NATIONAL STOCK EXCHANGE OF INDIA LIMITED

Volume VIII 2005

Indian Securities Market

A Review

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Volume VIII 2005

This publication reviews the developments in the securities market in India

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National Stock Exchange of India Limited

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Abbreviations

ADB	Asian Development Bank
ADRs	American Depository Receipts
AIFIs	All India Financial Institutions
AMC	Asset Management Company
AMFI	Association of Mutual Funds in India
ATM	At-The-Money
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
CFM	Carry Forward Margin
CFRS	Carry Forward under Rolling Settlement
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	Negotiatied 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
NSEIL	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
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

There have been significant changes in the securities market in India as well as in the international arena during the last one year. This is mainly due to the reforms/initiatives taken by the Government and the Regulators. As a result of these coordinated efforts, the market microstructure has been further modernized and refined. In the area of clearing and settlement, reforms in the payment system have been initiated by RBI *viz.,* real time gross settlement (RTGS) has been introduced by RBI to settle inter-bank transactions online at real time mode. These reforms along with other market developments which have taken place in the period April 2004 to June 2005 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

Transfer of resources from those with the idle resources to others who have a pressing need for them is perhaps most efficiently achieved through the securities markets. To state this formally, securities markets provide channels for allocation of savings to investments. Savings are linked to investments by a variety of intermediaries through a range of complex financial 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, the investors in the 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	
	2004	2005
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	9,368	9,128
Corporate Brokers	3,746	3,733
Sub-brokers	12,815	13,684
FIIs	540	685
Portfolio Managers	60	84
Custodians	11	11
Share Transfer Agents	78	83
Primary Dealers	18	17
Merchant Bankers	123	128
Bankers to an Issue	55	59
Debenture Trustees	34	35
Underwriters	47	59
Venture Capital Funds	45	50
Foreign Venture Capital Investors	9	14
Mutual Funds	37	39
Collective Investment Schemes	--	--

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

Market Segments

The securities market has two interdependent and inseparable segments, the new issues (primary) market and the stock (secondary) market. The primary market provides the channel for creation and sale of new securities, while the secondary market deals in securities previously issued. The securities issued in the primary market are issued by public limited companies or by government agencies. The resources in this kind of market 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 (dated securities and treasury bills).

The secondary market enables participants who hold securities to adjust their holdings in response to changes in their assessment of risks and returns. Once the new securities are issued in the primary market they are traded in the stock (secondary) market. 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 The Bombay Stock Exchange (BSE) provides trading in the derivatives.

International Scenario

Following the implementation of reforms in the securities industry during the last decade, Indian stock markets have stood out in the world ranking as well as in the developed and emerging markets. As may be seen from Table 1.2, India has a turnover ratio of 113.7%, which is quite comparable to the other developed market like the US and UK which has turnover ratios of 126.5% and 140.5% respectively. As per the Standard and Poor's Factbook India ranked 18th in terms of market capitalization (17th in 2003), 18th in terms of total value traded in stock exchanges (16th in 2003) and 15th in terms of turnover ratio (6th in 2003) as on December 2004. India ranked second in terms of listed securities on the Exchange next only to 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 approximately 9000 listed companies at the end of March 2005, while S&P considers only 4,730 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 2004

Particulars	USA	UK	Japan	Germany	Singa-pore	Hong-kong	China	India
No. of listed Companies	5,231	2,486	3,220	660	489	1,086	1,384	4,730
Market Capitalisation ($ Bn.)	16,324	2,816	3,678	1,195	172	861	640	388
Market Capitalisation Ratio (%)	148.2	167.6	84.3	57.3	190.1	488.8	45.2	68.0
Turnover ($ Bn.)	19,355	3,707	3,430	1,406	81	439	748	379
Turnover Ratio (%)	126.5	140.5	103.5	123.7	51.2	55.7	113.3	113.7

Source: S&P Global Stock Markets Factbook, 2005

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 capitalization in India is 73.7% whereas US index accounted for 92.6%. The ten largest index stocks share of total market capitalization in 33.4% in India and 14.7% in case of US.

Market Concentration in the World Index as on End 2004

(In Percent)

Market	Index Stocks Share of Total Market Capitalization	10 largest Index Stocks' Share of total Market Capitalization
Japan	97.1	18.2
Singapore	94.6	34.2
France	75.1	35.6
Germany	87.1	45.1
Italy	98.8	57.2
United Kingdom	95.9	40.9
United States	92.6	14.7
India	73.7	33.4

Source: S&P Global Stock Markets Factbook, 2005

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 though have grown from US $ 37.75 trillion in 2002 to $39.31 trillion in 2004 (though it witnessed a decline and stood at US $ 29.6 trillion in 2003). It is significant to note that US alone accounted for about 49.24% of worldwide turnover in 2004. Despite having a large number of companies listed on its stock exchanges, India accounted for a meagre 0.96% in total world turnover in 2004. The market capitalization of all listed companies taken together on all markets stood at US$ 38.90 trillion in 2004 ($32.01 trillion in 2003). The share of US in worldwide market capitalization decreased from 44.54% as at end-2003 to 41.96% in end-2004, while Indian listed companies accounted for 1.00% of total market capitalization in 2004.

Table 1.3 : Market Capitalisation and Turnover for Major Markets

(US $ million)

Country/Region	Market Capitalisation (end of period)			Turnover		
	2002	2003	2004	2002	2003	2004
Developed Markets	**21,039,479**	**28,370,952**	**34,173,600**	**35,287,887**	**26,805,163**	**35,341,782**
Australia	378,846	585,475	776,403	294,658	369,845	514,249
Japan	2,126,075	3,040,665	3,678,262	1,573,279	2,272,989	3,430,420
UK	1,864,262	2,460,064	2,815,928	1,909,716	2,211,533	3,707,191
USA	11,098,102	14,266,266	16,323,726	25,371,270	15,547,431	19,354,899
All Emerging Markets	**2,419,060**	**3,656,292**	**4,730,418**	**2,465,909**	**2,896,804**	**3,967,806**
China	463,080	681,204	639,765	333,369	476,813	748,274
India	131,011	279,093	387,851	197,118	284,802	379,085
Indonesia	29,991	54,659	73,251	13,042	14,774	27,561
Korea	249,639	329,616	428,649	792,165	682,706	638,891
Malaysia	123,872	168,376	190,011	27,623	50,135	59,878
Philippines	18,549	23,565	28,948	3,103	2,635	3,664
Taiwan	261,474	379,023	441,436	631,931	592,012	718,619
World Total	**23,458,539**	**32,027,244**	**38,904,018**	**37,753,796**	**29,701,967**	**39,309,589**
US as % of World	**47.31**	**44.54**	**41.96**	**67.20**	**52.34**	**49.24**
India as % of World	**0.56**	**0.87**	**1.00**	**0.52**	**0.96**	**0.96**

Source: S&P Gloal Stock Markets Factbook, 2005

There has also been an increase in market capitalization as 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 100.1% for high-income countries as at end-2003 and lowest for low-income countries at 37.3%. Market capitalization as per cent of GDP for India stood at 46.5% as at end-2003. The turnover ratio, which is a measure of liquidity, however was approximately same for both the high-income countries and low-income countries 110.1% and 130.5%, respectively. The total number of listed companies stood at 27,594 for high-income countries, 14,456 for middle-income countries and 7,988 for low-income countries as at end-2004.

Table 1.4: Select Stock Market Indicators

Markets	Market Capitalisation as % of GDP			Turnover Ratio (%)			Listed Domestic Companies		
	1990	2002	2003	1990	2003	2004	1990	2003	2004
High Income	**51.6**	**83.4**	**100.1**	**59.4**	**137.9**	**110.1**	**17,747**	**26,947**	**27,594**
Middle Income	**19.4**	**35.3**	**44.5**	**78.3**	**44.1**	**60.9**	**4,231**	**13,307**	**14,456**
Low & Middle Income	**18.8**	**33.3**	**43.5**	**70.7**	**57.8**	**72.4**	**7,677**	**20,629**	**22,444**
East Asia & Pacific	16.4	40.4	53.5	118.1	72.7	103.5	774	3,132	3,582
Europe & Central Asia	2.2	22.7	29.7	--	53.6	37.9	110	6,781	7,776
Latin America & Caribbean	7.7	27.4	33.2	29.8	21.7	22.0	1,734	1,381	1,468
Middle East & N. Africa	27.4	26.1	47.3	--	19.6	64.4	817	1,585	1,803
South Asia	10.8	22.7	39.8	54.0	180.3	131.2	3,231	6,839	6,909
Sub-Saharan Africa	52.3	47.3	105.9	--	23.7	39.3	1,011	911	906
Low Income	**9.8**	**22.6**	**37.3**	**53.8**	**139.6**	**130.5**	**3,446**	**7,322**	**7,988**
India	**12.2**	**25.7**	**46.5**	**65.9**	**14.1**	**115.5**	**2,435**	**5,644**	**4,730**
World	**48.0**	**74.6**	**89.7**	**57.2**	**123.0**	**72.4**	**25,424**	**47,576**	**50,038**

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 20.60% 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 1.5: 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
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	10.3
2003-04	N. A	64.9	38.6	11.4
2004-05 BE	N. A	65.8	27.3	N. A

Source: CMIE & RBI.

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 58.43% of total shares. Though the non-promoter holding is about 41.57%, the public held only 15.52% and the institutional holdings (by FIIs, MFs, FIs) accounted for 16.15%. There is not much significant difference in the shareholding pattern of companies in different sectors. About 57.64% of shares in companies in Petrochemicals sector are held by Indian promoters.

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 23.0%. In 2004-05, the state and the central government market borrowings financed 27.3% and 65.8% of the fiscal deficit respectively.

Households

According to the RBI data, household sector accounted for 84.7% of gross domestic savings during 2003-04. However, this has increased to 84.8% in 2004-05. In the last fiscal 2004-05, they have invested 39.4% of financial savings in deposits, 26.4% in insurance/provident funds, 19.0% on small savings, and 6.1% in securities (out of which the investment in Gilts has been 5.0%), including government securities and units of mutual funds (Table 1.7). Thus the fixed income bearing instruments are the most preferred assets of the household sector.

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

Table 1.6 : Shareholding Pattern at the end of March 2005 of Companies Listed on NSE

(In per cent)

Sectors	Non-Pomoters' Holding							Promoters' Holding		
	Institutional Investors			Non - Institutional Investors						
	FIs/Banks/ Insurance Companies	FIIs	MFs & UTI	Indian Public	NRIs/ OCBs	Private Corporate Bodies	Others	Indian Promoters	Foreign Promoters	Persons Acting in Concert
Finance	7.18	13.54	1.79	18.45	1.06	4.93	4.39	44.33	0.91	3.40
FMCG	10.64	11.91	0.90	19.85	0.50	1.70	0.14	13.32	40.83	0.23
Infrastructure	1.50	6.25	0.47	4.09	0.31	1.45	0.71	84.93	0.20	0.10
Information Technology	2.51	10.66	1.86	23.99	1.34	12.28	5.07	38.33	1.70	2.27
Manufacturing	6.70	7.27	2.83	14.60	1.06	4.59	2.89	48.84	7.64	3.59
Media & Entertainment	2.87	13.89	3.24	26.12	1.14	8.70	1.92	34.60	7.02	0.51
Petrochemicals	4.47	3.45	1.34	16.34	1.61	4.09	7.86	57.64	0.97	2.23
Pharmaceuticals	3.76	9.61	2.04	21.92	2.18	5.03	2.97	43.10	6.72	2.66
Services	8.16	7.20	2.68	17.78	1.08	4.63	2.39	46.78	7.50	1.79
Telecommunication	4.42	17.06	1.42	5.76	13.84	2.73	1.68	48.54	3.68	0.88
Miscellaneous	9.55	4.18	3.25	21.18	2.17	8.33	3.92	36.79	5.95	4.68
All Companies	**5.66**	**8.48**	**2.01**	**15.52**	**1.66**	**4.78**	**3.46**	**50.24**	**5.63**	**2.56**

Table 1.7: Savings of Household Sector in Financial Assets

(In per cent)

Financial Assets	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03 (P)	2003-04 (P)	2004-05 #
Currency	**13.3**	**8.6**	**7.4**	**10.4**	**8.6**	**6.4**	**9.5**	**8.9**	**10.5**	**9.2**
Fixed income investments	**79.1**	**84.5**	**88.0**	**85.3**	**84.2**	**89.4**	**82.4**	**86.9**	**84.7**	**84.8**
Deposits	42.5	48.1	46.6	39.2	39.2	44.3	37.9	40.9	41.6	39.4
Insurance/Provident/Pension Funds	29.2	29.4	30.1	33.3	34.0	33.5	33.4	31.1	27.6	26.4
Small Savings	7.4	7.0	11.3	12.8	11	11.6	11.1	14.9	15.5	19.0
Securities Market	**7.7**	**6.9**	**4.5**	**4.2**	**7.3**	**4.3**	**8.0**	**4.2**	**4.8**	**6.1**
Mutual Funds	0.5	2.7	1.4	1.9	4.9	1.3	1.7	1.3	1.2	0.4
Government Securities	0.4	0.4	1.6	0.6	0.9	1.6	5.7	2.5	4.7	5
Other Securities	6.8	3.8	1.5	1.7	1.5	1.4	0.6	0.4	-1.1	0.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: RBI.

P : Provisional Figures

: Preliminary Figures

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. 2,548,990 million were raised by the government and corporate sector during 2004-05 as against Rs. 2,730,070 million during the preceding year. Government raised about two third of the total resources, with central government alone raising nearly Rs. 1,065,010 million.

Corporate Securities

The average annual capital mobilisation from the primary market has grown manifold since the last two-three decades. Data in table 1.8 shows that there is a high preference for raising resources in the primary market through private placement route. Private placements accounted for 76% of total resources mobilized through domestic issues by corporate sector during 2004-05.

As may be seen from the Table 1.8, 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. 33,530 million through American Depository Receipts (ADRs)/Global Depository Receipts (GDRs).

FIIs have invested heavily in Indian market in 2004-05. They had net cumulative investments of US$ 35.93 billion as at end of March 2005. There were 685 FIIs registered with SEBI as of end March 2005.

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

Table 1.8: Resource Mobilisation from the Primary Market

(Rs. mn.)

Issues	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Corporate Securities	**366,890**	**371,470**	**421,250**	**601,920**	**724,500**	**783,956**	**744,032**	**752,411**	**748,500**	**1,092,970**
Domestic Issues	361,930	338,720	377,380	590,440	689,630	741,986	720,612	718,147	717,520	1,059,440
Non-Govt. Public Companies	160,750	104,100	31,380	50,130	51,530	48,900	56,920	18,777	36,750	134,820
PSU Bonds	22,920	33,940	29,820			-	--	--	--	--
Govt. Companies	10,000	6500	430			-	3,500	--	1,000	26,840
Banks & FIs	34,650	43,520	14,760	43,520	25,510	14,720	10,700	29890	40,760	57,260
Private Placement	133,610	150,660	300,990	496,790	612,590	678,360	649,500	669,480	639,010	840,520
Euro Issues	12,970	55,940	40,090	11,480	34,870	41,970	23,420	34,264	30,980	33,530
Government Securities	**467,830**	**426,880**	**673,860**	**1,060,670**	**1,133,360**	**1,284,830**	**1,525,080**	**1,819,790**	**1,981,570**	**1,456,020**
Central Government	405,090	361,520	596,370	939,530	996,300	1,151,830	1,338,010	1,511,260	1,476,360	1,065,010
State Governments	62,740	65,360	77,490	121,140	137,060	133,000	187,070	308,530	505,210	391,010
Total	**834,720**	**798,350**	**1,095,110**	**1,662,590**	**1,857,860**	**2,068,786**	**2,269,112**	**2,572,201**	**2,730,070**	**2,548,990**

Source: RBI.

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. 1,495,540 million. During the last one decade, the resources mobilized by the MFs are increased from Rs. 112,440 million in 1993-94 to Rs. 468,090 million in 2004-05.

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, however it witnessed a slight dip in the year 2004-05 to Rs. 1,065,010 million (Table 1.8). The issues by state governments have also increased from Rs. 25,690 million in 1990-91 to Rs. 505,210 million in 2003-04, but the same trend witnessed in case of Government securities followed in the State governments too, wherein they raised Rs. 391,010 million in 2004-05. The Central Government mobilised Rs. 803,500 million through issue of dated securities and Rs. 261,510 million through issue of T-bills. After meeting repayment liabilities of Rs. 343,160 million for dated securities, and redemption of T-bills of Rs. 261,360 million, net market borrowing of Central Government amounted to Rs. 460,500 million for the year 2004-05. The state governments collectively raised Rs. 391,010 million during 2004-05 as against Rs. 505,210 million in the preceding year. The net borrowings of State Governments in 2004-05 amounted to Rs. 339,780 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. The weighted average cost of its borrowing have increased to 6.11% in 2004-05. 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 14.13 years in 2004-05.

Secondary Market

Corporate Securities

Exchanges in India offer screen based, electronic trading. The trading system is connected using the VSAT technology from around 345 cities. There were 9,128 trading members registered with SEBI as at end March 2005 (Table 1.9).

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. 16,984,280 million at the end of March 2005. The market capitalization ratio defined as the value of listed stocks divided by GDP is sued 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 119.1% in 2004-05 against 52.3% 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. 9,689,098 million in 2002-03. However, the year 2004-05 maintained its trading volume when compared to the previous year. The trading volume for the fiscal 2004-05 stood at 16,668,960 million. The turnover ratio, which reflects the volume of trading in relation to the size of the market, stood at 98.1% for the year 2004-05.

Table 1.9: Secondary Market - Selected Indicators

(Amount in Rs. mn.)

