for clearing membership.
2. Additional Rs. 25 lakh is required for clearing membership. In addition, the clearing member is required to bring in IFSD of Rs. 2 lakh and CSD of Rs. 8 lakh per trading member in the F&O segment.

Table 7-5 B: Requirements for Professional Clearing Membership

Particulars	F&O Segment	CM and F&O Segment
Eligibility	Trading members of NSE/SEBI registered custodians/recognised banks	
Net Worth	Rs. 300 lakh	
Interest Free Security Deposit (IFSD)	Rs. 25 lakh	Rs. 34 lakh
Collateral Security Deposit (CSD)	Rs. 25 lakh	Rs. 50 lakh
Annual Subscription	Nil	Rs. 2.5 lakh

Note: The PCM is required to bring in IFSD of Rs. 2 lakh and CSD of Rs. 8 lakh per trading member in the F&O segment.

Source: NSE.

Contract Specifications

The index futures and index options contracts traded on NSE are based on S&P CNX Nifty Index and the CNX IT Index, while stock futures and options are based on individual securities. Presently stock futures and options are available on 51 securities. Interest rate future contracts are available on notional 91 day T-bill and 10 year bonds (6% coupon bearing and zero coupon bond). While the index options are European style, stock options are American style. There are a minimum of 5 strike prices, two '*in-the-money*', one '*at-the-money*' and two '*out-of-the-money*' for every call and put option. The *strike price* is the price at which the buyer has a right to purchase or sell the underlying. Contract specification for derivatives contracts are summarized in Annexure 7-1.

In respect of equity derivatives, at any point of time, contracts with 1 month, 2 months and 3 months to expiry are available for trading. These contracts expire on last Thursday of their respective expiry months. A new contract is introduced on the next trading day following the expiry of the near month contract. All the derivatives contracts are presently cash settled.

The interest rate future contracts are available for a period of one-year maturity with three months continuous contracts and fixed quarterly contracts for the entire year. New contracts are introduced on the trading day following the expiry of the near month contract. These contracts expire on the last Thursday of the expiry month. In case of last Thursday being a holiday, the contracts expire on the previous trading day.

Charges

The maximum brokerage chargeable by a TM for the trades effected in the contracts entered on the F&O segment is fixed at 2.5% of the contract value in case of index futures and stock futures. In case of index options and stock options, it is 2.5% of notional value of the contract [(Strike price + Premium) * Quantity)] in case of index options. The brokerages charged are exclusive of statutory levies.

The transaction charges payable by the trading member for the trades executed by him on the F&O segment are fixed at Rs. 2 per lakh of turnover (0.002%) subject to a minimum of Rs. 1 lakh per year.

The trading members contribute to Investor Protection Fund of F&O segment at the rate of Rs. 10 per crore of turnover (0.0001%).

Basket Trading Facility

To ease the arbitrage between futures and cash markets, NSE has provided basket-trading facility. This enables generation of portfolio offline order files in the derivatives trading system and its execution in the cash segment. A trading member can buy or sell a portfolio through a single order. Once he determines its size, the system automatically works out the quantity of each security to be bought or sold in proportion to their weights in the portfolio.

Clearing and Settlement

National Securities Clearing Corporation Limited (NSCCL) undertakes clearing and settlement of all trades executed on the futures and options (F&O) segment of the NSE. It also acts as legal counterparty to all the trades on the F&O segment and guarantees their settlement. The Clearing and Settlement process comprises of three main activities *viz.*, Clearing, Settlement and Risk Management.

Clearing Mechanism

The first step in clearing process is working out open positions and obligations of clearing (self-clearing/trading-cum-clearing/professional clearing) members. The open positions in the contracts traded of CMs are arrived at by aggregating the open positions of all the TMs and all custodial participants (CPs) clearing through him. The open position of a TM is arrived at by summing up his proprietary open position and his clients' open positions. While entering orders on the trading system, TMs identify the orders as either proprietary or client through 'Pro/Cli' indicator provided in the order entry screen. Proprietary positions are calculated on net basis for each contract and that of clients' are arrived at by summing together net positions of each individual client. A TM's open position is the sum of proprietary open position, client open long position and client open short position. Table 7-6 illustrates determination of open position of a CM, who clears for two TMs having two clients.

Table 7-6 : Determination of Open Position of a Clearing Member

TMs clearing through CM	Proprietary Trades			Trades: Client 1			Trades: Client 2			Open Position	
	Buy	Sell	Net	Buy	Sell	Net	Buy	Sell	Net	Long	Short
ABC	4000	2000	2000	3000	1000	2000	4000	2000	2000	6000	–
PQR	2000	3000	-1000	2000	1000	1000	1000	2000	-1000	1000	2000
Total	6000	5000	2000 -1000	5000	2000	3000	5000	4000	2000 -1000	7000	2000

Settlement Mechanism

The underlying for index futures/options on the index cannot be delivered, therefore, they have to be settled in cash. Futures and options on individual securities can be delivered as in the spot market. However, it has been currently mandated that stock options and futures would also be cash settled. The settlement amount for a clearing member is netted across all their TMs/clients, across various settlements. For the purpose of settlement, all CMs are required to open a separate bank account with NSCCL designated clearing banks for F&O segment.

Settlement of Futures Contracts on Index or Individual Securities

Futures contracts have two types of settlements, the MTM settlement which is done on a daily basis, and the final settlement, which is on the last trading day of the futures contracts.

- MTM Settlement

  All futures contracts for each member are mark-to-market (MTM) to the daily settlement price of the relevant futures contracts at the end of each day. The clearing members who have a loss position are required to pay MTM loss amount in cash, which is passed on to the clearing members who have made a MTM profit. This is known as the daily mark-to-market settlement. Clearing members are responsible to collect and settle the daily MTM profits/losses incurred by the TMs and their clients. In turn, TMs are responsible to collect/pay losses/profits from/to their clients by the next day. The pay-in and pay-out of the mark-to-market settlement are affected on the day following the trade day (T+1). After completion of daily settlement computations, all the open positions are reset to the daily settlement price. These positions become the open positions for the next day.

  The settlement price for the contract for today is assumed to be 105. The table 7-7 gives the MTM charged on various positions. The margin charged on the brought forward contract is the difference between the previous day's settlement price of Rs. 100 and today's settlement price of Rs. 105. Hence on account of the position brought forward, the MTM shows a profit of Rs. 500. For contracts executed during the day, the difference between the buy price and the sell price determines the MTM. In this example, 200 units are bought @Rs. 100 and 100 units sold @Rs. 102 during the day. Hence the MTM for the position closed during the day shows a profit of Rs. 200. Finally, the open position of contracts traded during the day, is margined at the day's settlement price and the profit of Rs. 500 credited to the MTM account. So the MTM account shows a profit of Rs. 1,200.

Table 7-7: Computation of MTM at the end of the day

Trade details	Quantity bought /sold	Settlement price	MTM
Brought forward from previous day	100@100	105	500
Traded during day			
Bought	200@100		
Sold	100@102	102	200
Open position (not squared up)	100@100	105	500
Total			1200

- ### Final Settlement of Futures

  After the close of trading hours on the expiry day, NSCCL marks all positions of a CM to the final settlement price and the resulting profit/loss is settled in cash. Final settlement loss/profit amount is debited/credited to the relevant CM's clearing bank account on the day following expiry day of the contract.

- ### Settlement Prices for Futures

  Daily settlement price is the closing price of the respective futures contracts. The closing price for a futures contracts is currently calculated as the weighted average price of the contract executed in the last half an hour of trading hours. Final settlement price is the closing price of the relevant underlying index/security in the capital market segment of NSE, on the last trading day of the contract. The closing price of the underlying Index/security is currently its last half an hour weighted average value in the capital market segment of NSE.

Settlement of Options Contracts on Index or Individual Securities

Options contracts have three types of settlements, daily premium settlement, interim exercise settlement in case of option contracts on securities and final settlement.

- ### Daily Premium Settlement

  Buyer of an option must pay the premium towards the purchase of options to the seller. Similarly, the seller of an option is entitled to receive the premium for the option sold. The premium payable and receivable are netted to compute the net premium payable or receivable for each client for each option contract. Premium settlement is cash settled and settlement style is premium style. The CMs, who have a premium payable positions are required to pay the amount to NSCCL, which is passed on to the members who have a receivable position. This is known as daily premium settlement. CMs are responsible to collect and settle for the premium amounts from the TMs and their clients. The pay-in and pay-out of the premium settlement is on T+1 day. The premium payable and receivable are directly debited/credited to the CMs clearing bank account.

- Interim Exercise Settlement

  Interim exercise settlement takes place only for option contracts on securities. An investor can exercise his in-the-money options at any time during trading hours. Interim exercise settlement is effected for such options at the close of the trading hours. Valid exercised option contracts are assigned to short positions in the option contract with the same series (i.e. having the same underlying, same expiry date and same strike price) randomly at the client level. The CM, who has exercised the option, receives the exercise settlement value per unit of the option from the CM. The interim exercise settlement value is the difference between the strike price and the settlement price of the relevant option contract. Exercise settlement value is debited/credited to the relevant CMs clearing bank account on T+2 day (T=exercise date).

- Final Exercise Settlement

  Final exercise settlement is effected for option at in-the-money strike prices existing at the close of trading hours on the day of expiry. All long positions at in-the-money strike prices are automatically assigned randomly to short positions in option contracts with the same series. Index options are exercised using European style, while stock options using American style. Final Exercise is Automatic on expiry of the option contracts. Final settlement loss/profit amount for option contracts on Index is debited/credited to the relevant CMs clearing bank account on T+1 day (T=expiry day). On the other hand, final settlement loss/profit amount for option contracts on Individual Securities is debited/credited to the relevant CMs clearing bank account on T+2 day (T=expiry day). Open positions, in option contracts, cease to exist after their expiration day.