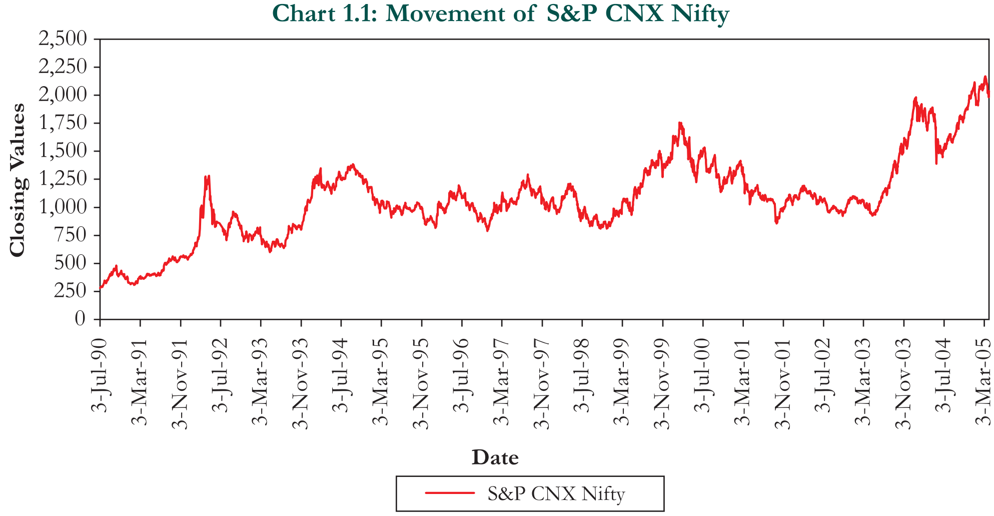
At the End of Financial Year	Capital Market Segment of Stock Exchanges								Turnover of Non-Repo Government Securities		Turnover of Derivatives Segment of Exchanges
	No. of Brokers	No. of Listed Companies	S&P CNX Nifty	Sensex	Market Capitalisation	Market Capitalisation Ratio (%)	Turnover	Turnover Ratio (%)	On WDM Segment of NSE	On SGL	
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	9,689,098	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
2004-05	9,128	–	2035.65	6492.82	16,984,280	119.1	16,668,963	98.1	8,493,250	12,608,667	25,641,269

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

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 89% of total turnover (volumes on all segments) in 2004-05. Top 5 stock exchanges accounted for 99.9% of turnover, while the rest 18 exchange had negligible volumes during 2004-05 (Table 1.10).

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 2004-05 witnessed a favorable movement in the Nifty, wherein it registered its all time high in March 9, 2005 of 2183.45. The point-to-point return of Nifty was 14.88% for 2004-05.

Chart 1.1: Movement of S&P CNX Nifty



Government Securities

The trading in non-repo government securities declined marginally in the year 2004-05 as compared to the previous year. The aggregate trading volumes in non-repo central and state government dated securities on SGL declined from Rs. 17,013,632 million in 2003-04 to Rs. 12,608,667 million in 2004-05 (Table 1.9). The share of WDM segment of NSE in the total of Non-repo government securities decreased marginally from 74.89% in 2003-04 to 67.36% in 2004-05.

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, CNX IT Index and Bank Nifty Index as well as options and futures on single stocks (119 stocks).

Table 1.10: Growth and Distribution of Turnover on Stock Exchanges

(Rs. mn.)

Sl. No.	Stock Exchanges	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
1	NSE	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	45,744,186
2	Mumbai	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	5,357,913
3	Calcutta	621,280	1,056,640	1,787,780	1,717,804	3,571,655	3,550,354	270,747	65,399	19,275	27,150
4	Delhi	100,760	486,310	678,400	517,593	932,889	838,711	58,280	111	34	--
5	Ahmedabad	87,860	205,330	307,710	297,342	375,656	540,352	148,435	154,586	45,445	80
6	Uttar Pradesh	23,730	160,700	153,900	186,267	240,478	247,467	252,373	147,634	117,510	53,430
7	Ludhiana	48,490	52,740	83,150	59,779	77,405	97,322	8,566	0	0	--
8	Pune	70,710	99,030	86,240	74,528	60,868	61,705	11,710	18	0	3
9	Bangalore	8,900	43,980	86,360	67,790	111,474	60,328	703	0	1	--
10	Hyderabad	12,850	4,800	18,600	12,759	12,365	9,778	413	46	20	140
11	ICSE	-	-	-	7	5,452	2,331	554	648	1	--
12	Cochin	18,030	14,010	17,830	7,730	0	1,866	0	0	0	--
13	OCTEI	2,180	2,210	1,250	1,422	35,879	1,259	38	1	158	
14	Madras		23,150	12,280	3,696	2,502	1,092	241	0	1,009	270
15	Madhya Pradesh	2,040	120	10	9	97	24	235	0	0	--
16	Magadh	16,290	27,550	3,230	0	80	16	0	5	1	--
17	Vadodara	12,590	42,680	45,760	17,491	1,593	9	101	25	1	--
18	Gauhati	6,190	4,840	200	302	0	0	1	1	0	--
19	Bhubaneshwar	2,260	2,310	2,020	770	701	0	0	0	0	--
20	Coimbatore	25,030	23,980	21,360	3,947	388	0	266	0	0	--
21	Jaipur	10,470	15,190	4,310	648	21	0	0	0	0	--
22	Mangalore	390	3,730	3,080	112	1	0	0	0	0	0
23	SKSE	5,640	3,980	170	0	0	0	0	0	0	0
	Total	**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**	**51,183,172**

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 total exchange traded derivatives witnessed a value of Rs. 25,641,269 million during 2004-05 as against Rs. 21,422,690 million during the preceding year. NSE proved itself as the market leader contributing 99.5% of the total turnover in 2004-05 in India. Not only in the Indian scenario, but also in the global market NSE has created a niche for itself in terms of derivatives trading in various instruments (discussed in detail with statistics in the chapter 7 on derivatives of this publication).

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 there under. 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 which aims 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 for the market participants to follow.

The regulator has to ensure that the market participants abide by and adhere to the rules and regulations prescribed to them. This in turn shall ensure that the securities market continues to be a major source of finance for corporate and government and also protect the interest of investors.

The responsibility for regulating the securities market is shared by the 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. The orders of SEBI under the securities laws are appellable before the Securities Appellate Tribunal (SAT).

Most of the powers under the SCRA are exercisable by DEA, while a few others by SEBI. The powers of DEA under SCRA are also con-currently exercised by SEBI. 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. The rules under the securities laws are framed by government and regulations by the SEBI. All rules are administered 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 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 brought in with the objective of improving market efficiency, enhancing transparency, preventing unfair trade practices and bringing the Indian market up to the international standards. The following paragraphs list the principal reform measures undertaken since 1992.

SEBI Act, 1992: It created the securities market regulator, the SEBI, with the main objective and responsibility 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 issuance of capital and transfer of securities, in addition to all intermediaries and persons associated with securities market. All market intermediaries are registered and regulated by the SEBI. They are also required to appoint a compliance officer who is responsible for monitoring compliance with 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.

Enactment of the SEBI Act was the first attempt towards integrated regulation of the securities market. SEBI was given full authority and jurisdiction over the securities market under the Act, and was given concurrent/delegated powers for various provisions under the Companies Act and the SCRA. Many provisions in the Companies Act have a bearing on securities markets, and are administered by SEBI. The Depositories Act, 1996 is also administered by SEBI.

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 substantial body of requirements for issuers/intermediaries, with a broad intention to ensure that all the concerned entities 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 so that investors can 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 setting up of NSE, 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 out-cry system has disappeared from India. Today, India can boast that almost 100% trading takes place through electronic order matching.

Technology has been harnessed to carry the trading platform to the premises of brokers. NSE carried the trading platform further to the PCs in the residence of investors through the internet and to hand-held devices through WAP for convenience of mobile investors. This has made a huge difference in terms of equal access to investors in a geographically vast country like 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 S&P CNX Nifty, CNX IT Index, CNX Bank Nifty Index, BSE 30 Index and stock options and stock futures on individual stocks (in NSE 119 as of August 2005) 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 and 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 with the objective 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 2005, the number of companies connected to NSDL and CDSL were 5,536 and 5,068, respectively. The number of dematerialised securities increased to 147.7 billion at the end of March 2005 from 97.7 billion as of end March 2004. As on the same date, the value of dematerialsied securities was Rs. 15,686 billion and the number of investor accounts was 7,306,495. All actively traded scrips are held, traded and settled in demat form. Demat settlement accounts for over 99.9% 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 for 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. This system 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 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. The NSE have also taken special measures for educating the investors, it conducts seminars, workshops and comes out with advertisement both in print and electronic media to communicate to the 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.

RBI permitted two-way fungibility for ADRs/GDRs, which meant that the investors (foreign institutional or domestic) who holds ADRs/GDRs can cancel them with the depository and sell the underlying shares in the market. The company can then issue fresh ADRs to the extent of the shares cancelled. Previously, once a company issued ADR/GDR and if the holder anted to obtain the underlying equity shares of the Indian Company, then, such ADR/GDR would be converted into shared of the Indian Company. Once such conversion took place, it was not possible to recovery the equity shares into ADR/GDR. The result was, every time a conversion took place, companies had to seek Government permission to reissue the depositories.

Government Securities Market

The Government securities market has witnessed significant transformation in the nineties. 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 (D*v*P) 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. Recently, RBI also introduced an electronic order matching system in the Indian gilts market a a part of NDS which is referred to as the NDS-OM. This system is purely order driven, has anonymous order matching, provides timely information both pre-trade and post trade, allows straight-through processing, allows traders to set their preferences in terms of orders, facilitates trading by members on behalf of their constituents and last but not the least provides a precise audit trail of transaction especially in light of the extant guidelines of sale of government securities and *DvP* III mode of settlements.

The major reforms planned include strengthening and modernizing 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 also 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 37 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 where the entire process 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.

Primary Market

Introduction

The issuers issue fresh securities through public issues as well as private placement. The resources, raised by them from domestic as well as international markets, are presented in table 2.1. During 2004-05, a total of Rs. 2,548,990 million were mobilized (decrease of 6.6% over the previous year) by both the government and corporate sector from the primary market through public issues and private placement. 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 and this state was maintained in the year 2004-05 also. This trend was further reinforced by the high confidence showed by the retail investors and the high rate of return given by the public issues. The private placement market accounted for 79.3% of the total resources mobilized domestically, whereas the public issues accounted for 20.7%. The resources raised by Indian corporates from the international capital market through the issuance of FCCBs, GDRs and ADRs have increased marginally during 2004-05 raising Rs. 33,530 million.

Table 2.1: Resource Mobilisation by Government and Corporate Sector

(Rs. mn.)

Issues	2003-04	2004-05 P
Corporate Securities	**748,500**	**1,092,970**
Domestic Issues	717,520	1,059,440
Public Issues	78,510	218,920
Non-Govt. Public Companies	36,750	134,820
PSU Bonds	--	--
Govt. Companies	1,000	26,840
Banks & FIs	40,760	57,260
Private Placement	639,010	840,520
Euro Issues	30,980	33,530
Government Securities	**1,981,570**	**1,456,020**
Central Government	1,476,360	1,065,010
State Governments	505,210	391,010
Total	**2,730,070**	**2,548,990**

Source: RBI Annual Report.

P : Provisional Figures

Policy Developments

In order to refine the primary market design various measures have been taken by the Government, RBI and SEBI. This section throws light on the policy measures initiated during the financial year 2004-05 and April 2005 to June 2005.

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:

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, PCDs, 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.

Pricing of Issues

For an IPO by an unlisted company, if the issue price is Rs. 500 or more, the issuer company has 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

The Green Shoe Option facility will be available in all public issues, *viz.,* IPOs (fresh issue or offer for sale), follow on offerings, public issues either through book building or fixed price route. All pre-IPO shareholders (including promoters) in case of IPOs and pre-issue share holders holding more than 5% shares in case of follow on offerings will be permitted to lend their shares for the purpose of GSO as per specified conditions in the guidelines.

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 'stabilizing agent' (SA) at the end of the stabilization period.
- The company should appoint one of the merchant bankers or book runners, as the SA. They will be responsible for the price stabilization 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 stabilization 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.

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.

Though the pre-issue advertisement is important in creating awareness about the issue, the cost involved in publishing the entire abridged prospectus in the newspaper is quite high. To avoid this cost, the pre-issue advertisements which are mandated for all the public issues shall contain the minimum details prescribed under the SEBI guidelines. The details about the closing and opening of the advertisement shall continue to be optional.

Allocation

In case of the book built issues, the allocation to Retail Individual Investors[1] (RIIs) have been increased from 25% to 35% and correspondingly have reduced the allocation to non-institutional investors (NIIs) from the existing 25% to 15%. Further, in case the book built issues are made pursuant to the requirement of mandatory allocation of 60% to QIBs in terms of Rule 19 (2) (b) of the SCRR, the respective figures shall be 30% of the RIIs and 10% of NIIs.

[1] Retail individual investor is defined in value terms as the one who can apply for shares up to a maximum amount of Rs. 100,000.

Disclosures in the Prospectus

The disclosures made by the issuers in the prospectus are required to be in a particular order. The clauses of section I of the DIP guidelines give the order in which disclosures should appear. The issuers are free to make any other additional disclosures, so long as they are not inconsistent with the guidelines.

With an aim of making the abridged prospectus readable, the guidelines have also been amended to improve upon the readability/visual impact of the contents of the abridged prospectus, deleting the repetitive disclosures.

Miscellaneous

- 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.
- The bidding period for which an issue is open has also been reduced from current 5-10 days (including holidays) to 3-7 working days.
- The issuers (whether listed/unlisted) can now either (i) disclose the price band in the red herring prospectus/application form/abridged prospectus OR (ii) disclose the price band /floor price at least a day before the bid opens.
- Data dissemination is very important for the investors. Ensuring that all relevant information is available with the investors, it has been decided to improve the contents of the information and also ensure uniformity of data displayed on the websites of the concerned exchanges. It is also required that the data is available for a further period of 3 days after the closure of the bids/issue.

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 only discuss the market design as stipulated in the SEBI (DIP) guidelines.

DIP Guidelines, 2000

Disclosure and Investor Protection (DIP) Guidelines of SEBI, was issued in June 1992. SEBI has since then been issuing clarifications/amendments to these guidelines from time to time in order to streamline the public issue process. 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 Registrar of Companies (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. A company cannot make an issue of security/(ies) if the company has been prohibited from accessing the capital market under any order or direction passed by the Board.

- 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. (IL&FS) 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.

In case of initial public offerings by unlisted company, if the issue price is Rs. 500 or more, the issuer company shall have the discretion to fix the face value below Rs. 10 per share, subject to the condition that the face value shall in no case be less than Rs. 1 per share. However, in case the issue price is less than Rs. 500 per share, the face value shall be Rs. 10 per share.

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 exercises 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, for which 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 to the public 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 3 working days and not more than 7 working days (which may be extended to a maximum of 10 working days in case the price band is revised) 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.1,000 million 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. 50 million. A CRA cannot 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. 1000 million, 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. Million)
Category I	To carry on activity of the issue management, to act as adviser, consultant, manager, underwriter, portfolio manager	50.00
Category II	To act as adviser, consultant, co-manager, underwriter, portfolio manager	5.00
Category III	To act as underwriter, adviser, consultant to an issue	2.00
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 2004-05 witnessed an upsurge in the primary market activity induced by a buoyant secondary market, sharp economic recovery, and political stability. The resource mobilization by way of IPOs and new issues by listed companies leaped to Rs. 282,560 million in 2004-05 from Rs. 232,720 million in 2003-04. As compared with 57 total schemes in 2004-05, there were total of 60 issues in this year (Table 2.2). The share of public issues in the total resources mobilized witnessed a slight dip from 95.7% in 2003-04 to 87.2% in 2004-05. Mobilisation of resources through rights issues recorded a significant rise in the year 2004-05. It witnessed a jump from Rs. 10,070 million in 2003-04 to Rs. 36,160 million in 2004-05. By number, the year witnessed 26 companies using the rights route. This was higher by 18% over the previous year that had seen 22 issues. The largest issue in the year, as per the Prime database was from Sterlite Industries (Rs. 19,723 million). The other Rs. 1,000 million plus issues were from ING Vysya Bank, United Breweries, Southern Iron and Steel, Karnataka Bank and Bharat Forge.

Table 2.2: Resource Mobilisation from Public Issues

(Amount in Rs. mn.)

Issue	2003-04		2004-05	
	Number	Amount	Number	Amount
IPOs	21	34,340	23	137,490
Issues by Listed Companies	36	198,380	37	145,070
Public Issues	14	188,310	11	108,910
Rights Issues	22	10,070	26	36,160
Total	**57**	**232,720**	**60**	**282,560**

Source: SEBI Bulletin, September 2005 Issue.
Note: The figures for 2003-04 are revised figures

According to a press statement of the Prime database "Rights offers are made at a discount to the ruling market price and hence are able to draw in shareholders response especially when the secondary market is doing well. The turnaround, in the fortunes of the rights issues both by numbers and by amount has come about primarily because of the bullish conditions in the secondary market which ran through almost the whole of the year. Companies offered shares on rights basis either to expand, diversify or simply to restructure their balance sheets."

A significant spurt can be seen in the total resource mobilization from the public issues as shown in the Table 2.2. The listed companies mobilised Rs. 145,070 million through 37 issues during 2004-05, while in 2003-04, there were 36 issues by listed companies for Rs. 198,380 million.

During 2004-05, there were 19 mega issues (Rs.1000 million and above) as against 22 such issues in the preceding year. The average size of an issue was Rs. 7,508 million in 2004-05 as against Rs. 6,327 million in 2003-04.