Settlement of Interest Rate Futures

Daily and Final Mark to Market settlement of interest rate futures contracts are also cash settled. All positions (brought forward, created during the day, closed out during the day) in futures contracts, at the end of trading hours, should be marked to market at the Daily Settlement Price. And on the last trading day it should be marked to market at Final Settlement Price for settlement. Daily settlement price should be the closing price of the relevant futures contract for the trading day. Final settlement price should be based on the value of the notional bond determined using the ZCYC computed by the Exchange.

- Daily Settlement Price: Daily settlement price is the closing price of the interest rate futures contracts on the trading day. The closing price for the contract is calculated on the basis of the weighted average price of the contracts executed in the last half an hour of trading in these contracts. In the absence of trading in the last half an hour, the theoretical price is taken or such other price as may be decided by the relevant authority from time to time.

  Theoretically, the daily settlement price for unexpired futures contracts should be the futures prices computed using the (price of the notional bond) spot prices arrived at from the applicable ZCYC Curve. The ZCYC should be computed by the Exchange or by any other approved agency from the prices of securities either traded on the Exchange or reported on the Negotiated Dealing System of RBI or both taking trades of same day settlement (i.e. t = 0).

For zero coupon notional bonds, the price should be the present value of the principal payment discounted using discrete discounting for the specified period at the respective zero coupon yield. The settlement price for the notional T-bill should be 100 minus the annualized yield for the specified period using the zero coupon yield curve. In respect of coupon bearing notional bond, the present value should be obtained as the sum of present value of the principal payment discounted at the relevant zero coupon yield and the present values of the coupons obtained by discounting each notional coupon payment at the relevant zero coupon yield for that maturity. For this purpose the notional coupon payment date should be half yearly and commencing from the date of expiry of the relevant futures contracts. For computation of futures prices, the rate of interest to be used may be the relevant MIBOR rate or such other rate as may be specified from time to time.

- Final Settlement Price: Final settlement price for an interest rate futures contracts on zero coupon notional and coupon bearing bond is based on the price of the bond determined using the zero coupon yield curve. In respect of notional T-bill it should be 100 *minus* the annualized yield for the specified period computed using the ZCYC.
- Since the T-bills are priced at 100 *minus* the relevant annualized yield, the settlement value should be arrived at using the relevant multiplier factor.

Settlement of Custodial Participant (CP) Deals

NSCCL provides a special facility to Institutions/Foreign Institutional Investors (FIIs)/MFs to execute trades through any TM, but cleared and settled by their own CM. They are known as Custodial Participants (CPs). To avail of this facility, a CP is required to register with NSCCL through his CM. A unique CP code is allotted to him by NSCCL. All trades executed by a CP through any TM are required to have the CP code in the relevant field on the trading system at the time of order entry itself. These trades have to be confirmed by their own CM within the time specified by NSE through the on-line confirmation facility on the same day. Only then he is responsible for clearing and settling of deals of such custodial clients. Unless CP confirms the trade, the same is considered as a trade of the TM and the responsibility of settlement of such trade vests with CM of the TM.

FIIs have been permitted to trade in all the exchange traded derivative contracts within the position limits prescribed for them and their sub-accounts. A FII/a sub-account of the FII, intending to trade in the F&O segment of the exchange, are required to obtain a unique Custodial Participant (CP) code from the NSCCL. The FII/sub-account of FII should ensure that all orders placed by them on the Exchange carry the relevant CP code allotted by NSCCL.

Risk Management

NSCCL has developed a comprehensive risk containment mechanism for the F&O segment. The salient features of risk containment mechanism on the F&O segment are:

1. Since financial soundness is a key to risk management, NSCCL has set stringent conditions for membership in terms of capital adequacy (net worth, security deposits).

2. NSCCL charges an upfront initial margin for all the open positions of a CM on a daily basis. The CM in turn collects the initial margin from the TMs and their respective clients.
3. The open positions of the members are marked to market based on contract settlement price for each contract. The difference is settled in cash on a T+1 basis.
4. A CM's open positions are monitored on a real-time basis using NSCCL's on-line position monitoring system. The positions limits for each CM are set on the basis of his capital deposits and whenever a CM reaches the position limit the on-line position monitoring system generates alerts. NSCCL monitors the CMs for MTM value violations, while TMs are monitored for contract-wise position limit violations. It has also put in place a system which tracks on real time basis the client level portfolio based upfront margining and monitoring.
5. CMs are provided with a trading terminal for the purpose of monitoring the open positions of all the TMs, who clear and settle through him. A CM may set exposure limits for his TM. NSCCL assists the CM to monitor the intra-day exposure limits set up by a CM and whenever a TM exceed the limits, it stops that particular TM from further trading.
6. A member is alerted of his position to enable him to adjust his exposure or bring in additional capital. Position violations by the CM result in disablement of trading facility for all TMs of a CM.
7. A separate settlement guarantee fund for this segment has been created.

The most critical component of risk containment mechanism for F&O segment is the margining system and on-line position monitoring. The actual position monitoring and margining is carried out on-line through Parallel Risk Management System (PRISM). PRISM uses SPAN®[2] (Standard Portfolio Analysis of Risk).

Risk Management for Interest Rate Futures

Initial margin should be payable on real time basis on all open positions of Clearing Members in accordance with the system adopted by Clearing Corporation. Presently, the initial margins are based on the zero coupon yield curve computed at the end of the day. However, in case of large deviation between the yields generated using only t=0 trades and all trades, initial margins are to be revised accordingly.

Initial Margin should include SPAN margins and any other additional margins that may be specified by Clearing Corporation. Clearing Corporation has to adopt SPAN (Standard Portfolio Analysis of Risk) system or any other system for the purpose of real time initial margin computation.

Initial margin requirements should be based on 99% VaR over a one day time horizon. In case of futures contracts, if it may not be possible to collect mark to market settlement value, before the commencement of trading on the next day, the initial margin may be computed over a two day time horizon. The methodology for computation of VaR percentage should be as per the recommendations of SEBI.

[2] SPAN® is a registered trademark of the Chicago Mercantile Exchange (CME) used here under licence.

The Initial margin for a member is to be computed taking into consideration requirements such as : (a) client positions should be netted at the level of individual client and grossed across all clients for the Trading/Clearing Member, however, without any set offs between clients (b) proprietary positions should be netted at Trading/Clearing Member level without any set offs between client and proprietary positions.

For this purpose, various parameters should be as specified hereunder:

(a) Price Scan Range: In the case of Notional Bond Futures, the price scan range should be 3.5 sigma (3.5 σ) and in no case the initial margin should be less than 2% of the notional value of the Futures Contracts, which should be scaled up by look ahead period. For Notional T-Bill Futures, the price scan range should be same as for notional bond futures, but in no case the initial margin should be less than 0.2% of the notional value of the futures contracts.

(b) Calendar Spread Charge: The margin on calendar spread should be calculated at a flat rate of 0.125% per month of spread on the far month contract subject to a minimum margin of 0.25% and a maximum margin of 0.75% on the far side of the spread with legs upto 1 year apart. A Calendar spread positions will be treated as non-spread (naked) positions in the far month contract, 3 trading days prior to expiration of the near month contract.

Exposure Limits (2nd line of defense): Clearing Members should be subject to Exposure limits in addition to initial margins. Exposure Limit should be 100 times the liquid net worth i.e. 1% of the notional value of the gross open positions in Notional 10 year bond futures (both coupon bearing and zero coupon) and should be 1000 times the liquid net worth i.e. 0.1% of the gross open positions in notional 91 day T-Bill futures. Exposure limit for calendar spreads should be regarded as an open position of one third of the mark to market value of the far month contract. As the near month contract approaches expiry, the spread should be treated as a naked position in the far month contract three days prior to the expiry of the near month contract.

Trading Member wise/Custodial Participant wise Position Limit: Each Trading Member/ Custodial Participant should ensure that his clients do not exceed the specified position limit. The position limits should be at the client level for near month contracts should be 15% of the open interest or Rs. 100 crore, whichever is higher. For futures contracts open interest should be equivalent to the open positions in that futures contracts multiplied by its last available closing price.

NSE–SPAN®

The objective of NSE–SPAN® is to identify overall risk in a portfolio of all futures and options contracts for each member. The system treats futures and options contracts uniformly, while at the same time recognizes the unique exposures associated with options portfolios, like extremely deep out-of-the-money short positions and inter-month risk. Its overriding objective is to determine the largest loss that a portfolio might reasonably be expected to suffer from one day to the next day based on 99% VaR methodology. SPAN considers uniqueness of option portfolios. The following factors affect the value of an option:

1. Underlying market price
2. Strike price

3. Volatility (variability) of underlying instrument
4. Time to expiration
5. Interest rate

As these factors change, the value of options within the portfolio also changes. Thus, SPAN constructs scenarios of probable changes in underlying prices and volatilities in order to identify the largest loss, a portfolio might suffer from one day to the next. Then it sets the margin requirement to cover this one-day loss. These complex calculations (e.g. the pricing of options) are executed using SPAN. The results of these calculations are called risk arrays. Risk arrays and other data inputs required for margin calculation are provided to members daily in a file called the SPAN risk parameter file. Members can apply the data contained in the risk parameter files, to their specific portfolios of futures and options contracts, to determine their SPAN margin requirements. Hence, members need not execute complex option pricing calculations, which are performed by NSCCL.

Margins

The margining system for F&O segment is explained below:

- *Initial Margin*: Margin in the F&O segment is computed by NSCCL upto client level for open positions of CMs/TMs. These are required to be paid up-front on gross basis at individual client level for client positions and on net basis for proprietary positions. NSCCL collects initial margin for all the open positions of a CM as computed by NSE-SPAN. A CM is required to ensure collection of adequate initial margin from his TMs up-front, in turn the TM collects it from his clients.
- *Premium Margin*: In addition to initial margin, premium margin is charged at client level. This margin is required to be paid by a buyer of an option till the premium settlement is complete.
- *Assignment Margin for Options on Securities*: Assignment margin is levied in addition to initial margin and premium margin. It is required to be paid on assigned positions of CMs towards interim and final exercise settlement obligations for option contracts on individual securities, till such obligations are fulfilled. The margin is charged on the net exercise settlement value payable by a CM towards interim and final exercise settlement.
- *Client Margins*: NSCCL intimates all members of the margin liability of each of their client. Additionally members are also required to report details of margins collected from clients to NSCCL, which holds in trust client margin monies to the extent reported by the member as having been collected from their respective clients.

Margin/Position Limit Violations

PRISM, the Parallel Risk Management System, is the real-time position monitoring and risk management system for the F&O market segment. The risk of each trading and clearing member is monitored on a real time basis by generating various alerts whenever a CM exceeds any limits set up by NSCCL. These are detailed below:

- *Initial Margin Violation*: The initial margin is computed on a real time basis i.e. for each trade the amount of initial margin is reduced from the effective deposits of the CM held with the clearing corporation. For this purpose, effective deposits are computed by reducing the total deposits of the CM by Rs. 50 lakh (referred to as minimum liquid net worth). The CM receives warning messages on his terminal when 70%, 80% and 90% of the effective deposits are utilized. At 100% the clearing facility provided to a CM is automatically withdrawn. Withdrawal of clearing facility of a CM in case of a violation leads to automatic withdrawal of trading facility for all TMs and/or custodial participants clearing and settling through such CM.

Similarly, the initial margins on positions taken by a TM is also computed on a real-time basis and compared with the TM limits set by his CM. As the TM limit is used up to 70%, 80%, and 90%, the member receives a warning message on his terminal. At 100%, the trading facility provided to the TM is automatically withdrawn.

A member is provided with adequate warnings on the violation before his trading/ clearing facility is withdrawn. A CM may appropriately reduce his exposure to contain the violation or alternately bring in additional capital.

- *Member-wise Position Limit Violation*: The member-wise position limit on open position of a TM is supervised by PRISM. The open position in all index futures and index option contracts of any TM, cannot exceed 15% of the total open interest of the market or Rs. 100 crore, whichever is higher at any time, including during trading hours. The open positions in all the futures and option contracts on the same underlying security of any TM, cannot exceed 7.5% of the total open interest of the market or Rs. 50 crore, whichever is higher, at any time, including during trading hours. For futures contracts, open interest is equivalent to the open positions in the futures contracts multiplied by last available traded price or closing price, as the case may be. For option contracts, open interest is equivalent to the notional value, which is computed by multiplying the open position in that option contracts multiplied with the last available closing price of the underlying.

- *Exposure Limit Violation:* PRISM monitors exposure of members on all futures and option contracts, which cannot exceed 33.33 times the liquid net worth for index options and index futures contracts. For option and futures contracts on individual securities, the exposure limits of, which is higher, 5% or 1.5 standard deviation of the notional value of gross open position in futures on individual securities and gross short open positions in options on individual securities in a particular underlying should be collected/adjusted from the liquid networth of a member on a real time basis.

- *Market-wide Position Limit Violation*: PRISM monitors market wide position limits for futures and option contracts on individual securities. The open position across all members, across all contracts cannot exceed lower of the following limits: 30 times the average number of shares traded daily in the previous calendar month or 10% of the number of shares held by non-promoters in the relevant underlying security i.e. 10% of the free float in terms of the number of shares of a company. When the total open interest in an option contract, across all members, reaches 80% of the market wide position limit for a contract, the price scan range and volatility scan range (for SPAN margin) are doubled. NSCCL specifies the market-wide position limits once every month, at the beginning of the month, which is applicable for the subsequent month.

- *Client-wise Position Limit Violation*: Whenever the open position of any client exceeds 1% of the free float market capitalization (in terms of no. of shares) or 5% of the open interest (in terms of number of shares) whichever is higher, in all the futures and option contracts on the same underlying security, then it is termed as client-wise position limit violation. The TM/CM through whom the client trades/clears his deals should be liable for such violation and penalty may be levied on such TM/CM which he may in turn recover from the client. In the event of such a violation, TM/CM should immediately ensure that the client does not take fresh positions and reduces the positions of those clients within the permissible limits.

- *Misutilisation of TM/Constituent's Collateral and/or Deposit*: It is a violation, if a CM utilize the collateral of one TM and/or constituent towards the exposure and/or obligations of another TM and/or constituent.
- *Violation of Exercised Positions*: NSCCL verifies whether open long positions for CM/TM and/or constituent exist in relation to option contracts, which are exercised by a CM/TM, before initiating exercise processing. If the contracts are exercised without open positions, then such cases are treated as violations.

Market Outcome

Trading Volumes

As mentioned earlier, the derivatives are traded only on two exchanges, the NSE and the BSE (Table 7-8). The total exchange traded derivatives volume witnessed a sharp rise to Rs. 21,422,690 million during 2003-04 as against Rs. 4,423,333 million during the preceding year. NSE emerged as a market leader in the Indian Market by accounting for about 99.5% of total turnover. Since more than 99% of volumes came from NSE, the further detailed analysis is based on NSE data.

During 2003-04, the F&O segment of NSE reported a total turnover for Rs. 21,306,492 million as against Rs. 4,398,548 million during the preceding year. The number of contracts

Table 7-8: Trade Details of Derivatives Market*

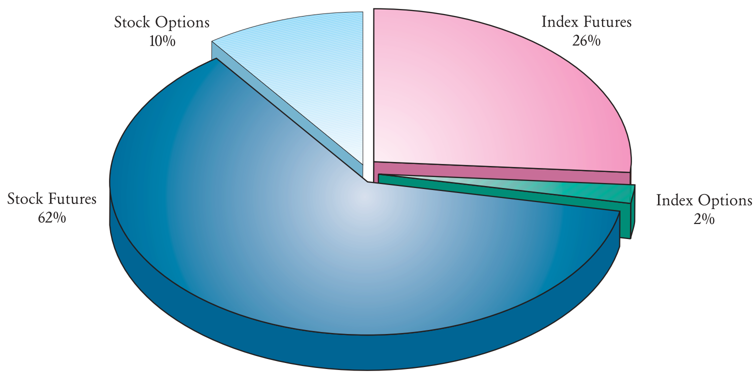
Month/Year	NSE		BSE		TOTAL	
	No. of Contracts Traded	Turnover (Rs. mn.)	No. of Contracts Traded	Turnover (Rs. mn.)	No. of Contracts Traded	Turnover (Rs. mn.)
Apr-03	2,205,470	500,196	5,280	873	2,210,750	501,069
May-03	2,252,050	534,233	1,155	229	2,253,205	534,462
Jun-03	2,750,294	730,173	423	92	2,750,717	730,265
Jul-03	3,720,563	1,098,495	4,718	1,031	3,725,281	1,099,526
Aug-03	4,314,098	1,403,625	23,634	5,090	4,337,732	1,408,715
Sep-03	5,481,939	1,851,509	34,274	8,509	5,516,213	1,860,018
Oct-03	5,989,205	2,303,645	30,668	8,574	6,019,873	2,312,219
Nov-03	4,769,938	1,921,714	31,337	9,287	4,801,275	1,931,001
Dec-03	5,724,035	2,389,067	107,545	36,840	5,831,580	2,425,907
Jan-04	6,976,023	3,240,630	103,573	37,869	7,079,596	3,278,499
Feb-04	5,696,541	2,728,392	22,212	7,299	5,718,753	2,735,691
Mar-04	7,006,620	2,604,813	17,439	505	7,024,059	2,605,318
2003-04	56,886,776	21,306,492	382,258	116,198	57,269,034	21,422,690

*: For NSE, data pertains to Index Futures, Stock Futures, Index Options, Stock Options and Futures on Interest Rates.

Source: NSE and SEBI Bulletin.

traded in 2003-04 amounted to 569 lakh as against 168 lakh in the previous year. The segment witnessed a record turnover of Rs. 219,213 million on January 28, 2004. The monthly turnover increased from Rs. 500,196 million in April 2003 to Rs. 2,604,813 million in March 2004. The average daily turnover increased from Rs. 25,010 million in April 2003 to Rs. 118,401 million in March 2004. The business growth of the F&O segment is presented in Annexure 7-2. It is evident from the statistics as presented in the Annexure 7-2 and the Chart 7-1 that the futures are more popular than options; contracts on securities are more popular than those on indices; and call options are more popular than put options.

Chart 7-1: Product-wise Distribution of Turnover of F&O Segment of NSE, 2003-04



During the year, Mumbai contributed nearly 47.8% of total turnover. The contributions from Delhi and Kolkata were 25.5% and 11.3% respectively (Table 7-9).