Most of the issues were made by private sector companies. Of the 60 issuers which tapped the market in 2004-05, 55 issues where by private sector issuers. They mobilized around 60.7% of the total resources raised. The public sector companies made 5 issues mobilizing

39.3% to the total resources mobilized (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	2003-04		2004-05	
	Number	Amount	Number	Amount
Private	39	46,120	55	171,620
Joint	--	--	--	--
Public	18	186,600	5	110,940
Total	**57**	**232,720**	**60**	**282,560**

Source: SEBI Bulletin, September 2005 Issue.
Note: The figures for 2003-04 are revised figures

For the past few years, debentures have been pre-dominant in the public issues. However, since the last year (2003-04) there has been a reversal in this trend and this year was no exception. The share of debt in resource mobilisation through public issues was only 16.1% in 2004-05 (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. It accounted for 83.9%.

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
2004-05	83.96	16.04

Source: Prime Annual Report

The Banks and Financial Institutions (FIs) had assumed a dominant role in fund mobilization in the early 2000's. However, the year 2003-04 saw a significant fall to only 23.3% (Table 2.5). The year 2004-05 witnessed a turnaround in its resource mobilization, with 40.0%. The chemical and the Information Technology (IT) industry contributed approximately 0.45% and 18.0% in the resource mobilization in 2004-05 respectively.

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

Table 2.5 Industry-wise Resource Mobilisation

Industry	Percentage Share	
	2003-04	2004-05
Banking/FIs	23.32	40.03
Cement & Construction	0.03	0.60
Chemical	2.24	0.45
Entertainment	0.66	0.55
Finance	0.31	0.41
Information Technology	3.45	18.03
Paper & Pulp	0.00	0.21
Plastic	0.00	0.00
Telecom	0.00	0.09
Textile	0.26	0.00
Others	69.72	39.63
Total	**100.00**	**100.00**

Source: SEBI Bulletin, September 2005 Issue.
Note: The figures for 2003-04 are revised figures

foreign direct investment and hence, need to conform to the existing FDI policy. During 2004-05, the resources mobilised through Euro issues increased to Rs. 33,530 million as against Rs. 30,980 million raised during 2003-04 (Table 2.1).

Performance of IPOs

During 2004-05, twenty three (23) IPOs were listed on NSE which belonged to various different sectors. The market price of almost all the IPOs appreciated quite substantially on the first day of listing/trading itself with an exception of Vishal Exports Overseas Limited, Sah Petroleums Limited and MSK Projects (India) Limited who had negative returns on the day of listing. The price of Indiabulls Financial Services Limited rose by a whopping 455.26% followed by Dishman Pharmaceuticals and Chemicals Limited (260.57%) and Power Trading Corporation of India Limited (200.63%). Most of the IPOs appreciated up to end March 2005, with only two exceptions i.e. Datamatics Technologies (-11.64%) and Sah Petroleums Limited (23.14%) (Table 2.6).

Book Building through On-line IPO System

Book building is basically a process used in IPO for efficient price discovery, wherein 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. Till June 2005, 61 issuers have used the NSE Online IPO system for making IPO issues.

Table 2.6: Performance of IPOs Listed on NSE During Aptil 01, 2004 to March 31, 2005

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, 2005 (Rs.)	Price Appreciation/ Depreciation on first day of Trading (%)	Price Appreciation/ Depreciation upto end-March 2005 (%)
1	Biocon Limited	7-Apr-04	315.00	484.05	407.60	53.67	29.40
2	Power Trading Corporation of India Limited	7-Apr-04	16.00	44.80	48.10	180.00	200.63
3	Bank of Maharashtra	12-Apr-04	23.00	39.35	32.80	71.09	42.61
4	Dishman Pharmaceuticals and Chemicals Limited	22-Apr-04	175.00	541.25	631.00	209.29	260.57
5	Ramkrishna Forgings Limited	5-May-04	20.00	38.30	51.15	91.50	155.75
6	Datamatics Technologies Limited	7-May-04	110.00	164.75	97.20	49.77	-11.64
7	New Delhi Television Limited	19-May-04	70.00	99.45	185.20	42.07	164.57
8	Vishal Exports Overseas Limited	28-May-04	45.00	35.75	24.40	-20.56	-45.78
9	Tata Consultancy Services Limited	25-Aug-04	850.00	987.95	1432.05	16.23	68.48
10	Sah Petroleums Limited	24-Sep-04	35.00	33.70	26.90	-3.71	-23.14
11	Indiabulls Financial Services Limited	24-Sep-04	19.00	23.75	105.50	25.00	455.26
12	Crew B.O.S. Products Limited	24-Sep-04	35.00	47.25	81.30	35.00	132.29
13	MSK Projects (India) Limited	4-Nov-04	40.00	38.25	57.95	-4.38	44.88
14	National Thermal Power Corporation Limited	5-Nov-04	62.00	75.55	85.30	21.85	37.58
15	S.A.L. Steel Limited	24-Nov-04	14.00	19.55	21.75	39.64	55.36
16	Deccan Chronicle Hold Limited	22-Dec-04	162.00	169.20	141.05	4.44	-12.93
17	Bharati Shipyard Limited	30-Dec-04	66.00	127.95	136.00	93.86	106.06
18	Dwarikesh Sugar Industries Limited	31-Dec-04	65.00	133.00	150.90	104.62	132.15
19	Indoco Remedies Limited	14-Jan-05	245.00	394.25	299.95	60.92	22.43
20	Impex Ferro Tech Limited	3-Feb-05	10.00	23.60	24.55	136.00	145.50
21	Jet Airways (India) Limited	14-Mar-04	1,100.00	1304.20	1211.55	18.56	10.14
22	UTV Software Communications Limited	17-Mar-04	130.00	168.55	146.70	29.65	12.85
23	Gateway Distriparks Limited	31-Mar-05	72.00	112.30	112.30	55.97	55.97

Source: NSE

Table 2.7: Resources Raised from Debt Markets

(Rs. mn.)

Issuer	2003-04	2004-05
Corporate	527,519	592,788
Public Issues	43,240	40,950
Private Placement*	484,279	551,838
Government	1,981,570	1,456,020
Total	**2,509,089**	**2,048,808**

* 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).

Disinvestment in PSUs in India[2]

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. million)

Year	No. of Company in which equity sold	Target receipt for the year	Actual receipts
1991-92	47	25,000	30,377
1992-93	29	25,000	19,124
1993-94	–	35,000	–
1994-95	17	40,000	48,431
1995-96	5	70,000	1,684
1996-97	1	50,000	3,796
1997-98	1	48,000	9,100
1998-99	5	50,000	53,711
1999-00	5	1,00,000	18,601
2000-01	5	1,00,000	18,713
2001-02	8	1,20,000	56,323
2002-03	8	1,20,000	33,479
2003-04	2	1,32,000	1,55,474
2004-05	3	40,000	27,948*

Source: Department of Disinvestment, Govt. of India (www.divest.nic.in)
* NTPC (5.25% Offer for Sale), IPCL (5% to employees) and ONGC (0.01%)

[2] References: Ministry of Disinvestment website (www.divest.nic.in), Government of India.

Disinvestment through the Capital market route is most preferred route these days as it has certain advantages over the strategic sale route such as (a) increases public ownership; (b) helps in better price discovery. In the year 2004-05 three companies *viz.,* National Thermal Power Corporation, Indian Petrochemicals Limited and Oil and Natural Gas Corporation opted for disinvestment.

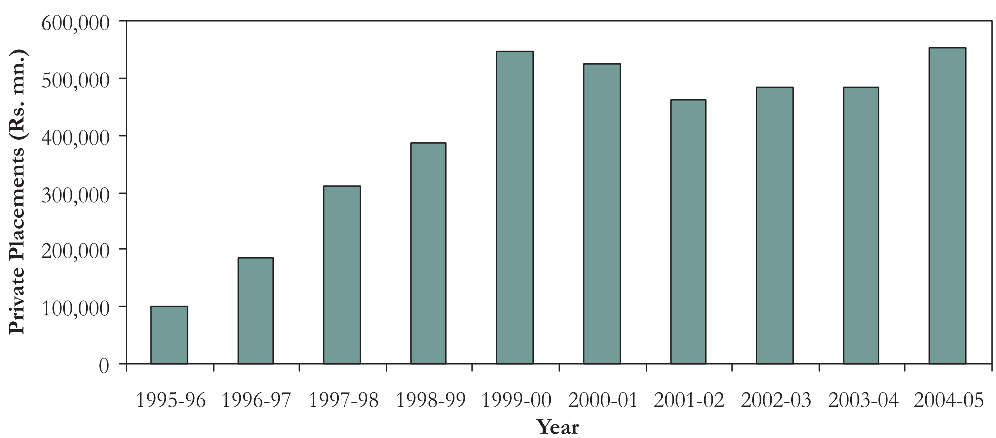
Debt Issues

Government and corporate sector collectively raised a total of Rs. 2,048,808 million from primary market during 2004-05. About 71.1% has been raised by the Government, while the balance by the corporate sector through public issues and private placement (Table 2.7).

Private Placement of Debt

According to Prime Database estimates, a total of 114 issuers (institutional and corporates) raised Rs. 551,838 million through 319 privately placed issues in 2004-05. 176 issues out of 319 were made by the government sector units, which together mobilized 82% 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 96 companies privately placed equities mobilizing around Rs. 58,982 million during 2004-05 (Annexure 2.1).

Of the 319 debt private placements, 176 (55%) were from the government/banking sector that together mobilized 82% of the total amount mobilized. The All India Financial

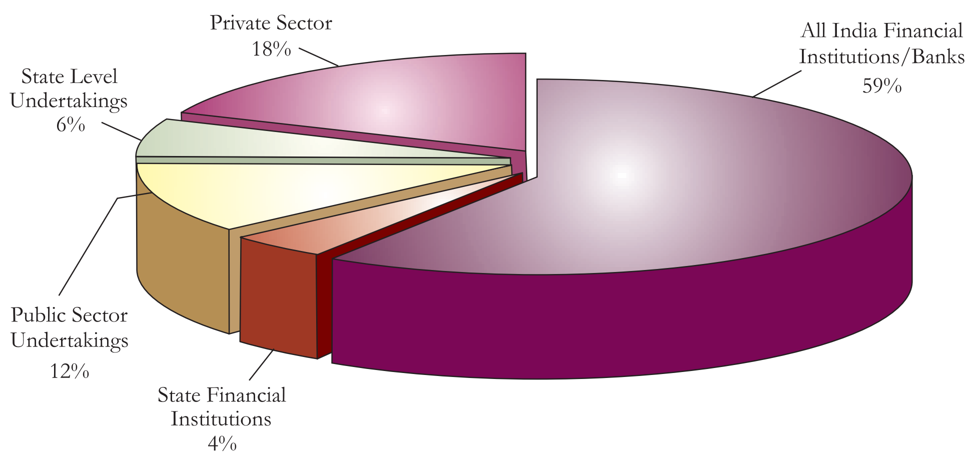
Institutions (AIFIs) & Banks continued to top the list with 59% (Rs. 326,522 million), followed by the Private Sector Undertakings with 18% share (Rs. 101,910 million) (Table 2.8 and Chart 2.2). The top '10' issuers accounted for 53.9% of total private placement during 2004-05.

Table 2.8: Issuer-wise Distribution of Private Placement of Debt

Issuer	Issue Amount (Rs. mn.)		% of Issue Amount	
	2003-04	2004-05	2003-04	2004-05
All India Financial Institutions/Banks	253,088	326,522	52.26	59.17
State Financial Institutions	42,084	23,808	8.69	4.31
Public Sector Undertakings	58,809	64,412	12.14	11.67
State Level Undertakings	65,642	35,186	13.55	6.38
Private Sector	64,656	101,910	13.35	18.47
Total	**484,279**	**551,838**	**100.00**	**100.00**

Source: Prime Database.

Chart 2.2: Issuer-wise Distribution of Private Placement of Debt, 2004-05



Sectoral distribution shows that the banking and financial services continued to dominate the private placement market, raising 64% in 2004-05 followed by power sector, which accounted for 16% during the year (Table 2.9).

The maturity profile of issues in the private placement market ranged between 12 months to 204 months during 2004-05. The largest number of placements was for 36 months (87 placements) and 60 months (57 placements). A total of 78 offers had a put option, while 83 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 319 debt private placement deals during 2004-05, 297 issues (93%) went for rating and 22 did not get rated.

Table 2.9: Sectoral Distribution of Resources Mobilised by Private Placement

(In per cent)

Sector	2003-04	2004-05
Financial & Banking	76	64
Power	17	16
Water Resources	5	2
Telecommunications	1	2
Others	1	16
Total	**100**	**100**

Source: Prime Database.

Private placement accounted for 68.4% of total resources mobilised by the corporate sector from the primary market (Table 2.10). The corresponding share of public issues was a meager 26.6%.

Corporate Debt

During 2004-05, the corporates raised a total of Rs. 592,788 million through debt issues, of which Rs. 551,838 million through private placement and Rs. 40,950 million through public issues. The privately placed debt issues make up a bulk of total debt issuances by accounting for 93.1%. The share of debt in total collection had been increasing consistently over the years but witnessed a reversal in the trend and stood at 73.5% in 2004-05 (Table 2.10).

Table 2-10: Resources Raised by Corporate Sector

(Amount in Rs. mn.)

Year	Public Equity Issues	Debt Issues			Total Resource Mobilisation (2+5)	Share (%) of Private placement in		Share (%) of Debt in Total Resource Mobilisation (5/6*100)
		Public Issues	Private Place-ments*	Total (3+4)		Total Debt (4/5*100)	Total Resource Mobilisation (4/6*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
2004-05	214,320	40,950	551,838	592,788	807,108	93.09	68.37	73.45

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

Source: Prime Database.

Annexure 2.1: Details of Private Placement Issues by NSE-listed Companies during the period April 1, 2004 to March 31, 2005 and listed on the Capital Market segment of the Exchange

Sl. No.	Name of Company	Number of Securities	Funds Raised (Rs.)	Face Value (Rs.)	Issue Price (Rs.)
1	Soma Textiles & Industries Ltd.	3,660,000	36,600,000	10	10.00
2	Tata Finance Ltd	113,079,533	3,000,000,010	10	26.53
3	Arvind Mills Ltd	1,181,850	17,727,750	10	15.00
4	Jayaswals Neco Ltd	7,762,452	77,624,520	10	10.00
5	Pentamedia Graphics Limited	15,300,000	179,775,000	10	11.75
6	Ind-Swift Laboratories Ltd.	3,340,000	83,500,000	10	25.00
7	KEC International Ltd. (Partly paid up)	3,500,000	108,500,000	10	31.00
8	Apollo Tyres Ltd	5,712,500	1,348,150,000	10	236.00
9	Nagarjuna Construction Co. Ltd	2,000,000	270,000,000	10	135.00
10	Shriram Investments Ltd.	4,400,000	129,184,000	10	29.36
11	Shriram Transport Finance Co. Ltd.	4,600,000	137,126,000	10	29.81
12	Subex Systems Limited	1,887,000	184,926,000	10	98.00
13	Alok Industries Limited	538,890	5,388,900	10	10.00
14	Alok Industries Limited ++	2,900,000	290,000,000	100	100.00
15	Jindal Iron & Steel Co. Ltd.	1,225,000	148,225,000	10	121.00
16	SKM Egg Products Export (India) Ltd.	7,367,500	73,675,000	10	10.00
17	Alok Industries Limited **	68,000,000	680,000,000	10	10.00
18	iGate Global Solutions Limited	220,873	56,603,124	4	256.27
19	TIPS Industries Limited	638,400	6,384,000	10	10.00
20	Khandwala Securities Limited	300,000	5,130,000	10	17.10
21	Pentamedia Graphics Limited	9,500,000	107,920,000	10	11
22	Cheslind Textiles Ltd	2,250,035	31,500,490	10	14
23	Cheslind Textiles Ltd	843,900	12,658,500	10	15
24	KPIT Cummins Infosystems Limited	240,425	2,404,250	10	10
25	Rajasthan Spg. & Wvg. Mills Ltd.	2,035,958	87,546,194	10	43
26	Reliance Energy Limited	26,425,622	16,912,398,080	10	640
27	Television Eighteen India Ltd.	500,000	71,000,000	10	142
28	Mysore Cements Ltd	4,768,350	47,683,500	10	10
29	Sakthi Sugars Ltd.	3,641,000	182,050,000	10	50
30	Uttam Galva Steels Limited	2,490,000	24,900,000	10	10
31	Welspun India Limited	2,598,930	246,898,350	10	95
32	Welspun India Limited	7,857,974	674,999,967	10	85.9
33	Monnet Ispat Ltd	3,527,353	352,735,300	10	100
34	Suven Life Sciences Limited	3,000,000	274,200,000	2	91.4
35	Moser-Baer (I) Ltd *	5,400,000	1,814,400,000	336	336
36	Orient Press Ltd	150,000	1,500,000	10	10
37	Wellwin Industry Limited	10,626,760	150,899,992	10	14.2
38	Nava Bharat Ferro Alloys Ltd	1,440,852	38,182,578	10	26.5
39	Jenson & Nicholson (India) Ltd	5,319,148	49,999,991	2	9.4
40	Mphasis BFL Limited	2,338,778	1,427,356,213	10	610.3

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Sl. No.	Name of Company	Number of Securities	Funds Raised (Rs.)	Face Value (Rs.)	Issue Price (Rs.)
41	Ind-Swift Laboratories Ltd.	1,227,375	39,276,000	10	32
42	Matrix Laboratories Limited	2,250,000	3,375,000,000	10	1500
43	Supreme Petrochem Ltd	6,872,800	119,999,088	10	17.46
44	Vintage Cards & Creations Limited	388,430	7,768,600	10	20
45	Shasun Chemicals and Drugs Ltd.	910,000	212,940,000	10	234
46	Shriram Investments Ltd.	5,050,000	126,250,000	10	25
47	Shriram Transport Finance Co. Ltd.	5,450,000	138,975,000	10	25.5
48	Bayer ABS Limited	1,000,000	64,250,000	10	64.25
49	Bayer ABS Limited	5,580,000	390,600,000	10	70
50	NRC Ltd.	3,600,000	36,000,000	10	10
51	Orient Information Technology Limited	6,000,000	276,000,000	10	46
52	Natco Pharma Limited	6,000,000	75,000,000	10	12.5
53	KRBL Limited	3,000,000	270,000,000	10	90
54	Apollo Hospitals Enterprise Ltd	2,079,930	511,662,780	10	246
55	CESC Ltd.	3,300,000	164,010,000	10	49.7
56	Gammon India Ltd.	1,825,000	921,625,000	10	505
57	NRC Ltd.	4,700,000	92,825,000	10	19.75
58	iGate Global Solutions Limited	1,526,211	409,024,548	4	268
59	Kothari Sugars And Chemicals Limited	82,143,725	821,437,250	10	10
60	Elder Pharmaceuticals Limited	1,599,000	255,840,000	10	160
61	Mphasis BFL Limited	3,526,562	2,152,260,789	10	610.3
62	Color Chips Limited	2,000,000	20,000,000	10	10
63	Pentasoft Technologies Limited	4,000,000	40,000,000	10	10
64	Essar Steel Ltd.	177,619,893	1,999,999,995	10	11.26
65	Jyoti Structures Ltd	2,000,000	94,000,000	10	47
66	HCL Technologies Ltd	19,358,989	6,988,595,029	2	361
67	Kale Consultants Limited	100,000	3,895,000	10	38.95
68	Zodiac Clothing Company Ltd	750,000	300,000,000	10	400
69	Greaves Cotton Limited	1,000,000	76,000,000	10	76
70	Jubilant Organosys Limited	2,424,273	2,000,025,225	5	825
71	Todays Writing Products Limited	1,560,000	42,120,000	10	27
72	Wellwin Industry Limited	3,000,000	42,600,000	10	14.2
73	SKF India Limited	7,470,030	478,081,920	10	64
74	Jain Irrigation Systems Limited	2,500,000	193,000,000	10	77.2
75	Jain Irrigation Systems Limited	1,987,281	198,728,100	10	100
76	Jain Irrigation Systems Limited	630,500	52,331,500	10	83
77	Rane (Madras) Ltd.	1,920,112	280,336,352	10	146
78	Rane (Madras) Ltd.	2,015,944	294,327,824	10	146
79	FCI OEN Connectors Limited	840,000	126,840,000	10	151
80	Omax Autos Limited	960,000	86,400,000	10	90

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Sl. No.	Name of Company	Number of Securities	Funds Raised (Rs.)	Face Value (Rs.)	Issue Price (Rs.)
81	IVRCL Infrastructures & Projects Ltd.	6,240,000	780,000,000	10	125
82	Goldstone Teleservices Ltd.	2,825,000	48,025,000	4	17
83	Nagarjuna Construction Co. Ltd	2,950,000	820,100,000	10	278
84	Sabero Organics Gujarat Ltd	123,400	1,234,000	10	10
85	Alok Industries Limited	11,311,400	689,995,400	10	61
86	Max India Ltd	4,050,700	810,140,000	10	200
87	Alembic Limited	1,200,000	193,200,000	10	161
88	Jain Irrigation Systems Limited	1,349,144	111,978,952	10	83
89	Ind-Swift Laboratories Ltd.	2,225,000	255,875,000	10	115
90	Uttam Galva Steels Limited	10,429,000	156,435,000	10	15
91	Jindal Steel & Power Ltd.	5,000,000	387,500,000	5	77.5
92	Ruchi Soya Industries Ltd.	1,900,000	100,700,000	10	53
93	Jain Irrigation Systems Limited	4,000,000	450,000,000	10	112.5
94	Oil Country Tubular Ltd	5,000,000	50,000,000	10	10
95	Kotak Mahindra Bank Limited	3,300,000	759,000,000	10	230
96	Flex Industries Ltd.	10,000,000	240,000,000	10	24

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 2004-05 with respect to the above three different CIVs are discussed in this chapter.

Mutual Funds

Mutual Funds (MFs) are undoubtedly an important product innovation in the financial field, as an instrument of raising capital from the wider public for corporate enterprise growth. Historically, MFs, originally called unit trusts in the United Kingdom, were invented for the mass of relatively small investors. MFs is a popular CIV among investors and are able to mobilize huge amounts of resources. They pool the savings of different investors together, invest them into specific securities (usually stocks or bonds) with a predetermined investment objective. Investors are issued 'units', thus, for an investor, investments in MF imply buying shares (or portions) of the MF and becoming the shareholders of the fund.

In India, the Unit Trust of India (UTI), created in 1964 was the first MF. It enjoyed complete monopoly of MF business up to 1988. The MF business was progressively opened to competition post 1988. This move gathered momentum after the adoption of economic liberalization in 1991 and the creation of SEBI in 1992. As of end March 2005, 39 MFs are registered with SEBI with an asset base of Rs. 1,495,540 million.

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, in debt instruments or in both, in real estates, gold units etc. 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 2004-June 2005 are as discussed hereunder:

Union Budget, 2005-06

The Union Budget 2005-06 proposed that mutual funds be introduced with Gold as underlying assets known as, Gold Exchange Traded Funds (GETF). This will be introduced by SEBI after consultation with RBI. The GETFs will enable any household to buy and sell gold in units for as little as Rs. 100/-.

Guidelines for MFs

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

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.

For existing schemes/plans, each scheme and individual plan(s) under the schemes should have a minimum of 20 investors and no single investor should account for more than 25% of the corpus of the scheme/plan(s). To determine the breach of 25% limit by an investor, the average net assets of the scheme shall be calculated daily and any breach of the 25% holding limit by an investor shall be determined. If there is a breach of limit by any investor over the quarter, a rebalancing period of one month would be allowed. Thereafter the investor who is in breach of the rule shall be given 15 days notice to redeem his exposure over 25% limit within the aforesaid 15 days. Failure to do so would lead to automatic redemption by the MF on the applicable NAV on the 15th day of the notice period.

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, which are 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, which 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 web site 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 in the following:

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

The MF vehicle is quite popular with investors who are wary of directly investing in the securities market. The popularity of the MFs as an investment avenue is clearly visible from the data presented in Table 3.1. In India, investment in MFs is considered to be as safe as bank deposits. This is due to the fact that the MFs in India have primarily been sponsored by

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	1700	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
2004-05	---------------16,670------------		25,970	425,450	468,090

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

government, banks and FIs. Thus, the schemes of MFs of the commercial banks and the insurance companies, which entered the market in 1987, were well received. The boom continued into the nineties with liberalisation evoking positive response from the investors. The resource mobilisations by MFs remained steady during the period 1992-95 with annual gross mobilisation averaging Rs. 110,000 million per annum during the period. The MFs were, however, hit severely by the bearish sentiments in the secondary market since October 1994. The years 1995-96 and 1996-97 witnessed net outflows of funds from MFs. The MF industry managed to mobilise modest sums during the next two financial years. It was in late 90's and first few years of 2000's that the MF industry witnessed a sharp turnaround with record resource mobilisation amounting to Rs. 199,530 million. Tax sops announced in the Union Budget 1999-00 and emergence of bullish trends in the secondary market fuelled the recovery. The year 2000-01 witnessed a slowdown once again with net resource mobilisation by all MFs taken together aggregating Rs. 71,370 million, which could be attributed to a slump in secondary market and increase in tax on income distributed by debt-oriented MFs. In 2002-03, the resource mobilization by all MFs together aggregated to a further low of Rs. 45,800 million with UTI having a net outflow of Rs. 94,340 million. The year 2003-04 witnessed a sharp rise in the net resources mobilized compared to its previous year aggregating Rs. 476,840 million. This trend was continued in the fiscal 2004-05 wherein the net resources mobilized was Rs. 468,090 million. The performance of the private sector MFs was also consistent as compared to previous year; it mobilized Rs. 425,450 million.

During 2004-05, the number of registered MF with the SEBI stood at 39. As against 46 schemes in the year 2003-04, 97 new schemes were launched in 2004-05, of which 72 were open-ended and 25 close-ended schemes. This took the total number of schemes as at end-March 2005 to 451 against 403 as at end March 2004. Aggregate sales of all the 451 schemes amounted to Rs. 8,396,620 million. The redemptions during the year were at Rs. 8,375,080 (Table 3.2).

Table 3.2: Accretion of Funds with Mutual Funds

(Rs. mn.)

	Category	2003-04			2004-05			Assets under Management at the end	
		Sale	Purchase	Net	Sale	Purchase	Net	March-04	March-05
A	**Bank Sponsored**	**466,610**	**431,830**	**34,780**	**904,460**	**924,600**	**-20,140**	**280,850**	**291,030**
	i. Joint Ventures -	--	--	--	309,950	299,700	10,250	--	65,950
	Predominantly Indian							280,850	225,080
	ii. Others	466,610	431,830	34,780	594,510	624,900	-30,390		
B	**Institutions**	**218,970**	**197,960**	**21,010**	**128,000**	**161,830**	**-33,830**	**65,390**	**30,100**
C	**Private Sector (i+ii+iii+iv)**	**5,216,320**	**4,804,020**	**412,300**	**7,364,160**	**7,288,650**	**75,510**	**1,049,920**	**1,174,410**
	i. Indian	1,430,500	1,331,310	99,190	2,424,280	2,370,600	53,680	198,850	307,500
	ii. Joint Ventures - Predominately Indian	1,405,450	1,272,800	132,650	1,568,790	1,561,980	6,810	331,430	308,390
	iii. Joint Ventures - Predominately Foreign	2,169,480	2,007,430	162,050	3,371,090	3,356,070	15,020	483,310	558,520
	iv Foreign	210,890	192,480	18,410	--	--	--	36,330	--
Grand Total (A+B+C)		**5,901,900**	**5,433,810**	**468,090**	**8,396,620**	**8,375,080**	**21,540**	**1,396,160**	**1,495,540**

Source: AMFI Updates.

The bank sponsored MFs made gross mobilization of Rs. 904,460 million accounting for 10.8% of the total resource mobilization during 2004-05. In net terms, the bank sponsored MFs witnessed an outflow of Rs. 20,140 million. The private sector MFs accounted for the bulk of mobilization, by raising almost 87.7% of gross resources mobilized by MF industry during 2004-05. These private sector MFs witnessed a net inflow of Rs. 75,510 million in the same period as compared to Rs. 412,300 million in the previous year (2003-04).

The share of open-ended schemes in total funds raised by MFs registered a marginal decline to 97.89% in 2004-05 as compared to 99.54% in 2003-04. No new assured return schemes were launched in 2004-05. The share of close ended schemes, on the other hand, had an increase from 0.46% during 2003-04 to 2.11% during 2004-05. The open ended and close ended schemes together registered a net inflow of Rs. 468,090 million and Rs. 21,540 million in 2003-04 and 2004-05 respectively (Table 3.3A.).

Table 3.3A: Scheme-wise Resource Mobilisation by Mutual Funds

(Rs. mn.)

Scheme	2003-04		2004-05	
	Sale	Purchase	Sale	Purchase
Open-ended	5,874,800	5,414,460	8,219,580	8,259,760
Close-ended	27,100	19,250	177,040	115,320
Assured Return	--	100	--	--
Total	**5,901,900**	**5,433,810**	**8,396,620**	**8,375,080**

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. 103,470 million during the year. However, the Income schemes, Gilt schemes and the ELSS schemes have witnessed outflows to the extent of Rs. 142,460 million, Rs. 13,450 million and Rs. 1,940 million, respectively during 2004-05. The income schemes raised about 18.5% of resources mobilising Rs. 1,557,190 million during 2004-05 (Table 3.3 B).

Table 3.3B: Scheme-wise Resource Mobilisation by Mutual Funds

(Rs. mn.)

Scheme	2003-04		Net Inflow/	2004-05		Net Inflow/
	Sale	Purchase	(Outflow)	Sale	Purchase	(Outflow)
Income	1,729,390	1,601,440	127,950	1,557,190	1,699,650	-142,460
Growth	266,420	189,580	76,840	370,790	298,320	72,470
Balanced	25,230	25,360	-131	37,550	34,100	3,450
Liquid/ Money Market	3,756,460	3,510,690	245,770	6,385,940	6,282,470	103,470
Gilt	123,870	101,550	22,320	43,610	57,060	-13,450
ELSS	530	5,190	-4,661	1,540	3,480	-1,940
Total	**5,901,900**	**5,433,810**	**468,090**	**8,396,620**	**8,375,080**	**21,540**

Source: AMFI Updates

Assets under Management

As on March 31, 2005, the MFs have managed assets of Rs. 1,495,540 million. As shown in Table 3.2, the share of private sector MFs in total assets managed increased from 75.2% as at end-March 2004 to 78.5% as at end-March 2005 (Chart 3.1). During the year the assets under management of the private sector MFs increased by Rs. 124,490 million amounting to an aggregate of Rs. 1,174,410 million.

The open ended schemes and the close ended schemes as at end-March 2005 accounted for 92.26% and 7.74% of total assets under management of MFs, respectively (Table 3.4).

Table 3.4: Assets under Management as at end March, 2005

(Rs. mn.)

Scheme	Open Ended	Close Ended	Total	% to total
Income	394,080	81,970	476,050	31.83
Growth	350,600	16,510	367,110	24.55
Balanced	41,630	7,040	48,670	3.25
Liquid/Money Market	540,680	--	540,680	36.15
Gilt	45,760	--	45,760	3.06
ELSS	7,080	10,190	17,270	1.15
Total	**1,379,830**	**115,710**	**1,495,540**	**100.00**

Source: AMFI Updates.

The liquid/money market schemes accounted for 36.15% of total assets under management as at end-March 2005, followed by income schemes with 31.83%. The growth schemes accounted for 24.55% of assets under management of MFs as at end-March 2005 (Chart 3.1).

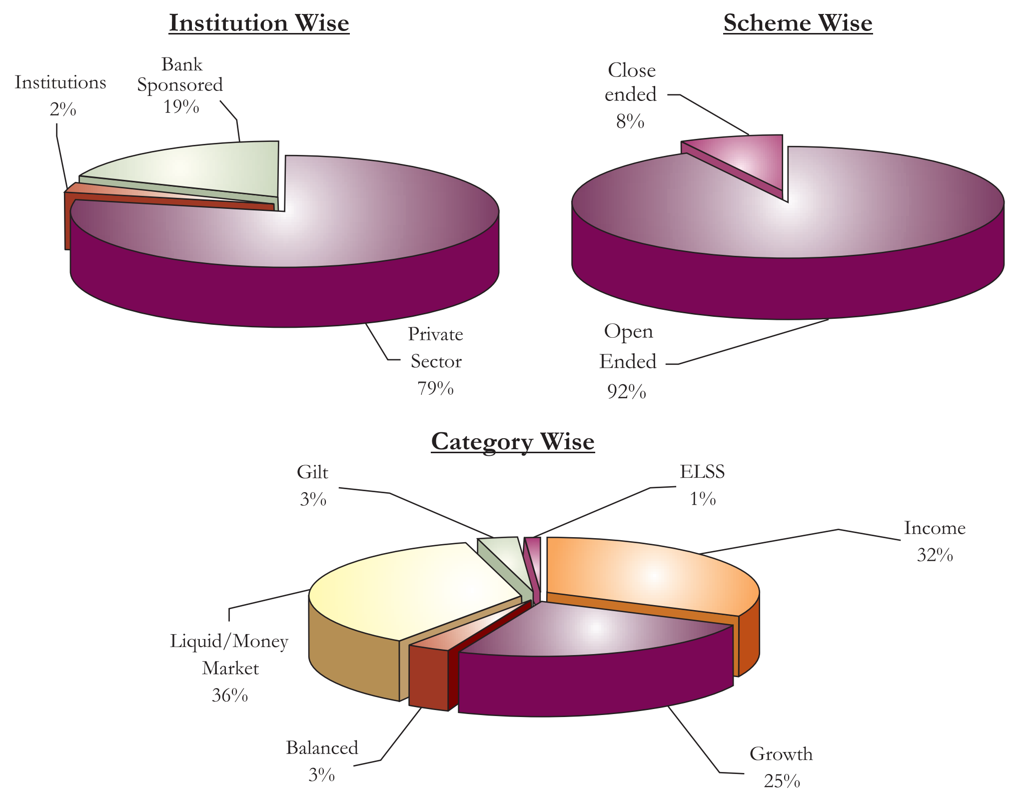
Index Funds

Index funds are those funds which track the performance of an index. This is usually carried out by either investing in the shares comprising the index or by buying a sample of shares making up the index or a derivative based on the likely performance of the index. The value of the fund is linked to the chosen index so that if the index rises so will the value of the fund. Conversely, if the index falls so will the value of the fund.

In the Indian context, the index funds attempt to copy the performance of the two main indices in the market *viz.,* S&P CNX Nifty or Sensex. 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.

The list of the index funds based on S&P CNX Nifty are Principal Mutual Fund, UTI Nifty Fund, Franklin India Index Fund, Franklin India Index Tax Fund, Magnum

Chart 3.1: Assets under Management at the end of March 2005



Index Fund, IL&FS Index Fund, Prudential ICICI Index, HDFC Index Fund, Birla Index Fund, LIC Index Fund, Tata Index Fund, ING Vysya Nifty Plus fund and Canindex 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. The Table 3.5 gives performance details of the index funds over the past one year; the returns given by the index funds show that they closely track their benchmark indices.

Exchange Traded Funds

An Exchange Traded Fund (ETFs) 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).