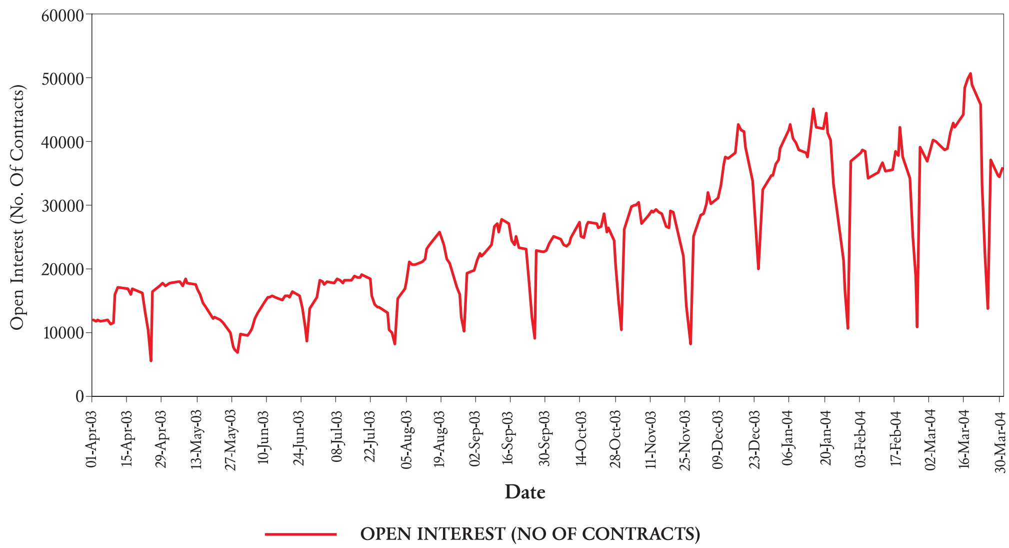
Table 7-9: City-wise Distribution of Turnover of F&O Segment of NSE 2003-04

Sl. No.	Location	Share in Turnover (%) 2002-03	2003-04
1.	Mumbai	41.20	47.81
2.	Delhi/Ghaziabad	20.31	25.45
3.	Calcutta/Howrah	15.16	11.32
4.	Ahmedabad	2.11	2.79
5.	Hyderabad/Secunderabad/Kukatpally	0.97	2.07
6.	Chandigarh/Mohali/Panchkula	2.00	2.06
7.	Chennai	2.24	1.85
8.	Cochin/Ernakulam/Parur/Kalamserry/Alwaye	0.63	1.07
9.	Bangalore	1.19	0.72
10.	Ludhiana	0.99	0.61
11.	Indore	0.38	0.57
12.	Jaipur	1.89	0.51
13.	Baroda	0.71	0.49
14.	Rajkot	0.36	0.45
15.	Pune	0.31	0.34
16.	Agra	0.53	0.20
17.	Coimbatore	0.44	0.16
18.	Lucknow	0.21	0.14
19.	Trivandrum	0.13	0.13
20.	Surat	0.47	0.12
21.	Tenali	0.09	0.09
22.	Others	7.69	1.05
	Total	100.00	100.00

Open Interest

Open interest is the total number of outstanding contracts that are held by market participants at the end of each day. Putting it simply, open interest is a measure of how much interest is there in a particular option or future. Increasing open interest means that fresh funds are flowing in the market, while declining open interest means that the market is liquidating. The highest open interest in index futures at NSE was recorded at 50,663 contracts on March 18, 2004. The daily open interest for near month index futures at NSE is presented in Chart 7-2.

Chart 7-2: Daily Open Interest for Near Month Nifty Futures



Implied Interest Rate

In the futures market, implied interest rate or cost of carry is often used inter-changeably. Cost of carry is more appropriately used for commodity futures, as by definition it means the total costs required to carry a commodity or any other good forward in time. The costs involved are storage cost, insurance cost, transportation cost and the financing cost. In case of equity futures, the carry cost is the cost of financing minus the dividend returns. Assuming zero dividend, the only relevant factor is the cost of financing.

Implied interest rate is the percentage difference between the future value of an index and the spot value, annualised on the basis of the number of days before the expiry of the contract. Carry cost or implied interest rate plays an important role in determining the price differential between the spot and the futures market. By comparing the implied interest rate and the existing interest rate level, one can determine the relative cost of futures' market price. Implied interest rate is also a measure of profitability of an arbitrage position. Theoretically, if the futures price is less than the spot price plus cost of carry or if the futures price is greater than the spot price plus cost of carry, arbitrage opportunities exist.

The futures prices are available for different contracts at different points of time. Chart 7-3 presents Nifty futures close prices for the near month contracts, and the spot Nifty close values from April 2003 to March 2004. The difference between the future and the spot price is called *basis*. As the time to expiration approaches, the basis reduces. Daily implied interest rate for Nifty futures from April 2003 to March 2004 is presented in Chart 7-4.

Chart 7-3: Nifty Futures and Spot Price

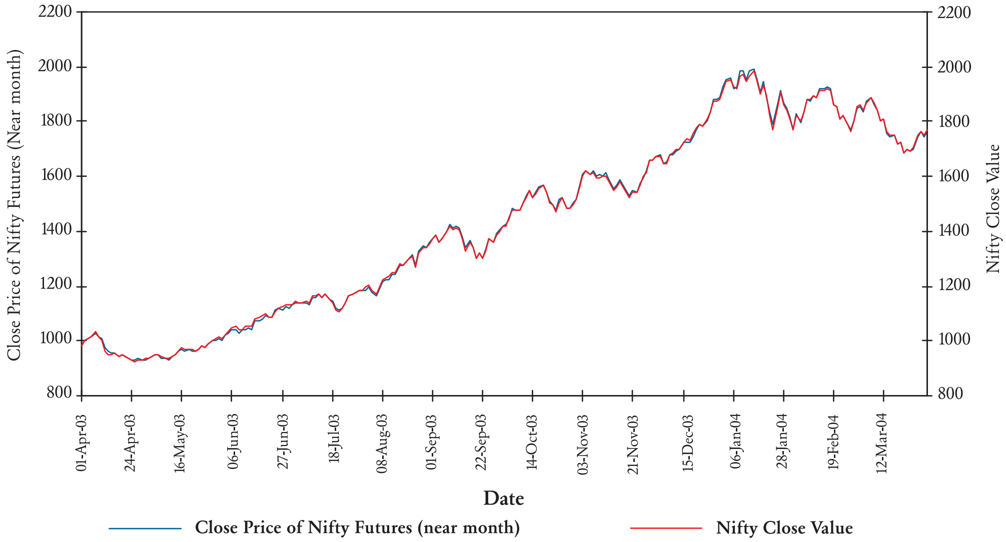
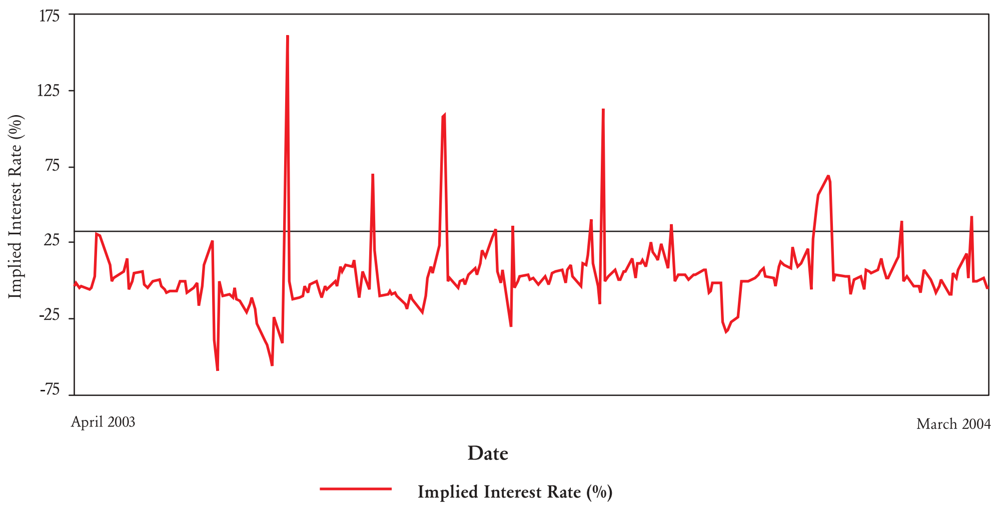


Chart 7-4: Implied Interest Rate for Near Month Nifty Futures (April 1, 2003 to March 31, 2004)



The implied interest rate for near month Nifty futures as on last trading of the month is presented in Table 7-10.

Table 7-10: Implied Interest Rate for Near Month Nifty Futures (April 2003 - March 2004)

Month	Expiry Date of near month Contract	Closing Future Price	Closing Spot Price	Implied Interest Rate (%)
Apr-03	29-May-2003	930.65	934.05	-4.59
May-03	26-Jun-2003	999.35	1006.80	-10.04
Jun-03	31-Jul-2003	1123.60	1134.15	-11.00
Jul-03	31-Jul-2003	1187.35	1185.85	NA
Aug-03	25-Sep-2003	1358.80	1356.55	2.24
Sep-03	30-Oct-2003	1418.25	1417.10	0.99
Oct-03	27-Nov-2003	1559.45	1555.90	3.08
Nov-03	24-Dec-2003	1619.95	1615.25	4.08
Dec-03	29-Jan-2004	1888.30	1879.75	5.71
Jan-04	26-Feb-2004	1814.85	1809.75	3.80
Feb-04	25-Mar-2004	1804.80	1800.30	3.37
Mar-04	29-Apr-2004	1765.55	1771.90	-4.52

Note: (1) The implied interest rate is calculated on the last trading day of the month for Near Month Nifty Futures.
(2) Number of days in a year have been taken as 365.

Source: NSE.

Implied Volatility

Volatility is one of the important factors, which is taken into account while pricing options. It is a measure of the amount and the speed of price change. To estimate future volatility, a time series analysis of historical volatility may be carried out to know the future movements of the underlying. Alternatively, one could work out implied volatility by entering all parameters into an option pricing model and then solving it for volatility. For example, the Black Scholes model solves for the fair price of the option by using the following parameters-days to expiry, strike price, spot price, volatility of underlying, interest rate, and dividend. This model could be used in reverse to arrive at implied volatility by putting the current price of the option prevailing in the market.

Putting it simply, implied volatility is the estimate of how volatile the underlying will be from the present until the currency of option. If volatility is high, then the options premiums are relatively expensive and vice-versa. However, implied volatility estimate can be biased, especially if they are based upon options that are thinly traded samples.

Prof. J. R. Varma ("Mispricing of Volatility in the India Index Options Market", Working Paper 2002-04-01, April 2002, IIM, Ahmedabad) has estimated the option prices and implied volatility from the Black formula. It was found that for about 6.5% of all calls and about 7.5% of all puts, implied volatility was undefined because the option traded below its intrinsic value.

Volatility Smile

The volatility smile is the relation between the implied volatility and the strike price of the same maturity. Normally the smiles for equity options have a downward sloping curve and they look alike for both put and call option. However, Prof. J. R. Varma in his paper "Mispricing of Volatility in the India Index Options Market", Working Paper 2002-04-01, April 2002, IIM, Ahmedabad found V shaped smiles and the smiles markedly different for puts and calls. He estimated volatility smiles separately for put and call options and established that the smiles are sharply different for calls and puts. The implied probability distribution is more highly peaked and has (except for deep-in-the-money calls) thinner tails than the normal distribution or the historical distribution. The market thus appears to be underestimating the probability of market movements in either direction. Prof. Varma also noticed some overpricing of deep-in-the-money calls and some inconclusive evidence of violation of put-call parity. However, it was observed that the observed prices are rather close to the average of the intrinsic value of the option and its Black-Scholes value disregarding the smiles.

Settlement

All derivative contracts are currently cash settled. During 2003-04, the cash settlement amounted to Rs. 122,959.8 million with settlement of futures and of options accounting for Rs. 109,609 million and Rs. 13,351 million, respectively. The detail of the settlement statistics in the F&O segment is presented in Table 7-11.

Table 7-11: Settlement Statistics in F&O Segment

(In Rs. mn.)

Month/Year	Index/Stock Futures		Index/Stock Options		Total
	MTM Settlement	Final Settlement	Premium Settlement	Exercise Settlement	
2000-01	**840.84**	**19.29**	–	–	**860.13**
Apr-01	80.43	0.88	–	–	81.31
May-01	37.76	1.13	–	–	38.88
Jun-01	48.52	0.10	14.69	2.75	66.07
Jul-01	66.95	1.35	58.76	14.28	141.35
Aug-01	45.94	1.36	98.31	50.62	196.22
Sep-01	336.87	5.00	156.22	139.09	637.18
Oct-01	112.69	1.01	179.61	114.22	407.53
Nov-01	283.75	7.09	245.55	202.14	738.52
Dec-01	789.41	37.62	174.67	82.14	1,083.84
Jan-02	1,125.28	21.69	305.71	177.55	1,630.22
Feb-02	1,088.70	122.14	244.00	88.57	1,543.42
Mar-02	1,036.18	19.88	170.08	68.10	1,294.25
2001-02	**5,052.49**	**219.25**	**1,647.58**	**939.46**	**7,858.79**
Apr-02	1,065.60	41.50	173.00	86.50	1,366.60
May-02	1,665.40	18.40	215.30	143.50	2,042.60
Jun-02	1,240.50	34.40	197.00	103.50	1,575.40
Jul-02	1,608.80	17.00	236.00	106.70	1,968.50
Aug-02	1,021.00	28.80	204.60	138.90	1,393.30
Sep-02	1,198.30	14.40	233.10	134.60	1,580.40
Oct-02	1,282.40	77.90	258.00	166.40	1,784.70
Nov-02	1,109.30	86.80	337.10	353.40	1,886.60
Dec-02	1,640.40	53.30	446.40	168.20	2,308.30
Jan-03	2,184.19	29.92	383.92	229.38	2,827.41
Feb-03	1,484.20	16.80	289.30	131.40	1,922.70
Mar-03	1,878.93	38.38	338.39	196.35	2,452.05
2002-03	**17,379.02**	**457.60**	**3,312.11**	**1,958.83**	**23,108.56**
Apr-03	2,058.06	47.93	459.95	300.07	2,866.01
May-03	1,635.92	57.42	380.39	304.30	2,378.03
Jun-03	2,202.33	38.58	487.81	464.99	3,193.71
Jul-03	3,897.88	80.24	694.32	447.68	5,120.12
Aug-03	5,696.01	85.82	773.16	588.14	7,143.14
Sep-03	10,318.74	92.38	781.23	304.09	11,496.44
Oct-03	11,880.49	141.09	991.48	603.07	13,616.13
Nov-03	9,393.49	238.60	634.00	221.13	10,487.22
Dec-03	9,054.58	178.99	699.91	410.95	10,344.44
Jan-04	26,682.05	128.24	1,074.58	426.73	28,311.59
Feb-04	13,296.98	164.00	682.56	244.20	14,387.74
Mar-04	12,103.23	136.18	930.00	445.84	13,615.25
2003-04	**108,219.77**	**1,389.48**	**8,589.38**	**4,761.19**	**122,959.81**

* Balance at the end of period.

Policy Debates

Derivatives are being traded in India for about more than three years now. After a subdued start, the trading volumes have picked up substantially thereafter. Some of the financial experts and market participants are of the opinion that the full potential of the market is yet to be realized. Few policy debates regarding the derivatives market are as discussed below:

Further Products

Derivatives trading in India have so far been introduced in a fairly limited range of products. Index futures and options are available only on S&P CNX Nifty, CNX IT Index and BSE Sensex, options and futures on individual stocks are available only on select 51 securities. However, conceptually, there is no limit to the range of derivative products as can be seen from the international experience. After the market gains some more familiarity with derivative products, the logical next step would be to consider expanding the basket of derivative products based on various other instruments available in financial markets. The index futures/options could be extended to other popular indices, such as the Nifty Junior and Defty. Stock futures/options could be extended to all active securities. The possibility of introducing derivatives based on the exchange rate, interest rate and gold as the underlying could also be explored.

Cross Margining

Cross-margining takes into account a member/client's combined position across products/market segments. This would imply that a member's margin with an exchange for one market could be used against the margin requirements of another market. Cross-margining thus results in a far more efficient use of a member's capital for trading in related products and in more than one market. A clearing corporation can easily compute and levy a single net margin amount based upon offsetting positions in different products/markets/exchanges. In fact, the L. C. Gupta Committee which had suggested the regulatory framework for derivatives, had recommended that cross margining (between spot and derivatives market) should eventually be allowed, as this would optimally use resources. A SEBI constituted advisory committee on derivatives under the chairmanship of Prof. J. R. Varma is currently looking into cross margining.

Annexure 1: Contract Specification for F&O

Particulars	Index Futures	Stock Futures	Index Options	Stock Options	Interest Rate Futures
Security Description	N FUTIDX	N FUTSTK —	N OPTIDX	N OPTSTK –-	N FUTINT
Underlying	S&P CNX Nifty Index/ CNX IT Index	Individual Securities	S&P CNX Nifty Index/ CNX IT Index	Individual Securities	Notional 10 year bond (6% coupon), Notional 10 year zero coupon bond and Notional 91 day T-Bill
Style of Option	NA	NA	European	American	NA
Contract Size	200 or multiples thereof (minimum value of Rs. 2 lakh)	Multiples of 100, as may be specified by NSE	200 or multiples thereof (minimum value of Rs. 2 lakh)	Multiples of 100, as may be specified by NSE	Permitted lot size is 2000
Price Steps	Rs. 0.05				Rs. 0.01
Expiration Months	3 near months				One year
Trading Cycle	A maximum of three month trading cycle - the near month (one), the next month (two) and the far month (three). New contract is introduced on the next trading day following the expiry of near month contract				The concern shall be for a period of a maturity of one year with three months continuous contracts for the first three months and fixed quarterly contracts for the entire year
Last Trading/Expiration Day	Last Thursday of the expiry month or the preceding trading day, if last Thursday is a trading holiday				Last Thursday of the expiry month. If last Thursday is a trading holiday, the contracts shall expire on previous trading day. Further, where the last Thursday falls on the annual or half yearly closing dates of the bank, the contract shall expire on previous trading day
Price Bands	Operating range of 10% of the base price	Operating range of 20% of the base price	Operating range of 99% of the base price	Operating range of 99% of the base price	NA
No. of Strike Prices	NA	NA	Minimum of 5 (two 'in the money', one 'at the money' and two 'out of the money') for every option type (i.e. call and put)	Minimum of 5 (two 'in the money', one 'at the money' and two 'out of the money') for very option type (i.e. call and put)	NA
Strike Price Interval (in Rs.)	NA	NA	10	Between 2.5 and 50 depending on the price of underlying	NA
Settlement	In cash on T+1 basis	In cash on T+1 basis	In cash on T+1 basis	Daily settlement on T+1 basis and final settlement on T+2 basis	Daily Mark-to-Market settlement and Final Settlement will be on T+1 basis
Daily Settlement Price	Closing price of futures contracts on the trading day	Closing price of futures contracts on the trading day	Premium Value (net)	Premium Value (net)	As may be stipulated by NSCCL in this regard from time to time
Final Settlement Price	Closing value underlying index/ security on the last trading day of the futures contract	Closing value underlying index/ security on the last trading day of the futures contract	Closing value of such underlying security (index) on the last trading day of the options contracts	Closing value of such underlying security (index) on the last trading day of the options contracts	As may be stipulated by NSCCL in this regard from time to time
Settlement Day		Last trading day			
Margins	Up-front initial margin on daily basis				