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	-4.00	14.37	47.81	S&P CNX Nifty
Franklin India Index Tax Fund	February 26, 2001	-2.33	16.43	15.59	S&P CNX Nifty
Franklin India Index Fund	August 4, 2001	-2.21	16.71	18.32	S&P CNX Nifty
UTI Nifty Fund	March 27, 2000	-2.27	16.26	16.62	S&P CNX Nifty
UTI Master Index	June 29, 1998	-1.52	15.85	17.17	BSE Sensex
SBI Magnum Index Fund	December 1, 2001	-2.15	15.78	41.98	S&P CNX Nifty
Prudential ICICI Index fund	February 1, 2002	-2.71	16.68	13.53	S&P CNX Nifty
HDFC Index Fund	July 1, 2002	-2.09	16.41	12.65	S&P CNX Nifty
Birla Index Fund	September 17, 2002	-2.62	15.16	102.03	S&P CNX Nifty
LIC Index Fund	November 1, 2002	9.49	18.64	27.56	S&P CNX Nifty
Tata Index Fund	February 1, 2003	-2.36	16.46	16.04	S&P CNX Nifty
ING Vysya Nifty Plus Fund	January 1, 2004	-3.35	14.36	12.79	S&P CNX Nifty
S&P CNX Nifty	November 3, 1995	-2.16	16.62	14.89	--
BSE Sensex	January 2, 1986	-1.66	16.28	16.14	--

* Returns are calculated as on March 31, 2005

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 there 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, 2005, there was no CIS entity registered with SEBI. SEBI had information regarding 664 entities; out of which 75 entities wound up their schemes and repaid money to the investors; 19 entities have court cases pending against them; remaining 570 entities, SEBI has taken actions against them for failure to wind up their schemes and make repayments to investors. In addition to this, SEBI has requested the police authorities to file FIR under IPC against 70 CIS entities which had mobilized Rs. 50 million or more under their collective investment schemes and had failed to wind up their schemes to repay 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.

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. 0.5 million (5 lakh); the minimum corpus of the fund before it starts activities should be at least Rs. 50 million (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, 2005 the total count of VCFs and FVCIs stood at 50 and 14 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.

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 SEBI and Exchanges.

With the increased application of information technology, the trading platforms of stock exchanges are accessible from anywhere in the country through trading terminals. 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 2004 and June 2005 pertaining to trading of securities are enumerated below:

Initiatives from Government

I. Union Budget for 2004-05

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

1. To provide a greater impetus to the small and medium enterprises (SME) to raise equity and debt from the capital market, an alternative trading platform has been proposed to be set up.
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.

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

4. Long-term capital gains tax on securities transaction has been abolished and the short-term capital gains tax has been proposed to be at a flat rate of 10 percent.

5. Turnover taxes had 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. (STT rates have been revised subsequently. The revised figures have been given later on in this chapter).

II. Union Budget for 2005-06

The Union Finance Minister presented the Union Budget 2005-06 on February 28, 2005. The proposals made in the budget having an impact on the functioning of the capital market are as follows:

1. The definition of 'securities' under the Securities Contracts (Regulation) Act, 1956 shall be amended so as to provide a legal framework for trading of securitised debt including mortgage backed debts;
2. A one time exemption from stamp duty on the notional transfer of assets shall be granted to the three stock exchanges that are not yet corporatised;
3. The Securities Transaction Tax which was introduced in the previous fiscal year shall be increased from 0.015% to 0.020% for day traders.
4. SEBI shall be authorized to set up a National Institute of Securities Markets (NISM) for teaching and training intermediaries in the securities markets and promoting research;

III. Amendments in the External Commercial Policy

In the background of the developments in the recent months, the Government, in consultation with RBI, decided to further revise the policy pertaining to ECBs as explained below:

1. ECBs can be accessed under two routes, namely, (i) Automatic Route and (ii) Approval Route. ECB for investment in the real sector – Industrial sector is under the Automatic Route. The maximum amount of ECB which can be raised by an eligible borrower under the Automatic Route is USD 500 million during a financial year. The following shall be permissible under the Automatic Route:

    a. ECB up to USD 20 million or equivalent with minimum average maturity of 3 years

    b. ECB above USD 20 million and up to USD 500 million or equivalent with minimum average maturity of 5 years.

    All cases, which fall outside the purview of the Automatic Route, will be decided by an empowered committee of RBI.

2. Under the existing policy, corporates registered under the Companies Act, 1956 except banks, FIs, HFCs and NBFCs are eligible. To this list, NGOs engaged in micro-finance activities have also been permitted to raise ECB up to USD 5 million during the financial year for permitted end-use under the automatic route. It has also been decided to further expand the eligibility/end-use as follows:

    a. ECB by NBFCs will be permitted under the Approval route from multilateral FIs, reputed regional FIs, official export agencies and international banks towards import of infrastructure equipment for leasing to infrastructure projects with a minimum average maturity of 5 years.

b. FCCBs by HFCs with strong financials satisfying criteria to be notified by RBI, will be permitted under the Approval Route.

3. FIs dealing exclusively with infrastructure or export finance such as IDFC, IL&FS, Power Finance Corporation, Power Trading Corporation, IRCON and EXIM Bank are considered on a case-by-case basis i.e. through the approval route.

4. Banks and FIs which had participated in the textile or steel sector restructuring package as approved by the Government are permitted to the extent of their investment in the package and assessment by RBI based on prudential norms. Any ECB availed for this purpose so far is deducted from their entitlement.

5. Borrowers can raise ECB from internationally recognised sources such as international banks, international capital markets, multilateral financial institutions, export credit agencies and suppliers of equipment, foreign collaborators and foreign equity holders.

6. All ECBs are subject to the following maximum spreads over six month LIBOR, for the respective currency of borrowing or the applicable benchmark (s) as the case may be:

Minimum Average Maturity Period	All-in-cost Ceilings over 6 months LIBOR*
3 years and up to 5 years	200 basis points
More than 5 years	350 basis points.

*All-in-cost ceilings include rate of interest, other fees and expense in foreign currency except commitment fee, pre-payment fee and fees payable in India Rupees. Moreover, the payment of withholding tax in Indian rupees is excluded for calculating the all-in-cost.

7. Permissible end-use restrictions shall be as follows: (a) ECB can be raised only for investment in real sector-industrial sector including SME and infrastructure sector in India (b) ECB proceeds can be utilised for overseas direct investment in joint ventures (JV)/wholly owned subsidiaries (WOS) subject to the existing guidelines on Indian Direct Investment in JV/WOS abroad (c) utilisation of ECB proceeds is permitted in the first stage acquisition of shares in the disinvestment process and also in the mandatory second stage offer to the public under the Governments disinvestment programme of PSU shares (d) utilisation of ECB proceeds is not permitted for investment in capital markets by corporate or for on-lending (e) utilisation of ECB proceeds is not permitted in real estate. The term 'real estate' excludes development of townships/housing and other infrastructure and construction development projects defined by the Ministry of Commerce (f) end uses of ECB for working capital, general corporate purpose and repayment of existing Rupee loans are not permitted.

8. ECB proceed should be parked overseas until actual requirement in India.

9. Prepayment of ECB up to USD 200 million is allowed subject to minimum average maturity of 5 years. Pre-payment of ECB for amounts exceeding USD 200 million or prepayment of ECBs with minimum average maturity of 3-5 years would be on the approval route.

10. Refinancing of existing ECB by raising fresh ECBs at lower cost is permitted subject to the condition that the outstanding maturity of the original loan is maintained.

11. The housing policy for ECB is also applicable to FCCBs in all respect except in the case of HFCs for which criteria will be notified by RBI.

III. Simplification of Foreign Investment Procedures

In order to make the environment in India more attractive for foreign investors, the Government decided to simplify the procedure by placing the following under the General Permission route (i. e. RBI route) instead of the existing Government approval route (i.e. FIPB route). This change aimed at ensuring speedy and streamlined investment approvals.

a. Transfer of shares from resident to non-resident other than in financial services sector *provided* the investment is covered under automatic route. This shall not attract the provisions of SEBI's (Substantial Acquisition of Shares and Takeovers) Regulations, 1997 and shall fall within the sectoral cap and also comply with prescribed pricing guidelines.

b. Conversion of ECB/loan into equity *provided* the activity of the company is covered under automatic route. The foreign equity after such conversion shall fall within the sectoral cap and also comply with prescribed pricing guidelines.

c. Cases of increase in foreign equity participation by fresh issue of shares as well as conversion of preference shares into equity capital *provided* such increase falls within the sectoral cap in the relevant sectors and are within the automatic route. They shall also comply with the prescribed pricing guidelines.

Initiatives from SEBI

I. Name Change by 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.

II. SEBI (Interest Liability Regularisation) Scheme, 2004

SEBI issued the SEBI (Interest Liability Regularisation) Scheme, 2004 in an attempt to bring a satisfactory solution to the problem of registration fees payable by the brokers in the cash segments of the Exchanges. The details of the scheme are as follows:

Under the scheme, the stock brokers who had outstanding fee liabilities (principal and/or interest) as on October 1, 2004 had to pay the entire outstanding amount of principal, if any, together with 20% of the outstanding interest as on that date. On payment of the aforementioned amounts during the "Regularisation Period" specified under the Scheme, the stock brokers would not be liable for payment of the balance 80% of the outstanding interest on that date. The regularisation period commenced on October 15, 2004 and ended on November 15, 2004. The fee liability is computed based on the turnover data as provided by the Exchanges to SEBI in the manner as specified in the Regulations.

III. Membership Card Value for Net worth Calculation of Members

Pursuant to the recommendations of the Market Risk Management Group, SEBI decided that in cases of pending demutualization of stock exchanges, where the card based membership is in place, the value of the membership card shall be included as a part of the member's capital for the computation of networth subject to a suitable haircut and conditions as specified herewith. The value of the card shall be arrived at on the basis of the latest price obtained in auction/sale with a haircut based on the period when auction/sale of the card last took place as given in the table below. The card shall be included in the non-cash component of the capital.

Sl. No.	Period in which auction/sale last took place	Percentage of haircut
1	0 to ≤ 6 months	50%
2	> 6 months to < 12 months	75%

If the auction/sale of card has not taken place in the last 12 months then the card value shall not be considered for calculation of net-worth of the stock brokers The card value shall not be reckoned as a part of the capital deposited by the stock brokers with the exchange towards intra-day trading and gross exposure limits or for adjustment against margins. The Exchange shall also maintain an amount equivalent to at least 50% of the aggregate card value of all members in the form of cash and liquid assets.

IV. Securities Transaction Tax

In the Union Budget 2004-05, Government proposed a package of tax measures relating to securities transactions. The STT was notified on September 28, 2004. The stock exchanges have been advised to levy and collect STT on all transactions done by their members and remit the same to the Government of India with effect from October 1, 2004. In the Union Budget 2005-06, the STT was further revised. The old and the revised rates (applicable from June 1, 2005) are given in the table below:

(In per cent)

Type of Transactions	2004-05 (Old Rate)	2005-06 (Revised Rate) @
1	2	3
A. Equity		
(1) Delivery-based transactions *	0.15	0.20
(2) Non-Delivery based transactions	0.015	0.02
B. Derivative Transactions	0.01	0.0133

@ The revised STT became effective from June 1, 2005
* To be equally shared by both buyers and sellers.

V. Mandatory Admission of Debt Instruments

SEBI had issued a circular in November 2002 wherein the issuer companies were asked to mandatory admit their debt instruments with both the depositories. However, it was observed that many issuers' debt instruments have still not admitted their debt securities on both the depositories. The stock exchanges and the depositories were instructed to inform the issuer companies to comply with SEBI circular pertaining to mandatory admission of debt instruments on both the depositories.

VI. Guidelines for IPF/CPF at Stock Exchanges

The Investors Protection Fund (IPF)/Customer Protection Fund (CPF) Guidelines were reviewed and comprehensive guidelines prescribed with respect to constitution and management of the IPF/CPF, contributions to the fund, manner of filing/inviting claims etc. The details of the guidelines are as given below:

1. The IPF/CPF shall be administered by way of trust created for the purpose. This trust shall consist of at least one public representative, one representative from the registered investor associations recognized by SEBI and the Executive Directors/Managing Directors/Administrators of the stock exchange. The exchanges shall ensure that the funds in the IPF/CPF are well segregated and that the IPF/CPF is immune from any liabilities of the exchange.

2. The contributions by the exchanges to the IPF/CPF shall be made in the following manner (a) 1% of listing fees received, on a quarterly basis; (b) 100% of the interest earned on the 1% security deposit kept by the issuer companies at the time of offering of securities for subscription to the public, immediately on refund of the deposit; (c) the difference of the amount of auctions/close-out price; (d) amount received from the proceed of the sale of the securities written off, and (e) the amount specified in pursuance of Regulation 28(12) (e) (ii), Regulation 28(13) and Regulation 29(2) of SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 1997. The present contributions from the transaction charges shall remain the same.

3. In accordance with its bye-laws, rules or regulations, the stock exchanges shall publish a notice inviting the legitimate claimants to file claims against the defaulter member brokers within a specified period of time called as the "specified period". This specified period shall not be less than one month or twenty five working days, whichever is more. The notice shall be published in all editions of at least one English national daily with wide circulation and in at least one regional language daily with wide circulation at the place where the exchange is situated. The notice calling for claims shall also be displayed on the premises of the exchange as well as the web site of the exchange for the entire specified period. The notice shall contain the specified period, the maximum compensation limit for a single claim of an investor, etc.

4. The claims received against the defaulter members during the specified period shall be eligible for compensation from the IPF/CFP. The trust may however, if satisfied that the claims could not have been filed during the specified period for reasons beyond the control of the claimant, entertain claims received even after the specified period. The claims of the investors/clients shall be eligible for compensation from the IPF/CPF. However, in no case the claims of a broker or an associate of the member broker of the exchange shall be eligible for compensation out of the IPF/CPF. The claims of the investor/clients arising out of speculative transactions shall not be eligible for compensation from the IPF/CPF.

5. The IPF/CPF trust may adopt the arbitration mechanism at the exchange to determine the legitimacy of the claims received from the claimants. The trust may also seek the advice of the defaulters committee to sanction and ratify the payments to be made to the investors.

6. The exchanges are free to fix suitable compensation limits, in consultation with the Trust. However, the amount of compensation available against a single claim of an investor arising out of default by a member broker of a exchange shall not be less than Rs. 1 lakh in case of major exchanges (NSE & BSE) and Rs. 50,000 in case of other exchanges. The stock exchanges in consultation with the Trust shall also review and progressively increase the amount of compensation available against a single claim from an investor, at least every three years. The exchange shall disseminate the compensation limit fixed by them and any change thereof, to the public through press releases and also through its website.

7. The Trust shall disburse the amount of compensation from the IPF/CPF to the investor and such compensation shall not be more than the maximum amount fixed for a single claim of an investor. The IPF/CPF need not wait for the auction of the card of the defaulter member before the disbursements of the claims. The Trust shall disburse the compensation to the investors as and when claim have been crystallised against the defaulter. The exchange shall ensure that the amount realised by the auction/closeout of the card/realisation of assets of the defaulter members are credited to the IPF/CPF after satisfying the claims of the stock exchange and the SEBI in accordance with the bye-laws of the stock exchange.

8. Post-demutualization, the balance of the IPF/CPF lying un-utilised with the exchanges, shall continue to be utilised only for such purposes as prescribed by SEBI. In cases where the stock exchange is wound up post-demutualization, the balance in the IPF/CPF lying unutilised in the exchange shall be transferred to the SEBI who will act as the trustee of these funds. These funds shall be utilised for the purpose of investor education, awareness, research etc.

VII. Corporate Governance in Listed Companies

To improve the standards of corporate governance, SEBI amended the Clause 49 of the listing agreement. The major changes in the new clause 49 include amendments/additions to provisions relating to the definition of independent directors, strengthening the responsibilities of audit committees, improving quality of financial disclosures etc. The implementation schedule of the amended Clause 49 which was initially proposed to be effective from April 1, 2005 for listed companies has been extended to December 31, 2005.

I. Board of Directors

a. *Composition of Board*: The Board of directors of the company shall have an optimum combination of executive and non-executive directors with not less than 50% of the Board comprising of non-executive directors. In cases where the chairman of the Board is a non-executive director, at least half of the Board should comprise of independent directors.

b. *Non-executive Directors Compensation and Disclosures*: All fees/compensation, if any paid to non-executive directors, including independent directors shall be fixed by the Board of Directors and shall require previous approval of shareholders in the general meeting. The shareholders resolution shall specify the limits for the maximum number of stock options that can be granted to non-executive directors, including independent directors, in any financial year and in aggregate.

c. *Other Provisions*: The Board shall meet at least four times a year, with a maximum time gap of three months between any two meetings. A director shall not be a member in more than 10 committee or act as Chairman of more than 5 committees across all companies in which he is a director. Furthermore it should be mandatory annual requirement for every director to inform the company about the committee positions he occupies in other companies and notify changes as and when they take place.

d. *Code of Conduct*: The Board shall lay down a code of conduct for all Board members and senior management of the company. The code of conduct shall be posted on the website of the company. The Board members and the senior management personnel shall affirm compliance with the code on an annual basis. The annual report of the company shall contain a declaration to this effect signed by the CEO.