NA: Not applicable

Annexure 7-2: Business Growth of Derivatives Segment

Month/ Year	Index Futures		Stock Futures		Interest Rate Futures		Index Options				Stock Options				Total		Average Daily Turnover (Rs. mn.)	Open Interest at the end of	
							Call		Put		Call		Put						
	No. of Contracts Traded	Turnover (Rs. mn.)	No. of Contracts Traded	Turnover (Rs. mn.)	No. of Contracts Traded	Trading Value (Rs. mn.)	No. of Contracts Traded	Notional Turnover (Rs. mn.)	No. of Contracts Traded	Notional Turnover (Rs. mn.)	No. of Contracts Traded	Notional Turnover (Rs. mn.)	No. of Contracts Traded	Notional Turnover (Rs. mn.)	No. of Contracts Traded	Turnover (Rs. mn.)		No. of Contracts	Turnover (Rs. mn.)
Jun-00 to Mar-01	90,580	23,650	-	-	-	-	-	-	-	-	-	-	-	-	90,580	23,650	116		
Apr-01	13,274	2,917	-	-	-	-	-	-	-	-	-	-	-	-	13,274	2,917	154	1,430	319
May-01	10,048	2,305	-	-	-	-	-	-	-	-	-	-	-	-	10,048	2,305	105	2,033	471
Jun-01	26,805	5,902	-	-	-	-	5,232	1,185	3,429	766	-	-	-	-	35,466	7,854	374	4,071	904
Jul-01	60,644	13,086	-	-	-	-	8,613	1,908	6,221	1,352	13,082	2,902	4,746	1,057	93,306	20,306	967	14,040	2,948
Aug-01	60,979	13,046	-	-	-	-	7,598	1,653	5,533	1,193	38,971	8,437	12,508	2,633	125,589	26,962	1,284	19,096	3,961
Sep-01	154,298	28,571	-	-	-	-	12,188	2,432	8,262	1,687	64,344	13,221	33,480	6,900	272,572	52,810	2,640	16,204	2,780
Oct-01	131,467	24,848	-	-	-	-	16,787	3,263	12,324	2,329	85,844	16,319	43,787	8,015	290,209	54,775	2,608	25,051	4,628
Nov-01	121,697	24,835	125,946	28,114	-	-	14,994	3,099	7,189	1,453	112,499	23,722	31,484	6,379	413,809	87,601	4,380	60,414	13,291
Dec-01	109,303	23,393	309,755	75,147	-	-	12,890	2,866	5,513	1,184	84,134	19,859	28,425	6,740	550,020	129,187	6,799	37,891	8,024
Jan-02	122,182	26,598	489,793	132,610	-	-	11,285	2,528	3,933	853	133,947	38,361	44,498	12,529	805,638	213,479	9,282	78,384	17,753
Feb-02	120,662	27,472	528,947	139,395	-	-	13,941	3,235	4,749	1,068	133,630	36,347	33,055	8,643	834,984	216,159	10,808	89,560	20,104
Mar-02	94,229	21,846	503,415	139,890	-	-	10,446	2,487	4,773	1,113	101,708	28,628	37,387	10,936	751,958	204,899	10,784	93,917	21,499
2001-02	1,025,588	214,819	1,957,856	515,155	-	-	113,974	24,657	61,926	12,998	768,159	187,795	269,370	63,830	4,196,873	1,019,254	4,127	93,917	21,499
Apr-02	73,635	16,562	552,727	150,651	-	-	11,183	2,600	5,389	1,215	121,225	34,004	40,443	11,704	804,602	216,736	9,852	66,922	15,540
May-02	94,312	20,223	605,284	159,810	-	-	13,070	2,945	7,719	1,687	126,867	34,901	57,984	16,432	905,236	235,998	10,727	55,839	12,053
Jun-02	99,514	21,228	616,461	161,783	-	-	10,272	2,229	7,805	1,662	123,493	33,246	48,919	13,173	906,464	233,320	11,666	65,834	15,315
Jul-02	122,663	25,133	789,290	212,047	-	-	16,637	3,498	7,688	1,616	154,089	43,406	65,530	18,369	1,155,897	304,069	13,220	85,369	17,997
Aug-02	152,375	29,778	726,310	178,806	-	-	15,967	3,178	10,124	2,000	147,646	38,367	65,630	17,255	1,118,052	269,383	12,828	71,655	16,602
Sep-02	144,303	28,357	700,051	175,011	-	-	16,578	3,318	12,543	2,507	151,291	40,160	80,038	22,051	1,104,804	271,404	13,570	67,261	13,858
Oct-02	164,934	31,448	856,930	212,134	-	-	23,628	4,594	13,910	2,671	214,027	55,953	104,659	27,612	1,378,088	334,413	15,924	135,239	30,228
Nov-02	175,567	35,000	970,251	254,630	-	-	25,413	5,090	17,191	3,360	261,600	71,060	104,529	29,220	1,554,551	398,360	20,966	94,615	22,134
Dec-02	277,403	59,580	1,217,873	355,316	-	-	30,261	6,601	19,973	4,274	309,573	95,524	111,756	34,907	1,966,839	556,201	26,486	110,431	28,933
Jan-03	258,955	55,567	1,304,122	382,988	-	-	26,376	5,769	16,805	3,635	322,876	101,743	132,021	41,790	2,061,155	591,400	25,717	100,764	23,888
Feb-03	237,803	50,403	1,198,564	324,448	-	-	26,501	5,711	17,681	3,749	268,156	76,444	114,512	33,192	1,863,217	493,948	25,997	109,192	27,378
Mar-03	325,299	66,237	1,138,980	297,698	-	-	53,788	11,165	35,739	7,397	255,658	71,634	140,540	39,186	1,950,004	493,317	24,666	97,025	21,943
2002-03	2,126,763	439,516	10,676,843	2,865,321	-	-	269,674	56,698	172,567	35,772	2,456,501	696,441	1,066,561	304,891	16,768,909	4,398,548	17,524	97,025	21,943
Apr-03	362,157	69,939	1,291,493	297,492	-	-	54,890	10,914	31,107	6,157	297,270	74,713	168,553	40,981	2,205,470	500,196	25,010	121,089	25,877
May-03	325,784	62,826	1,354,581	327,517	-	-	53,198	10,387	30,109	5,784	332,529	88,606	155,849	39,113	2,252,050	534,233	25,440	101,396	20,066
Jun-03	439,151	93,475	1,694,505	465,047	9,768	1,819	55,874	12,065	34,895	7,351	383,603	113,026	132,498	37,390	2,750,294	730,173	34,770	132,383	36,892
Jul-03	641,002	147,430	2,282,426	705,146	963	193	87,149	20,395	50,669	11,634	495,853	161,801	162,501	51,895	3,720,563	1,098,495	47,761	254,332	74,811
Aug-03	990,731	249,886	2,620,897	912,876	50	10	96,875	24,769	54,649	13,616	434,526	160,276	116,370	42,191	4,314,098	1,403,625	70,181	161,027	55,300
Sep-03	1,676,358	458,610	3,122,432	1,138,735	0	0	110,014	30,877	69,920	19,250	401,660	163,785	101,555	40,252	5,481,939	1,851,509	84,160	192,544	66,084
Oct-03	1,866,407	564,351	3,469,563	1,463,771	0	0	89,794	27,613	60,330	18,128	405,706	185,581	97,405	44,201	5,989,205	2,303,645	100,158	179,670	66,773
Nov-03	1,557,909	494,862	2,761,725	1,224,630	0	0	71,696	23,135	48,281	15,342	269,032	133,135	61,295	30,610	4,769,938	1,921,714	96,086	179,704	69,197
Dec-03	1,875,468	653,777	3,334,468	1,509,326	0	0	87,683	31,002	68,394	23,552	294,596	140,951	63,426	30,460	5,724,035	2,389,067	108,594	230,109	100,038
Jan-04	2,611,649	998,776	3,791,114	1,957,883	0	0	105,431	41,204	72,869	27,929	327,135	178,041	67,825	36,797	6,976,023	3,240,630	154,316	182,708	76,158
Feb-04	2,339,950	863,590	2,868,432	1,614,639	0	0	98,938	37,536	74,933	27,912	238,517	138,731	75,771	45,984	5,696,541	2,728,392	143,600	166,794	70,504
Mar-04	2,505,102	887,101	3,777,206	1,442,431	0	0	132,352	48,115	92,364	33,567	367,722	143,090	131,874	50,509	7,006,620	2,604,813	118,401	235,792	71,876
2003-04	17,191,668	5,544,625	32,368,842	13,059,493	10,781	2,022	1,043,894	318,011	688,520	210,222	4,248,149	1,681,736	1,334,922	490,384	56,886,776	21,306,492	83,884	235,792	71,876

Note: 1. Notional Turnover = (Strike Price + Premium) * Quantity.
2. Index Futures, Index Options, Stock Options and Stock Futures were introduced in June 2000, June 2001, July 2001 and November 2001, respectively.

Knowledge Initiatives

Several initiatives have been taken over the last few years with a view to develop the skills of market intermediaries, educate the investors and promote high quality research in the securities market. In order to further improve the skills and widen the knowledge base of people involved in the securities market, SEBI is planning to set up a global securities training centre, the 'National Institute for Securities Training'.

Quality Intermediation

Given the large number of different intermediaries, who compete among themselves to entice the investors to subscribe to their issues, the investors are in a dilemma as to which intermediary is to be patronized. This dilemma is not restricted to only the investors, but also to the issuers of securities. In this scenario, how does an investor/ issuer discriminate among them? How does he know that a particular intermediary really understands his needs and can handle his money efficiently? Fortunately, all the intermediaries in the securities market are now registered and regulated by SEBI. There are codes of conduct prescribed for each intermediary as well as for their employees. Further, there is a system to monitor and inspect their operations. In case of violation of any regulation disciplinary actions are taken against them. All the intermediaries in the market are mandated to have a compliance officer who reports independently to SEBI about any non-compliance observed by him. Thus, a reasonably satisfactory arrangement is in place to ensure good conduct of the intermediaries.