II. Audit Committee

e. *Qualified and Independent Audit Committee*: A qualified and independent audit committee shall be set up, giving the terms of reference subject to the following (i) audit committee shall have minimum three directors as members; 2/3rd of the members of the committee shall be independent directors, (ii) all members of the committee shall be financially literate; at least one member shall have accounting or related financial management expertise.

f. *Meeting of Audit Committee*: The committee shall meet at least four times in a year and the gap between two meetings should not be more than four months. The quorum for the meeting shall be either two members or 1/3rd of the members of the audit committee whichever is greater, but there should be a minimum of two independent members present.

g. *Powers of the Audit Committee*: The audit committee shall have the power to (i) investigate any activity within its terms of reference, (ii) seek information from any employee, (iii) obtain outside legal or other professional advice and (iv) secure attendance of outsiders with relevant expertise, if it considers necessary.

h. *Role of the Audit Committee*: The audit committee shall have the role of (i) over sighting the company's financial reporting process and the disclosure of its financial information to ensure that the financial statements are correct, sufficient and credible, (ii) recommending to the Board, the appointment, re-appointment and if required the replacement or removal of the statutory auditor and the fixation of audit fees, (iii) approval of payment to statutory auditors for any other services rendered by the statutory auditors, (iv) reviewing with the management, the annual financial statements before submission to the Board for approval, with particular reference to matters required to be included in the director's responsibility statement, changes if any in accounting policies and practices and reasons for the same, major accounting entries involving estimates based on the exercise of judgement by management etc., (v) reviewing with the management, the quarterly financial statements before submission to the board for approval, (vi) reviewing with the management, performance of statutory and internal auditors, adequacy of the internal control systems, (vii) reviewing the adequacy of internal audit function, if any including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit, (viii) discussing with the internal auditors any significant findings and follow up there on, (ix) reviewing the findings of any internal investigations by the internal auditors into matters where there is suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting of the matter to the board, (x) discussing with the auditors before the audit commences, about the nature and scope of audit as well as post-audit discussion to ascertain any area of concern, (xi) looking into the reasons for substantial defaults in the payment of to the depositors, debenture holders, shareholders and creditors, (xii) reviewing the functioning of the whistle blower mechanism, in case it is existing, (xiii) carrying out any other function as mentioned in the terms of reference of the audit committee.

III. Subsidiary Companies

At least one independent director on the Board of directors of the holding company shall be a director on the Board of directors of a material non listed Indian subsidiary company. The audit committee of the listed holding company shall also review the financial statements, in particular, the investments made by the unlisted subsidiary company. The minutes of the Board meetings of the unlisted subsidiary company shall be placed at the Board meetings of the listed holding company. The management should periodically bring to the notice of the Board of Directors of the listed holding company, a statement of all significant transactions and arrangements entered into by the unlisted subsidiary company.

IV. Disclosures

i. *Basis of related party transactions*: A summarised statement of the transactions with related parties in the ordinary course of business shall be placed periodically before the audit committee. The details of material individual transactions with related parties which are not in the normal course of business and not on an arm's length basis shall also be placed before the audit committee. However details of transactions not on an arm's length basis should be placed together with the management's justification for the same.

j. *Disclosure of accounting treatment*: Deviation if any, in the preparation of the financial statements from what has been prescribed in the Accounting Standard should be disclosed in the financial statements, together with the management's explanation as to why it believes such alternative treatment is more representative of the true and fair view of the underlying business transaction in the Corporate Governance Report.

k. *Board Disclosures - Risk Management*: The Company shall lay down procedures to inform Board members about the risk assessment and minimization procedures. These procedures shall be periodically reviewed to ensure that executive management controls risk through means of a properly defined framework.

l. *Proceeds from public issues, rights issues, preferential issues etc.*: When money is raised through an issue (public issues, rights issues, preferential issues etc.), it shall disclose to the Audit Committee, the uses/applications of funds by major category (capital expenditure, sales and marketing, working capital, etc), on a quarterly basis as a part of their quarterly declaration of financial results. Further, on an annual basis, the company shall prepare a statement of funds utilized for purposes other than those stated in the offer document/ prospectus/notice and place it before the audit committee. Such disclosure shall be made only till such time that the full money raised through the issue has been fully spent. This statement shall be certified by the statutory auditors of the company. The audit committee shall make appropriate recommendations to the Board to take up steps in this matter.

m. *Remuneration of Directors*: All pecuniary relationship or transactions of the non-executive director's vis-à-vis the company shall be disclosed in the Annual Report. Further the disclosures on all the elements of remuneration package of individual directors summarised under major groups such as, salary, benefits, bonuses, stock options, pension etc, details of fixed component and performance linked incentives along with performance criteria shall be made in the section on the corporate governance of the Annual Report. Stock option details, if any, and whether issued at a discount as well as the period over which accrued and over which exercisable shall also be disclosed. The company shall publish its criteria of making payments to non-executive directors in its annual report. Alternatively, this may be put up on the company's website and reference drawn thereto in the annual report. The company shall disclose the number of shares and convertible instruments held by non-executive directors in the annual report. Non-executive directors shall be required to disclose their shareholding in the listed company in which they are proposed to be appointed as directors, prior to their appointment. These details should be disclosed in the notice to the general meeting called for appointment of such directors.

VIII. FII Investment in Debt Securities & Limit for Investment by FIIs

In view of the Government of India raising the cumulative debt investment limit for FIIs/ Sub-Accounts (SAs) from US$ 1 billion to US$ 1.75 billion, SEBI notified the that the FIIs investment in dated Government securities and Treasury bills shall be under the cap of US$ 1.75 billion under both the 100% debt route and general 70:30 route. Thus, investment in securities other than dated Government securities and treasury bills i.e. corporate debt would not be reckoned within the sub ceiling of US$ 1.75 billion. The investments by FIIs/SAs through 100% debt route in dated Government securities and t-bills only are reckoned for the purpose of monitoring of individual limits allocated to them. Monitoring of the above investment limit shall be done on a daily basis and total outstanding position of all FIIs/SAs under this route in Government securities and treasury bills will be published daily on the SEBI website. Further, a 'headroom' of US$ 25 million have been decided i.e. FIIs/SAs shall be free to invest till the total investment reaches US$ 175 million. Thereafter, the FIIs/SAs will have to approach SEBI for prior approval of limit allocation. Allocation of limit will be done on 'first come-first serve' basis. The FIIs shall be granted 7 days time to invest and on the expiry of which the validity will lapse.

Individual debt investment limits earlier allocated for 100% FIIs/SAs will be realigned based on the remaining available limit of US$ 1.55 billion out of the overall cap of US$ 1.75 billion and revised limits will be advised to the 100% debt FIIs/SAs separately.

IX. Requirement of Notice Period

Keeping in view the difficulties experienced in case of corporate action in stocks on which derivatives are available or stocks which form a part of an index on which derivatives are available, the SEBI Advisory Committee on Derivatives and Market Risk Management recommended amendment in the listing agreement. The Clause 16 of the Equity Listing agreement was amended so that the company on whose stocks, derivatives are available or whose stocks forma part of an index on which derivatives are available, shall give a notice period of 30 days to stock exchanges for corporate actions like mergers, de-mergers, splits and bonus shares.

X. Demat Charges

Based on the recommendations of the Securities Market Advisory Committee, SEBI rationalised the charge structure for dematerialisation as given under w.e.f. February 1, 2005. Accordingly (a) no investor is required to pay any charge towards opening of a Beneficiary Owner (BO) Account except for statutory charges as may be applicable; (b) no investor is required to pay any charge for credit of securities into his/her BO account, and (c) no custody charge is to be levied on any investor opening a BO account on or after February 1, 2005. With effect from April 1, 2005, the custody charges are not levied on any investor. However, the depositories may levy and collect the charges towards custody of issuers, on a per folio (ISIN position) basis as at the end of financial year as per table below:

Nominal Value of Admitted Securities (Rs.)	Annual Custodial Fee payable by a Issuer to each Depository (Rs.) *
Upto 5 crore	4,000
Above 5 crore and upto 10 crore	10,000
Above 10 crore and upto 20 crore	20,000
Above 20 crore	30,000

* Plus service tax as applicable

Issuers are required to pay custody charges to the depository with whom they have established connectivity based on the total number of folios as on March 31st of the previous financial year or the minimum amount, as the case may be, by April 30th of each financial year failing which depositories may charge penal interest subject to a maximum of 12% per annum.

XI. Election to the Governing Board of Stock Exchanges

SEBI clarified that members of stock exchanges who were on the Governing Boards of the stock exchanges at the time of supersession need to be excluded from the reconstituted Governing Boards of the stock exchanges for a period of two years, as they had earlier failed to take effective action during their tenure on the Governing Board.

Initiatives from RBI

I. Declaration of Dividends by Banks

RBI reviewed the guidelines on dividends payable by banks in consultation with the Standing Technical Advisory Committee on Financial Regulation (STACFR). The revised guidelines are as follows:

Eligibility Criteria: Only the banks that comply with the minimum prudential requirements (listed below) will be eligible to declare dividends without prior approval of RBI: (a) CRAR of at least 11% for preceding two completed years and the accounting year for which it proposes to declare dividend (b) Net NPA less than 3%. The bank shall comply with the provisions of Sections 15 & 17 of the Banking Regulation Act, 1949.

The bank has to comply with the prevailing regulations/guidelines issued by RBI, including creating adequate provisions for impairment of assets and staff retirement benefits, transfer of profits to statutory Reserves and Investment Fluctuation Reserve, etc. The Reserve Bank should not have placed any explicit restrictions on the bank for declaration of dividends.

Quantum of Dividend Payable: Banks which qualify to declare dividends consequent upon compliance with the requirements as mentioned above shall only pay dividends without obtaining prior approval of the RBI, subject to further compliance with the following: (a) dividend payout ratio shall not exceed 33.33% (b) proposed dividend shall be payable out of the current years profit (c) dividend payout ratio is calculated as a percentage of 'dividend payable in a year' to 'net profit during the year' (d) in case the profit for the relevant period includes any extra-ordinary profits/income, the payout ratio shall be computed after excluding such extra-ordinary items for reckoning compliance with the prudential payout ratio ceiling of 33.33% (e) the financial statements pertaining to the financial year for which the bank is declaring a dividend should be free of any qualifications by the statutory auditors, which have an adverse bearing on the profit during that year. In case of any qualification to that effect, the net profit should be suitably adjusted while computing the dividend payout ratio.

II. Financing of Acquisition of Equity in Overseas Companies

The guidelines pertaining to financing of acquisition of equity in overseas companies issued by RBI have been reviewed and RBI has decided to allow banks to extend financial assistance to Indian companies for acquisition of equity in overseas joint ventures/wholly owned subsidiaries or in other overseas companies, new or existing, as strategic investment, in terms of a board approved policy duly incorporated in the loan policy of the bank. Such policy should include overall limit on such financing, terms and conditions of eligibility of borrowers, security, margin etc. While the Board may frame its own guidelines and safeguards for such lending, such acquisition(s) should be beneficial to the company and the country

Market Design*

At the end of March 2005, there were 23 stock exchanges registered with SEBI having a total of 9,128 registered brokers and 13,684 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. There are 23 recognized stock exchanges in India and most of them now are demutualised and corporatised or in the process of being done so.

Pursuant to the announcement made by the Finance Minister in the Parliament on March 13, 2001, that the stock exchanges would be corporatised and demutualised, SEBI constituted a committee under the chairmanship of Chief Justice M. H. Kania. Based on the recommendations of the committee, all the stock exchanges were advised to submit their respective proposals for Corporatisation and Demutualisation to SEBI for approval. The Securities Laws (Amendment) Ordinance, 2004 was promulgated on October 12, 2004, which amended the Securities Contracts (Regulation) Act, 1956 to facilitate the corporatisation and demutualization process of stock exchanges. The Ordinance was subsequently replaced by the Securities Laws (Amendment) Act on January 7, 2005. Following the promulgation of the Ordinance, all the stock exchanges were asked by SEBI to evolve a road map for corporatisation and demutualization. Presently, all the stock exchanges have filed with SEBI there proposal for demutualization. On May 20, 2005, the Stock Exchange, Bombay was notified as a Corporatised and Demutualised Exchange.

NSE since inception has adopted a demutualised structure and its model of demutualization compares well with the international models of demutualised stock exchanges as seen from Table 4.1

Membership

The trading platform of a stock exchange is accessible only to trading members. They play a significant role in the secondary market by bringing together the buyers and sellers. The brokers give buy/sell orders either on their own account or on behalf of clients. 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.

* 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 representatives 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.

Table 4.2: Eligibility Criteria for Trading Membership on CM Segment of NSE

(Amount in Rs. lakh)

Particulars	CM and F&O Segment	CM, WDM and F&O Segment
Constitution	Individuals/Firms/Corporates	Corporates
Paid-up capital (in case of corporates)	30	30
Net Worth	100	200
Interest Free Security Deposit (IFSD)	125	275
Collateral Security Deposit (CSD)	25	25
Annual Subscription	1	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. 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 2005, there were brokers 9,128 (including multiple registrations) registered with SEBI as compared to 9,368 brokers as at end-March 2004. As of end March 2005, 3,773 brokers, accounting for nearly 41.33% of total have become corporate entities. Amongst those registered with NSE around 89.86% of them were corporatised, followed by OTCEI and BSE with 76.90% and 73.55% corporate brokers respectively.

As at end-March 2005, there were 13,684 sub-brokers registered with SEBI, as compared with 12,815 sub-brokers as at end of previous year. During 2004-05, 239 new brokers were registered with SEBI, whereas 479 were membership cases of reconciliation/cancellation/ surrender. NSE and BSE together constituted 89.5% 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, 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 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 byelaws 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 byelaws. 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.
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 byelaws, 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 set up as a national exchange having nation-wide access with fully automated screen based trading system. Owing to this, today NSE has become the largest exchange in India with approximately 70% of the trading volumes on it. It

Table 4.3: Listing Criteria for Companies on CM Segment of NSE

Criteria	Initial Public Offerings (IPOs)	Companies listed on other exchanges
Paid-up Equity Capital (PUEC)/ Market Capitalisation (MC)	PUEC ≥ Rs. 10 cr. and MC ≥ Rs. 25 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.
Dividend Record or Net worth	--	Dividend paid in at least 2 out of the last 3 years OR Net worth Rs. 50 cr.
Project Appraisal/Listing	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) 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. 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.

is one of the very few exchanges in the world to also have adopted anonymous order matching system. The member punches 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.

As of March 2005, 78 trading members on the Capital Market Segment provided internet based trading facility to investors. The trading members in turn had registered 849,696 clients for web based access as on March 31, 2005. Around 8% of the total trading volume was routed and executed through internet.

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 realized 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 345 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', 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 investigates/ inspects 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,
- 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, then their securities are traded on the 'trade for trade' settlement window of the exchanges.

At the end of March 2005, the number of companies connected to NSDL and CDSL were 5,536 and 5,068, respectively. The number of dematerialised securities have increased from 97.7 billion at the end of March 2004 to 147.7 billion at the end of March 2005. During the same period the value of dematerialsied securities has increased from Rs. 10,726 billion to Rs. 15,686 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-04	March-05	March-04	March-05
Companies - Agreement signed	5,216	5,536	4,810	5,068
Companies - Available for Demat	5,212	5,536	4,810	5,068
Market Cap. of Companies Available (Rs. Bn.)	11,071	16,383	1,064	1,210
Number of Depository Participants	214	216	200	532
Number of DP Locations	1,719	2,819	219	1,530
No. of Investor Accounts	5,203,393	6,300,723	629,159	1,005,772
Demat Quantity (Mn.)	83,694	128,663	14,010	19,080
Demat Value (Rs. Bn.)	9,662	14,477	1,064	1,210

Source: SEBI

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. A trading member was required to pay the exchange transaction charges @0.004% (Rs. 4 per Rs.1 lakh) of the turnover. However, w.e.f. October 1, 2005 the transaction charges on all trades done on CM segment has been reduced and is levied @ Rs. 3.50 per lakh (0.0035%) of the transaction value (each side).

A securities transaction tax has also been introduced. For all delivery based transactions a STT of 0.20% (to be shared equally by both buyers and sellers) and for all non-delivery based transactions 0.02% shall be levied.

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. However, the existing structure of dematerialization charges has been rationalized to provide benefits to the investors. W.e.f. February 1, 2005, certain charges paid by investors were removed which include charges towards opening of a Beneficiary Owner (BO) account, credit of securities into BO account and custody charges for BO account opened on or after February 1, 2005. W.e.f. April 1, 2005, the custody charges are not levied on any investor. 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, 2005)

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 recognized 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, 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 72 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 23 sectors of the economy. It accounted for 60.02% of total market capitalisation of CM segment of NSE as at end-March 2005. The total traded value of all Nifty stocks is approximately 60% of the traded value of all the stocks on the NSE (average taken for the last six months). CNX Nifty Junior accounts for 10.39% 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 2004-March 2005.

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, CNX IT and on Bank Nifty 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. It has seen a considerable increase in late 1990's, however a slump was witnessed during 2001-02. The traits of recovery in the market are visibly seen for the last two years. The volumes had risen from Rs. 9,689,093 million in 2002-03 to Rs. 16,204,977 million in 2003-04. The trading volumes in the year 2004-05 were Rs. 16,668,963 million. In percentage terms there has been a growth of only 2.86% in 2004-05 over the previous year's volume (Table 4.5).

The monthly trading value of the CM segment on NSE increased from Rs. 1,009,512 million in April 2004 to Rs. 1,130,551 million in March 2005 (Table 4.6). However the volumes showed a decline in the rest of the months, it again re-bounced back in the later months of the fiscal year. The daily turnover on NSE averaged around Rs. 45,062 million in this year.