In some segments of the financial markets such as the insurance and banking, there is conscious effort being made to equip the personnel joining these organizations with the required expertise. The employees of insurance companies upgrade their skills by taking associate and fellow examinations offered by the Insurance Institute of India. Similarly, bank officials can take junior associate and certified associate examinations conducted by Indian Institute of Bankers. However, in the securities market, there has been no such effort initiated. As a result, the professionalization of intermediaries has been left, by and large, to the market forces.

In some of the developed and developing markets, there is a system of testing and certification for persons joining market intermediaries. This ensures that these personnel have a minimum required knowledge about the market and the existing regulations. The benefits of this system are wide spread. While the intermediaries are assured of qualified staff, the employees get an opportunity to improve their career prospects. This in turn instills confidence in the investors to be associated with the securities market.

The formal educational or training programme on securities markets is not adequate to cover their areas of operations. For instance, no academic course teaches how to maintain depository accounts or to sell mutual fund products, issue contract notes or clear and settle trades on a stock exchange. As a result, a need for certification was being increasingly felt by the regulators as well as by the securities industry.

Initiatives in India

With a view to improve the quality of intermediation, SEBI had set up a Committee to prescribe standards of knowledge necessary for different types of specialized functions in the securities industry at operational and supervisory levels. The committee recommended that an examination based certification system was ideal to meet the requirements of the Indian capital markets. In the initial period, the test may be offered on a voluntary basis, but after a period of two years, the test is to be made mandatory. Thereafter, every person regardless of his educational qualifications has to pass the certification test within a period of 12 months from the date of his employment with the intermediary. Also, among the existing staff, two persons or 20%, whichever is higher, have to obtain the certificate within 12 months from the date on which the test becomes mandatory. If the intermediary is unable to employ the minimum number of certified persons, then it would automatically be de-registered from the date of the said violation. Initially there may be a single common test for all types of market intermediaries, subsequently specialised tests may be introduced. The examination can be taken by anyone, irrespective of qualifications, age, employment or experience. The Committee designed an exhaustive syllabus with a view to test the understanding a candidate has acquired of the securities market. It also tests his ability to provide sound advice to investors. Though the testing and certification system as recommended by the committee is yet to be operationalised, it has created an awareness of and need for certification among the market participants.

The L. C. Gupta Committee was set up by the SEBI to develop appropriate regulatory framework for derivatives trading in India. It recommended that the broker-members, sales persons/dealers in the derivatives market must pass a certification programme approved by the SEBI. This was reinforced by the Parliamentary Standing Committee on Finance, which examined the derivatives bill. The standing committee recommended that SEBI should in consultation with the stock exchanges endeavour to conduct the certification programme on derivatives trading with a view to educate investors and market players. Pursuant to this, SEBI has mandated that trading members must have qualified approved users and sales persons, who have passed an approved certification programme.

The Association of Mutual Funds in India (AMFI) has taken a major initiative to build a cadre of trained professional distributors of mutual fund products by starting the AMFI certification for agents and distributors for mutual fund schemes. SEBI has supported AMFI by mandating it for all MFs to appoint agents/distributors who have obtained AMFI certification w.e.f November 1, 2001. In case of firms/companies, the requirement of certification may be made applicable to the persons engaged in sales and marketing.

NSE's Certification in Financial Markets

National Stock Exchange's Certification in Financial Markets (NCFM), a testing and certification mechanism, has become extremely popular and is sought after by the candidates as well as employers due to its unique on-line testing and certification programme. It offers all the certifications mandated by SEBI, IRDA, NSDL, AMFI, FIMMDA and NSE itself. The entire process from generation of question paper, invigilation, testing, assessing, scores reporting and certifying is fully automated-there is absolutely no human intervention. It allows tremendous flexibility in terms of testing centres, dates and timing by providing easy accessibility and convenience to candidates as they can be tested at any time and from any location. The purpose is to test the practical knowledge and skills that are required to operate in the financial markets, in a very secure and unbiased manner.

NCFM offers a comprehensive range of modules covering many different areas in finance. Some of these modules enjoy regulatory and/or industry patronage (Table 8-1). A total of approximately 140,000 candidates have taken test of different modules of NCFM as at end June 2004.

Table 8-1: NCFM Modules

Sl. No.	Name of Modules	Primary Inspiration
1.	Derivatives Core Module	Regulatory Requirement
2.	NSDL - Depository Operations Module	Industry (NSDL) Initiative
3.	Surveillance in Stock Exchanges Module	Regulatory Persuasion
4.	AMFI - Mutual Funds (Advisors) Module	Industry (AMFI) Initiative
5.	AMFI - Mutual Funds (Basic) Module	Industry (AMFI) Initiative
6.	Capital Market (Dealers) Module	SRO's Requirement
7.	Pre-recruitment Examination for Life Insurance Agents	Regulatory Requirement
8.	Pre-recruitment Examination for General Insurance Agents	Regulatory Requirement
9.	FIMMDA - NSE Debt Market (Basic) Module	Industry (NSE & FIMMDA) Initiative
10.	Securities Market (Basic) Module	Industry (NSE) Initiative
11.	Commodities Market Module	Industry (NSE) Initiative

Through a system of certification, it can be ensured that intermediation is carried out by trained personnel. This would induce investors to use their services. Industry/SROs/Regulators have made a modest beginning, but adequate attention is not given to this dimension of the market. Though NCFM has been offering a wide range of modules, there is still scope to offer such certifications for each category of intermediary/activity. SEBI should also specify certification as a mandatory requirement for all operational level employees for all types of intermediaries. For instance, IRDA has made it compulsory for all the life insurance agents and general insurance agents.

Hence, it is required that all new employees joining the intermediaries and all intermediaries joining the market, should be certified. For the existing intermediaries and employees, a grace period of five years should be given to qualify for this certification. The employees should also be required to update their skills and expertise by seeking certification at intervals of five years. There should be an arrangement to maintain a database of certified professionals and enforce a code of conduct for them so as to enable prospective employers access the database to meet their personnel requirements. This would enhance the knowledge and skill of the intermediaries (including regulators and SROs), who, in turn, can educate and guide the investors in securities and issuers of securities.

Research Initiatives

The regulators and SROs have been actively promoting academicians and market participants to carry out research about various topics in the various segments of securities market. The initiatives by a few of them are presented below:

SEBI

In order to improve the understanding and knowledge about Indian capital market, and to assist in policy-making, SEBI has been promoting high quality research in capital market. It has set up an in-house research department, which brings out working papers on a regular basis (Table 8-2). During the year, several research studies (topics as presented below) have also been conducted *viz.*, *Cost Benefit Analysis of T+1, Development of Corporate Debt Market in India, Behavioral Economics: Case of Irrational Behavior of Market Agents, Disclosures Standards in Indian Stock Market: A Cross Country Comparison, IPO Analysis: Shareholding Pattern in the Immediate Post-Listing Phase, Short Selling: Overview, Review and Issues, Corporate Governance: A Brief Account of the Major Developments, Assessment of Securities Settlement System in India.*

Table 8-2: Working Papers of SEBI

Sl. No.	Title of Study
1.	Stock Market Volatility: An International Comparison
2.	Transaction Cost for Equity Shares in India
3.	Stock Market Volatility-A Comparative Study of Selected Markets
4.	Transaction Cost for Equity Shares in India (Revised)
5.	Dematerialisation: A Silient Revolution in the Indian Capital Market
6.	Impact of Takeover Regulations on Corporate Sector in India - A Critical Appraisal
7.	Trade Execution Cost of Equity Shares in India
8.	Price Discovery and Volatility on NSE Futures Market

NSE Research Initiative

NSE administers a scheme called the NSE Research Initiative. This aims at improving the market efficiency further. The initiative fosters research with a purpose to support and facilitate stock exchanges to design market microstructure, to help participants frame their strategies, assist regulators to frame regulations, and in general to broaden the knowledge horizon of the securities market. The initiative has received tremendous response from the academics as well as the market participants from within and outside the country. The studies completed/ under progress under the initiative are presented in Table 8-3.

Data Dissemination

NSE compiles, maintains and disseminates high quality data to market participants, researchers and policy-makers. This acts as a valuable input for formulating strategy, doing research and making policies. NSE has been maintaining the historical database of all the details of every order placed on its trading system and every trade executed. This data is disseminated through monthly CD releases which are priced at a nominal rate. The following information is available on CDs:

- Summary information about each security's high price, low price, closing price and last traded price, turnover (value and volume), and number of trades for each trading day.
- Database of stock market indices computed by IISL. Both intra day and end of day information is available for Nifty, Nifty Junior and Defty.
- Snapshots of limit order book of NSE at different points during a day.
- Database of circulars issued during the month. Every development in the market in terms of market design is documented in these circulars.

Besides, NSE's web-site itself is a storehouse of information.

Table 8-3: Studies under the NSE Research Initiative

Sl. No.	Title of Study
Completed Papers	
1.	Econometric Estimation of Systematic Risk of S&P CNX Nifty Constituents
2.	Stock Market Development and its Impact on the Financing Pattern of the Indian Corporate Sector
3.	Efficiency of the Market for Small Stocks
4.	Determinants of Financial Performance of Indian Corporate Sector in the Post-Liberalization Era: An Exploratory Study
5.	Should pension funds invest in equities? An analysis of risk-return tradeoff and asset allocation decisions
6.	Changes in liquidity following exposure to foreign shareholders: The effect of foreign listings, inclusion in country funds and issues of American Depositary Receipts
7.	Is the Spread Between E/P Ratio and Interest Rate Informative for Future Movement of Indian Stock Market?
8.	Merger Announcements and Insider Trading Activity in India: An Empirical Investigation
9.	Achieving an Individual Investor Friendly System using the power of the Internet
10.	Improved Techniques for using Monte Carlo in VaR estimation
11.	Short selling and its Regulation in India in International Perspective
12.	Empirical investigation of multi-factor asset pricing models using Artificial Neural Network
13.	Idiosyncratic Factors in Pricing Sovereign Bonds: An Analysis of the Government of India Bond Market
14.	The Extreme Value Volatility Estimators and Their Empirical Performance in Indian Capital Markets
15.	Equity Market Interlinkages: Transmission of Volatility – A Case Of US and India
16.	Institutional Investors and Corporate Governance in India
17.	Dividend policy of Indian Corporate Firms : An Analysis of Trends & Determinants
18.	Market Microstructure Effects of Transparency of Indian Banks
19.	Futures Trading, Information and Spot Price Volatility of NSE-50 Index Futures Contract
20.	Measuring productive efficiency of stock exchanges using price adjustment coefficients
21.	Do Futures and Options trading increase stock market volatility?