Most of the exchanges saw large scale declines in their trading volumes in the year 2004-05, many exchanges did not report any turnover during the whole fiscal. Only three exchanges *viz.,* NSE, BSE and Calcutta stock exchange showed slight growth trends in this period. NSE consolidated its position further as the market leader by contributing about 68.4% 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. Not only in the national arena, but also in the international markets, NSE has been successful in

Table 4.5: Turnover on Stock Exchanges in India*

	Stock Exchanges	Turnover (Rs. mn.)		Share in turnover (%)	
		2003-04	2004-05	2003-04	2004-05
1	NSE	10,995,339	11,400,720	67.85	68.39
2	Mumbai	5,026,184	5,187,170	31.02	31.12
3	Calcutta	19,275	27,150	0.12	0.16
4	Uttar Pradesh	117,510	53,430	0.73	0.32
5	Ahmedabad	45,445	80	0.28	0.00
6	Delhi	34	--	0.00	--
7	Pune	0.0	3	0.00	0.00
8	Ludhiana	0.0	--	0.00	--
9	Bangalore	0.5	--	0.00	--
10	ICSE	0.5	--	0.00	--
11	Hyderabad	19.6	140	0.00	0.00
12	SKSE	0.0	0	0.00	0.00
13	Madras	1,008.9	270	0.01	0.00
14	Madhya Pradesh	0.0	--	0.00	--
15	Vadodara	1.4	--	0.00	--
16	OTCEI	157.6	0	0.00	0.00
17	Gauhati	0.0	--	0.00	--
18	Cochin	0.0	--	0.00	--
19	Magadh	0.7	--	0.00	--
20	Bhubaneshwar	0	--	0.00	--
21	Coimbatore	0	--	0.00	--
22	Jaipur	0	--	0.00	--
23	Mangalore	0	0	0.00	0.00
	Total	**16,204,977**	**16,668,963**	**100.00**	**100.00**

* Excludes turnover in WDM and derivatives segments of Exchanges.
Source: SEBI Annual Report 2004-05

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-04	1,009,512	448,640	50,476	22,432	11,718,279	12,553,470
May-04	989,199	459,380	47,105	21,875	9,504,938	10,231,280
Jun-04	848,985	369,900	38,590	16,814	9,796,999	10,472,580
Jul-04	938,361	394,490	42,653	17,931	10,660,873	11,355,880
Aug-04	868,557	381,950	39,480	17,361	11,430,748	12,165,660
Sep-04	885,081	396,030	40,231	18,001	12,275,502	13,093,170
Oct-04	756,976	346,080	37,849	17,304	12,538,253	13,371,910
Nov-04	820,353	357,420	41,018	17,871	14,462,924	15,395,950
Dec-04	1,155,931	502,260	50,258	21,837	15,791,608	16,859,880
Jan-05	997,319	438,880	52,490	23,099	15,574,438	16,615,320
Feb-05	999,895	496,860	49,995	24,843	16,145,971	17,309,400
Mar-05	1,130,551	595,280	51,389	27,058	15,855,853	16,984,280
2004-05	**11,400,720**	**5,187,170**	**45,062**	**20,503**	**15,855,853**	**16,984,280**

creating a niche for itself. According to reports of FIBV, in the calendar year 2004, in terms of trading intensity NSE ranked 3rd next only to NASDAQ and NYSE (this is third consecutive year where NSE ranks 3rd).

The sectoral distribution of turnover has undergone significant change over last few years. Table 4.7 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. But the last two years have seen sharp rise in the share, 37.66% in 2003-04 and 41.81% in 2004-05. The share of information technology (IT) companies in trading volume has fallen from 74.71% in 2002-03 to only 19.56% in 2004-05.

The share of top '5' securities in turnover has been on a declining trend since the past few years. It witnessed a decline from 31.04% in 2003-04 to 25.88% in 2004-05 (Table 4.8). Trading in top '100' securities also has witnessed a decline from 91.03% to 84.26% 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 2004-05, top '5' members accounted for only 13.52% of turnover, while top '100' members accounted for 64.09% of total turnover.

Turnover in India seems to be more concentrated in comparison to that in other comparable markets (international) as may be seen from Table 4.9. Ten most active index securities accounted for 42.6% of turnover in India and top ten index securities in terms of equity base accounted for 33.4% of market capitalisation at the end of December 2004.

At the end of March 2005, NSE has permitted 78 members on its CM segment the web based access to its trading system. These members in turn have registered 849,696 clients for web based access. About 499 lakh trades for Rs. 894,083 million constituting 7.84% 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 2005 amounted to Rs. 15,855,853 million and Rs. 16,984,280 million respectively.

A sharp change in the shares of different sectors in market capitalisation is observed over the years (Table 4.7). 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, a turnaround in the market capitalization was witnessed in 2003-04 and have continued to some extent to 2004-05 where it registered 23.35%. The IT sector companies showed a drastic improvement from 9.63% in 2003-04 to 22.54% in 2004-05.

Table 4.7: Distribution of Turnover and Market Capitalisation of Top '50' Companies listed at NSE

Companies	Turnover															
	Amount (Rs. mn.)								% to Total							
	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Manufacturing	1,326,775	882,241	1,397,421	1,247,790	284,260	111,930	3,289,182	3,450,950	37.43	23.13	18.78	9.85	6.05	2.03	37.66	41.81
Financial Services	540,709	265,005	343,082	175,590	49,170	142,040	1,164,357	1,240,080	15.25	6.95	4.61	1.39	1.05	2.57	13.33	15.02
F.M.C.G	1,551,480	942,404	380,109	324,380	132,580	44,630	194,259	174,380	43.77	24.71	5.11	2.56	2.82	0.81	2.22	2.11
I.T.	25,793	1,381,476	3,693,152	9,571,590	3,128,510	4,127,810	2,711,187	1,614,760	0.73	36.22	49.63	75.56	66.58	74.71	31.04	19.56
Pharmaceuticals	19,762	90,295	482,304	210,850	225,380	95,600	229,623	228,810	0.56	2.37	6.48	1.66	4.80	1.73	2.63	2.77
Others	80,484	252,850	1,144,814	1,138,030	878,840	1,002,930	1,146,357	1,545,400	2.27	6.63	15.39	8.98	18.70	18.15	13.12	18.72
Total	**3,545,003**	**3,814,271**	**7,440,881**	**12,668,230**	**4,698,740**	**5,524,940**	**8,734,966**	**8,254,380**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Companies	Market Capitalisation															
	Amount (Rs. mn.)								% to Total							
	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Manufacturing	1,773,710	1,065,715	1,516,922	967,180	561,090	333,830	2,621,234	2,562,230	54.95	34.39	20.53	20.79	12.41	8.03	31.13	23.35
Financial Services	340,613	183,338	362,092	364,600	424,850	452,830	1,045,514	1,385,180	10.55	5.92	4.90	7.84	9.39	10.89	12.41	12.62
F.M.C.G	591,987	907,729	795,220	804,970	565,070	378,260	598,188	623,510	18.34	29.29	10.76	17.30	12.49	9.09	7.10	5.68
I.T.	84,343	457,416	3,064,181	1,060,950	801,450	760,170	811,075	2,473,980	2.61	14.76	41.48	22.80	17.72	18.28	9.63	22.54
Pharmaceuticals	81,758	242,208	193,237	210,350	323,140	275,740	425,007	413,650	2.53	7.82	2.62	4.52	7.14	6.63	5.05	3.77
Others	355,454	242,718	1,456,091	1,245,020	1,847,200	1,958,270	2,920,559	3,515,830	11.01	7.83	19.71	26.76	40.84	47.08	34.68	32.04
Total	**3,227,864**	**3,099,124**	**7,387,742**	**4,653,070**	**4,522,800**	**4,159,100**	**8,421,576**	**10,974,380**	**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

Table 4.8: Percentage Share of Top 'N' Securities/Members in Turnover of NSE

Month	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
2004-05	25.88	41.65	57.98	72.40	84.26
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
2004-05	13.52	20.20	34.97	49.01	65.09

Source: NSE.

Table 4.9: Market Concentration in Emerging Asian Markets: End December 2004

(In per cent)

Market	Index Stock's Share of		Share of 10 Largest Index Stocks in Market Capitalisation	Share of 10 Most Active Index Stocks in Turnover
	Market Capitalisation	Turnover		
China	66.6	47.4	28.9	13.7
Thailand	84.1	70.5	44.9	32.3
Taiwan	81.0	62.6	35.0	24.7
Korea	86.1	65.1	41.3	27.8
Malaysia	75.1	49.1	34.2	23.9
India	73.7	75.1	33.4	42.6

Source: S&P Global Stock Markets Factbook 2005

Indices

The year 2004-05 could not sustain with the performance which the different markets had shown the previous year. The Nifty index, registered a new high of 2035.65 in March 2005. The point to point return of the index was 14.89% in 2004-05 (Table 4.10). Similarly BSE also gave returns to the tune of 16.14% in the said period.

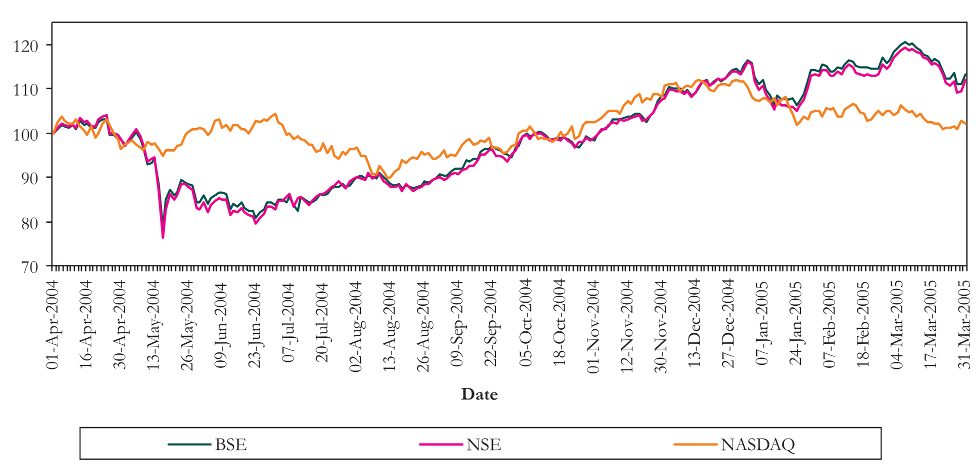
Table 4.10: Movement of Select Indices on Indian/Foreign Markets

Index	31.03.2003	31.03.2004	31.03.2005	Change during 2003-04 (%)	Change during 2004-05 (%)
S&P CNX Nifty	978.20	1771.90	2035.65	81.14	14.89
BSE Sensex	3048.72	5590.60	6492.82	83.38	16.14
Hang Seng	8634.45	12681.67	13516.88	46.87	6.59
Dow Jones	7992.13	10381.70	10503.76	29.90	1.18
Nasdaq	1341.17	2000.63	1999.23	49.17	-0.07
Nikkei	7972.71	11715.39	11668.95	46.94	-0.40
FTSE	3613.30	4417.50	4894.40	22.26	10.80

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, 2004-05



Volatility

The stock markets witnessed maximum volatility in May 2004 basically due to the intra-day downslide in the benchmark index wherein an eight sigma deviation was observed in the VAR (Table 4.11). During the last quarter of the 2004-05, January witnessed high volatility to the tune of 1.67% and 1.54% in the Nifty and the Sensex respectively. Rest of the months during 2004-05 showed volatility of either 1.00% or less than 1.00%. Chart 4.2 presents the volatility of S&P CNX Nifty, Sensex and Nasdaq.

The volatility across different sectoral indices varied widely (Table 4.12). For the month of May 2004 and January 2005 wherein the volatility of Nifty was quite high, the other sectoral indices too had high volatilities.

Table 4.11: Stock Market Index, Volatility and P/E Ratio: April 2004 to March 2005

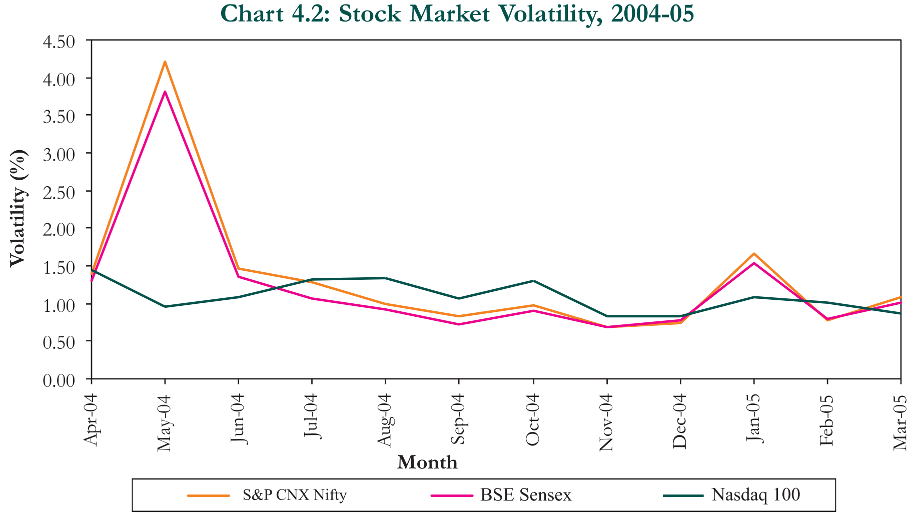
Month/Year	S&P CNX Nifty			Sensex		
	Index	Volatility (%)**	P/E Ratio*	Index	Volatility (%)**	P/E Ratio*
Apr-04	1796.10	1.40	18.68	5,655.09	1.30	18.83
May-04	1483.60	4.21	11.94	4759.62	3.81	15.49
Jun-04	1505.60	1.46	12.64	4795.46	1.36	14.23
Jul-04	1632.30	1.29	13.63	5170.32	1.06	15.38
Aug-04	1631.75	0.99	13.64	5192.08	0.92	15.42
Sep-04	1745.50	0.83	14.59	5583.61	0.73	16.74
Oct-04	1786.90	0.97	14.93	5672.27	0.90	17.26
Nov-04	1958.80	0.68	16.39	6234.29	0.69	18.79
Dec-04	2080.50	0.74	15.32	6602.69	0.77	17.07
Jan-05	2057.60	1.67	14.68	6555.94	1.54	16.33
Feb-05	2103.25	0.78	15.02	6713.86	0.80	16.09
Mar-05	2035.65	1.08	14.60	6492.82	1.02	15.61

* As on the last trading day of the month.

** Volatility is calculated as standard deviation of the daily returns for the respective period

Source: SEBI & NSE.

Chart 4.2: Stock Market Volatility, 2004-05



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 4.12. 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 a year back (March 2004) gave out positive returns of 14.89%.

Table 4.12: Performance of Sectoral Indices

Month/ Year	Monthly Closing Prices						Average Daily Volatility (%)					
	S&P CNX Nifty	CNX FMCG	CNX IT	CNX Finance	S&P CNX Petro-chemicals	S&P CNX Pharma-ceuticals	S&P CNX Nifty	CNX FMCG	CNX IT	CNX Finance	S&P CNX Petro-chemicals	S&P CNX Pharma-ceuticals
Apr-04	1796.10	2415.32	2068.70	711.51	2402.30	2762.17	1.40	1.07	2.12	1.94	1.87	0.99
May-04	1483.60	2180.07	2042.15	604.23	1952.06	2521.58	4.21	3.43	4.84	5.03	4.66	2.93
Jun-04	1505.60	2131.48	2115.20	630.82	1956.56	2369.18	1.46	0.86	1.61	1.40	2.23	1.34
Jul-04	1632.30	2208.28	2269.20	657.70	2232.52	2473.16	1.29	1.14	1.13	1.09	1.75	0.70
Aug-04	1631.75	2194.85	2340.15	668.62	2200.49	2544.72	0.99	0.98	1.14	1.11	1.49	0.87
Sep-04	1745.50	2387.54	2496.20	706.59	2389.96	2910.17	0.83	1.08	1.16	0.75	1.20	0.80
Oct-04	1786.90	2344.78	2667.15	674.65	2420.97	2881.04	0.97	0.60	1.62	0.90	1.61	0.63
Nov-04	1958.80	2711.57	2996.50	815.42	2376.21	3051.23	0.68	1.00	0.95	1.35	1.33	0.84
Dec-04	2080.50	2786.34	2936.90	919.88	2514.96	3442.72	0.74	0.69	1.68	1.29	1.06	0.78
Jan-05	2057.60	2954.33	2849.40	880.70	2367.42	3088.00	1.67	1.26	1.94	2.59	2.32	1.70
Feb-05	2103.25	2834.95	2919.05	978.91	2491.79	2988.89	0.78	1.08	1.12	1.12	1.57	0.41
Mar-05	2035.65	2787.59	2923.15	963.77	2310.71	2914.25	1.08	1.16	1.34	1.69	1.38	0.82

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 2004-05 is presented in Chart 4.3. It is observed that during the entire period, CNX Finance Index, S&P CNX Pharmaceuticals Index and the CNX IT Index out-performed the Nifty. The S&P CNX Petrochemicals Index was the worst performer during the whole year. CNX FMCG Index though mirrored the movement of Nifty during the most part of the year. The monthly closing prices of these sectoral indices are presented in Table 4.12.