22. Section switching stock market price effect in the Indian capital market and the policy implications thereof
23. Study of Common Stochastic Trend and Co-integration in the Emerging Markets - A case study India, Singapore and Taiwan
24. Market Discipline in the Indian Banking Sector: An Empirical Exploration
25. Conditional CAPM and Cross sectional returns – A study on Indian Securities Market
26. Evaluating index fund implementation in India
27. Measuring Volumes in the Indian Financial Markets Some Terminological and Conceptual Issues
28. Corporate Social Responsibility Initiatives by NSE NIFTY Companies – Content, Implementation Strategies & Impact
29. Measures for Improving Common Investor Confidence in Indian Primary Market : A Survey
30. Informational Content of Trading Volume And Open Interest – An Empirical Study of Stock Options Market In India
31. An analysis of the Dynamic Relationships Between South Asian and Developed Equity Markets
32. Corporate Governance and Market reactions

Papers under Progress

1. The Impact of Introducing Stock Futures Trading on the Cash Market in India
2. An analysis of the Dynamic Relationships Between South Asian and Developed Equity Markets
3. Insider Ownership and Corporate Governance
4. Price and Volume Effects of S & P CNX Nifty Index Reorganization
5. Understanding Speculative Bubbles in Stock Markets
6. Seasoned Capital Offerings: Earnings Management and Long-Run Operating Performance of Indian Firms
7. Estimating and Forecasting Volatility of Equity Market Using Asymmetric – GARCH Models
8. Indicators of Shareholder Wealth Maximization: A Comparative study of Indian Industries
9. Volatility Spillovers
10. Management Motivation for Share Buyback: An Empirical Study of Corporate India
11. Improving Index Fund Implementation in India
12. Untangling the web of Indian Pyramids

NSENEWS

NSENEWS, a monthly publication of NSE, is the most referred publication among professionals in the securities market. Among other monthly data, it also puts out articles in order to educate the market participants and investors about latest developments in the industry. These articles analyse market developments in terms of the working of the market and provide theoretical and empirical inputs for policy initiatives.

Investor Awareness

Investors are the backbone of the securities market. An educated and aware investor is not only well acquainted with the functioning of the market, but is also aware of his rights and obligations. As the class of educated investors increases, so does the width of the market. The regulators, self regulatory organisations (SROs), non-government organisations (NGOs), and investor fora/associations need to take steps to educate the investors.

SEBI had launched a nation-wide intensive investor education exercise aimed at creating awareness among the investors in securities market in January 2003. Following the national launch, the campaign has already been extended to 12 states. SEBI has also put in place a comprehensive investor grievances processing mechanism. Office of Investor Assistance and Education (OIAE) is a single window interface of SEBI. It accepts complaints from aggrieved investor for matters falling within its jurisdiction. These complaints received are acknowledged and taken up with the concerned entities either directly by OIAE or by the Investor Complaint Cell of the concerned department.

The Department of Company Affairs (DCA) also informs the general public about the agency they should approach for redressal of their grievances. For complaints relating to deposits in banking companies and non-banking financial companies, the investors should approach the RBI. All complaints relating to listed companies are dealt by SEBI and for unlisted companies by DCA. In the case of deposits from non-banking non-financial companies, the depositors should approach the Company Law Board. If the orders passed by the Board are not honored, then they should approach the concerned Registrar of Companies. These complaints relate to non-registration of transfer of shares, non-refund of share application money, non-receipt of dividends, non-receipt of duplicate shares, non-issue of share certificates, non-issue of debenture certificates, bonus shares, share certificates on conversion, after endorsement etc.

Investors' Associations

SEBI registers and supports investor associations engaged in education of investors and redressal of investor complaints. At the end of March 2004, the following Investors Associations were registered with SEBI:

1. Consumer Education and Research Society, Ahmedabad
2. Consumer Unity & Trust Society, Jaipur
3. Ghatkopar Investors' Welfare Association, Mumbai
4. Investors' Grievances Forum, Mumbai
5. Jagrut Grahak Mandal, Patan (Gujarat)
6. Kolhapur Investor' Association, Kolhapur
7. Midas Touch Investors' Association, Kanpur

Investor Protection Fund

Despite the various efforts taken by the regulators and exchange, some problems do arise. A cushion in the form of Investor Protection Funds (IPFs) is set up by the stock exchanges. The purpose of the IPF is to take care of investor claims, which may arise out of non-settlement of obligations by the trading members. The IPF is also used to settle claims of such investors whose trading member has been declared a defaulter. Further, the stock exchanges have been allowed to utilise interest income earned on IPF for investor education, awareness and research.

The Companies Act, 1956 also provides for an Investor Education and Protection Fund (IEPF) to protect the interests of small shareholders. The fund is utilised for conducting direct education programmes, organising seminars, promoting research activities and providing legal assistance to genuine investor litigants through investor grievances forums. The fund is managed by a committee comprising both government and non-government members. The IEPF is constituted from grants received from the government and from the unclaimed dividends, share application money, matured deposits and unclaimed debentures of the corporates.

IEPF provides financial assistance to any organisation/entity/person with a viable project proposal on investors' education and protection. The eligible entities are those registered under the Societies Registration Act or formed as Trusts or incorporated Companies. They should be in existence for a minimum period of 2 years employing a minimum of 20 members. They should be governed by properly established rules, regulations and or by-laws prior to its date of application for registration. In addition, they should not be a profit making entity. The limit for each entity for assistance would be subject to 5% of the budget of IEPF during that financial year and not exceeding 50% of the amount to be spent on the proposed programme/activity.

Disclosures

The spread of information should be uniform across investors in a timely fashion so as to increase the efficiency of the market. One of the major sources of information about a company is the disclosure made by the company itself. The Companies Act has laid down detailed guidelines for disclosures to be made by all companies. These have been supplemented further by the Disclosure and Investor Protection Guidelines of SEBI, and the listing agreement. Under the Companies Act, all companies have to prepare statutorily audited annual accounts, which are to be sent to all shareholders and lodged with the Registrar of Companies, after being approved by the company Board. The listed companies are also required to submit the annual accounts to every stock exchange where they are listed. In addition, listed companies have to prepare abridged unaudited financial summaries for every quarter and submit a cash flow statement. The most substantive financial disclosures of companies are found in the annual reports, particularly the balance sheet and profit and loss account.

It is only very recently that ICAI has issued accounting standards in the areas of consolidation of accounts, segment reporting, deferred taxes, related party transactions and earning per share and their applicability to continuous disclosure requirements. So that the companies would provide fair disclosures of related party transactions and consolidated accounts of subsidiaries and associate companies, which was not earlier.

While the quantity and quality of financial disclosures is an important issue, how these disclosures are made is also important. Mostly companies have been making the disclosures through the annual reports and the quarterly reports. All other important announcements are made through the public media. It is, however, possible that such information reaches common investors later than it is made available to some others. To impart healthy practices in this regard, the companies are now required to make announcements regarding corporate actions, such as declaration of dividends and bonus, and financial results of the company, within 15 minutes from the close of Board meeting in which these decisions are taken. Further, companies should be promoted to use the information technology for dissemination of information. Some companies, however, may find it unaffordable to maintain web-sites. It would be better to have a common web-site for providing information on various companies at one place.

NSE has put in place a system that ensures proper, up-to-date and correct information is available to the all investors. Such price-sensitive information as bonus announcements, mergers, new line of business, etc. received from the companies is disseminated to all the market participants through the network of NSE terminals all over India. The Exchange initiates action where such price-sensitive information is not provided to the Exchange at the prescribed time. NSE has recently launched a new system, under which all corporate announcements including that of Board meetings that needs to be disclosed to the market is handled in a straight through and hands free manner. As and when the company submits the information in electronic form the same is seamlessly broadcast to the market and also simultaneously displayed on the NSE website.

NSE conducts various seminars and programs for the investors all over the country with a view to educate them on their rights and obligations and also the precautions they should take while dealing in the securities market.

EDIFAR

In association with National Informatics Centre (NIC), SEBI has set up an Electronic Data Information Filing and Retrieval (EDIFAR) System. This system facilitates an electronic filing of certain information by listed companies. This is an automated system for filing, retrieving and disseminating of time sensitive corporate information, which are now being filed physically by the listed companies. The primary objective is to centralize the information and accelerate its dissemination and thereby enhance transparency and efficiency for the benefit of various classes of market participants.

The system is being introduced in phases and is applicable to 2,544 companies. In the first phase, the information that is filed online are: (i) financial statements comprising of balance sheets, profit and loss account and full version of annual report, half yearly financial statements including cash flow statements and quarterly financial statements, (ii) corporate governance reports, (iii) shareholding pattern statement, (iv) statement of action taken against the company by an regulatory agencies and (v) such other statement, information or report as may be specified by SEBI from time to time in this regard.

These filings are in addition to the filings made by the companies with the stock exchange in compliance with the provisions of the listing agreement. Gradually the physical filing should be discontinued and both the number of companies as well as disclosure statements should be expanded to cover all the actively traded companies for all the disclosure statements. EDIFAR is available at http: //sebiedifar.nic.in.

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