Chart 4.3: Movement of Nifty and Sectoral Indices, 2004-05

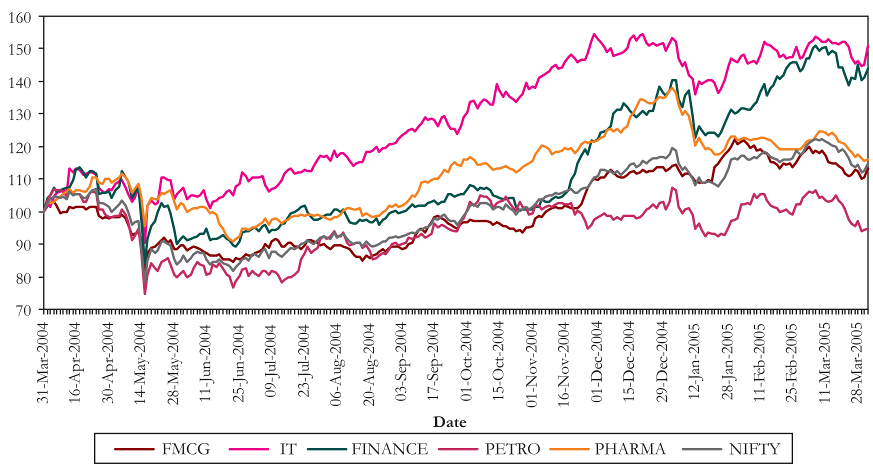


Table 4.13: Performance of Select Indices as at end March 2005

(In per cent)

	1 month	3 months	6 months	1 year
S&P CNX Nifty	-3.21	-2.16	16.62	14.89
S&P CNX 500	-2.99	-1.78	19.89	21.64
S&P CNX Defty	-3.39	-2.29	22.51	15.52
CNX Nifty Junior	-2.58	-4.00	22.00	26.03
CNX Midcap 200	0.87	7.20	39.60	73.54
CNX IT Index	0.14	-0.47	17.10	50.88
CNX Bank Index	-2.83	0.89	43.87	26.27

Source: IISL.

Exchange Traded Funds

The first ETF in India, the "Nifty BeEs (Nifty Benchmark Exchange Traded Scheme) based on S&P CNX Nifty 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 2005, there were five ETFs listed on NSE. They are namely 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 2005 the total trading volume of the 5 ETFs listed on NSE was Rs. 256 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 34.54% as compared with 99.05 % on NSE in March 2005 (Table 4.14). Only 81.49% of companies traded on BSE were traded for more than 100 days during 2004-05, while that on NSE, it has been 95.56% (Table 4.15). Trading took place for less than 100 days in case of 17.27% of companies traded at BSE during the year, and for less than 10 days in case of 4.89% of companies traded.

Table 4.14: 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-04	795	771	96.98	7,098	1,907	26.87
May-04	804	776	96.52	7,223	1,768	24.48
Jun-04	813	787	96.80	7,560	1,780	23.54
Jul-04	815	793	97.30	7,087	1,991	28.09
Aug-04	820	799	97.44	7,133	2,093	29.34
Sep-04	824	809	98.18	7,148	2,314	32.37
Oct-04	828	814	98.31	6,903	2,213	32.06
Nov-04	831	816	98.19	6,908	2,459	35.60
Dec-04	832	821	98.68	6,942	2,425	34.93
Jan-05	833	820	98.44	6,916	2,432	35.16
Feb-05	837	825	98.57	6,946	2,455	35.34
Mar-05	839	831	99.05	6,897	2,382	34.54

Source: SEBI and NSE.

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

Table 4.15: 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	
	2004-05	% to Total	2004-05	% to Total
Above 100 days	818	95.56	2,368	81.49
91-100 days	2	0.23	36	1.24
81-90 days	1	0.12	37	1.27
71-80 days	4	0.47	35	1.20
61-70 days	6	0.70	32	1.10
51-60 days	3	0.35	50	1.72
41-50 days	1	0.12	34	1.17
31-40 days	4	0.47	41	1.41
21-30 days	4	0.47	68	2.34
11-20 days	3	0.35	63	2.17
1-10 days	10	1.17	142	4.89
Total	**856**	**100.00**	**2,906**	**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 2004-05, 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. 458,800 million. The FII net investment was highest during the month of December 2004, when they made net purchases for a peak of Rs. 101,390 million (Table 4.16). The cumulative net FII investment touched US$ 35.93 billion by end-March 2005. As on end March 2005, the total number of FIIs registered with SEBI amounted to 685 against 540 in March 2004.

Table 4-16: Trends in FII 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**
2004-05	**2,169,530**	**1,710,730**	**458,800**	**1,478,306**	**10,173**	**35,927**
Apr-04	196,920	129,720	67,200	1,086,706	1,483	27,237
May-04	156,550	192,010	-35,460	1,051,246	-806	26,431
Jun-04	108,940	111,680	-2,740	1,048,506	-57	26,374
Jul-04	112,470	105,340	7,130	1,055,636	157	26,531
Aug-04	128,560	103,350	25,210	1,080,846	550	27,081
Sep-04	130,970	105,220	25,750	1,106,596	556	27,637
Oct-04	160,630	140,350	20,280	1,126,876	439	28,076
Nov-04	213,020	131,170	81,850	1,208,726	1,783	29,859
Dec-04	258,410	157,020	101,390	1,310,116	2,229	32,088
Jan-05	175,020	178,190	-3,170	1,306,946	-75	32,013
Feb-05	243,600	151,510	92,090	1,399,036	2,101	34,114
Mar-05	284,440	205,170	79,270	1,478,306	1,813	35,927

Source: SEBI.

During 2004-05, the MFs have invested more funds in the debt instruments than equity instruments (Table 4.17). In the equity market, MFs were net buyers to the tune of Rs. 4,480 million during 2004-05. In the months of April 2004 and from June 2004 to December 2004 the MFs were in a selling spree in the equity, whereas in the Debt instruments June 2004 and October 2004 witnessed the MFs in selling mode.

Table 4.17: 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-04	36,750	38,950	-2,200	61,000	36,540	24,460	22,260
May-04	48,570	38,520	10,050	43,120	36,840	6,280	16,330
Jun-04	21,300	23,900	-2,600	40,670	53,380	-12,710	-15,310
Jul-04	26,790	31,490	-4,700	43,570	40,060	3,510	-1,190
Aug-04	28,220	29,200	-980	45,830	32,280	13,550	12,570
Sep-04	35,300	37,590	-2,290	46,210	34,120	12,090	9,800
Oct-04	28,610	32,830	-4,220	23,550	28,190	-4,640	-8,860
Nov-04	35,890	42,850	-6,960	37,090	25,270	11,820	4,860
Dec-04	47,960	51,510	-3,550	65,730	38,730	27,000	23,450
Jan-05	37,680	32,200	5,480	58,180	31,370	26,810	32,290
Feb-05	38,450	37,430	1,020	74,980	47,440	27,540	28,560
Mar-05	64,930	49,500	15,430	81,890	47,760	34,130	49,560
2004-05	**450,450**	**445,970**	**4,480**	**621,820**	**451,980**	**169,840**	**174,320**

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 details about the ADRs/GDRs constituting the Instanex Skindia index in given in table 4.18. RBI permitted two-way fungibility for ADRs/GDRs, which meant that the investors (foreign institutional or domestic) who holds ADRs/GDRs can cancel them

Table 4.18: Details of ADRs/GDRs Constituting the Instanex Skindia Index

(In per cent)

Company	Weight (%)	Price (US$) at 5 pm	Market Capitalsiation ($M)	PE
Instanex Skindia	**100.00**	**1287.76**	**8,373**	**20.49**
Bajaj Auto (G)	1.75	30.75	145	18.83
Dr. Reddy's (A)	3.01	16.74	249	44.58
HDFC Bank (A)	6.87	45.66	569	32.84
Hindalco (G)	4.16	27.85	345	12.98
ICICI Bank (A)	20.00	22.13	1,744	20.01
Infosys Tech (A)	18.55	75.48	1,537	58.10
ITC (G)	4.76	36.90	395	23.21
L&T (G)	2.89	26.00	240	16.76
MTNL (A)	2.34	6.48	194	7.06
Ranbaxy Labs (G)	4.43	25.00	367	35.06
Reliance (G)	9.94	29.25	823	14.86
Satyam Computers (A)	5.13	25.50	425	27.15
State Bank of India (G)	10.38	41.40	860	12.06
VSNL (A)	3.78	10.47	313	13.58
Wipro (A)	2.01	20.20	166	50.93

Source: The Economic Times, June 30, 2005 with the depository and sell the underlying shares in the market. The company can then issue fresh ADRs to the extent of the shares cancelled. Previously, once a company issued ADR/GDR and if the holder wanted to obtain the underlying equity shares of the Indian Company, then, such ADR/GDR would be converted into shared of the Indian Company. Once such conversion took place, it was not possible to recover the equity shares into ADR/GDR. The result was, every time a conversion took place, companies had to seek Government permission to reissue the depositories.

Takeovers

In 2004-05, there were 61 takeovers under open category involving Rs. 4,632 million as against Rs. 15,948 million during the preceding year (Table 4.19). However, there were 212 takeovers under exempted category involving Rs. 6,598 million as against Rs. 14,357 million in the previous year.

Table 4.19: Substantial Acquisition of Shares and Takeovers

(Value in Rs.mn.)

Year	Open Offers								Automatic Exemption	
	Objectives						Total			
	Change in Control of Management		Consolidation of Holdings		Substantial Acquisition					
	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value of Shares Acquired
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
2004-05	35	3,503	12	165	14	964	61	4,632	212	6,958
Total	**347**	**79,999**	**154**	**58,356**	**80**	**17,415**	**581**	**155,770**	**1,691**	**220,398**

Source: SEBI.

BOX ITEM: 1

Corporate Governance

Need for Corporate Governance

Globalization has opened up vast opportunities for domestic players but is also fraught with various challenges. FIIs too demand greater professionalism in corporate activities. The Indian economy has consciously shifted from a controlled one to a market driven one. In the process, several developments have unfolded. Indian corporates need to assimilate these developments in order to survive and flourish amidst global competition. They can aspire to reach their goals with success if they can pursue the right means. Good governance is the means to that end.

Precedence for Corporate Governance norms in India

- The initiatives taken by Government of India in 1991, aimed at economic liberalization and globalization of the domestic economy. It led India to initiate reform process in order to suitably respond to the developments taking place world over.
- On account of interest generated by Cadbury Committee report, CII, ASSOCHAM and SEBI constituted committees to recommend initiatives in Corporate Governance
- The recommendations of the Kumar Mangalam Birla Committee, constituted by SEBI, led to addition of Clause 49 in the listing agreement.
- SEBI, as part of its endeavor to improve the standards of corporate governance, constituted another committee under the Chairmanship of N.R.Narayana Murthy, to review the progress of the corporate sector in meeting the norms of Corporate Governance. On the basis of the recommendations of the committee SEBI has revised clause 49 of the listing agreement vide circular dated August 26, 2003. However this circular has been withdrawn by SEBI recently.
- SEBI on October 28, 2004 again issed a circular directing all Stock Exchanges to amend the listing agreement by replacing the existing clause 49.

Definition of Corporate Governance

- Cadbury Committee, U.K. has defined Corporate Governance as follows:

  "Corporate Governance is the system by which companies are directed and controlled. It is also a system of structuring, operating and controlling a company with the following specific aims:
  1. Fulfilling long term strategic goals of owners
  2. Taking care of the interests of employees
  3. A consideration for the environment and local community
  4. Maintaining excellent relations with customers and suppliers
  5. Proper compliance with all the applicable legal and regulatory requirements."
- N.R.Narayana Murthy committee on Corporate Governance has observed that:

  "Corporate Governance is the acceptance by management of the inalienable rights of shareholders as the true owners of the corporation and of their own role as trustees on behalf of the shareholders. It is about commitment to values, about ethical business conduct and about making a distinction between personal and corporate funds in the management of a company"

Audit Committee

A proper and well functioning financial system exists when the three main groups responsible for financial reporting- the board, the internal auditor and the outside auditors- form the group that supports responsible financial disclosure and active and participatory oversight. The audit committee has an important role to play in this process, since the audit committee is a sub-group of the full board and hence the monitor of the process. Certainly it is not the role of the audit committee to prepare financial statements or engage in the myriad of decisions relating to the preparation of those statements. The committee's job is clearly one of oversight and monitoring and in carrying out this job it relies on senior financial management and the outside auditors. It is therefore necessary that a qualified and independent audit committee should be set up by the board of a company.

Independent Directors

Independent directors are considered as both a safeguard and a significant source of competitive advantage. The inclusion of independent directors bring a different view a more knowledgeable view, a more professional view, of the world in which the company operates. The capabilities required in an independent director includes *interalia* financial, marketing literacy, mentoring capabilities, independence of mind etc. Independent directors are required because they perform the following important role:

- Balance the often conflicting interests of the stake holders
- Facilitate withstanding and countering pressures from owners
- Fulfill a useful role in succession planning
- Act as a coach, mentor and sounding board for their full time colleagues
- Provide independent judgment and wider perspectives

Appointment and Role of Non-executive Directors:

The Board of directors of the company shall have an optimum combination of executive and non-executive directors with not less than fifty percent of the board of directors comprising of non-executive directors. Where the Chairman of the Board is a non-executive director, at least one-third of the Board should comprise of independent directors and in case he is an executive director, at least half of the Board should comprise of independent directors.

Non-executive directors are normally appointed to the Board primarily for their contribution to the development of the company's strategy. In addition and particularly in smaller companies, non-executive directors may contribute valuable expertise not otherwise available to management. What matters in every case is that the non-executive directors should command the respect of the executives and should be able to work with them in a cohesive team to further the company's interest.

Code of Conduct:

"The Board shall lay down a code of conduct for all board members and senior management of the company. All board members and senior management personnel shall affirm compliance with the code on an annual basis"

Until recently, the adoption of a corporate code of conduct was completely voluntary. Therefore, most existing codes were rather brief and general statements that left a good deal of room for interpretation and contained no administrative details. Vide revised clause 49, it will be obligatory for the board of a company to lay down a code of conduct for its board members and the senior management of the company.

A code of conduct should not be viewed as a panacea of all issues relating to prevailing ethical concerns. Codes must be recognized as only one aspect of a larger system of institutional efforts directed at developing and nurturing an ethical corporate culture or environment.

Whistle Blower policy

Annexure I D of the revised clause 49 lists out certain non-mandatory requirements, including whistle blower policy.

A whistle blower is 'An employee or ex-employee of an organization, who discloses information about serious malpractice by that organization, not other wise known or visible, where the disclosure is made in the reasonable belief that there is malpractice and the disclosure is made in good faith without malice and may in the public interest.

Whistle blower policy is an internal mechanism, which will dissuade employees disclosing fraud or corruption to the media. Encouraging a culture of openness within an organization helps. Placing employees in a position where they feel driven to approach the media to ventilate concerns is unsatisfactory both for the employee and the organization.

Related Party Transactions

1. A statement in summary form of transactions with related parties in the ordinary course of business shall be placed periodically before the audit committee.
2. Details of material individual transactions with related parties which are not in the normal course of business shall be placed before the audit committee.
3. Details of material individual transactions with related parties or others, which are not on an arm's length basis should be placed before the audit committee, together with Management's justification for the same.

Annexure 4.1: Exchange -wise Brokers and Sub-brokers in India

Exchanges	Participants at the end March			
	Registered Brokers		Registered Sub-Brokers	
	2004	2005	2004	2005
Ahmedabad	323	317	124	119
Bangalore	242	250	156	156
Bhubaneshwar	229	221	17	17
Calcutta	980	962	92	88
Cochin	468	446	42	42
Coimbatore	177	135	24	22
Delhi	373	376	363	343
Gauhati	172	119	4	4
Hyderabad	305	288	199	199
ICSEIL	633	654	3	3
Jaipur	532	522	34	34
Ludhiana	297	293	38	38
Madhya Pradesh	179	174	115	5
Madras	182	178	3	115
Magadh	195	198	1	3
Mangalore	105	66	5	1
Mumbai	673	726	6,600	6,917
NSEIL	970	976	4,717	5,338
OTCEI	867	801	25	19
Pune	197	186	161	161
SKSE	437	425	0	0
Uttar Pradesh	514	504	19	19
Vadodara	318	311	73	41
Total	**9,368**	**9,128**	**12,815**	**13,684**

Source: SEBI Annual Report

Annexure 4.2: Market Capitalisation of S&P CNX Nifty Securities: April 2004 to March 2005 (end of period)

(Rs. mn.)

Sl . No.	Security	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05
1	ABB	33,253	27,156	28,519	30,089	32,242	31,939	32,337	40,441	41,163	41,309	54,526	49,326
2	ACC	49,632	42,195	43,110	42,689	48,004	47,624	45,692	51,147	60,362	63,723	65,543	64,303
3	BAJAJAUTO	93,170	88,040	89,426	83,345	94,384	103,951	97,318	102,084	114,459	105,150	104,563	109,491
4	BHARTI	314,702	256,599	253,077	282,360	259,286	271,148	291,257	321,930	400,976	427,201	417,378	384,388
5	BHEL	143,283	106,348	122,931	133,419	135,095	140,517	152,853	151,727	187,694	184,133	210,041	187,584
6	BPCL	141,165	89,040	106,620	103,980	105,375	105,390	103,875	117,870	137,775	127,455	128,460	106,050
7	CIPLA	82,150	70,213	63,571	74,830	71,397	88,867	83,754	83,304	95,299	85,928	78,146	76,707
8	COLGATE	17,427	16,482	17,230	20,005	19,331	20,406	19,841	23,574	24,356	25,329	25,315	24,757
9	DABUR	23,158	20,724	17,905	19,568	19,725	20,899	23,089	25,208	26,809	29,029	33,139	31,807
10	DRREDDY	66,511	60,989	56,222	58,154	53,934	56,410	57,485	60,859	66,216	56,352	55,117	56,559
11	GAIL	185,198	132,852	143,888	165,748	156,234	161,266	164,987	184,352	195,346	194,965	204,098	179,447
12	GLAXO	49,682	45,128	44,171	44,711	44,398	50,148	50,133	64,488	67,243	61,606	64,335	62,781
13	GRASIM	113,386	95,996	92,641	89,907	102,498	105,211	99,573	103,419	121,249	121,896	123,473	111,331
14	GUJAMBCEM	55,167	49,757	50,155	49,160	57,325	60,521	61,346	66,109	72,298	80,595	80,635	71,885
15	HCLTECH	81,398	88,417	88,365	93,562	94,375	105,554	107,963	110,874	102,348	104,975	107,620	118,454
16	HDFC	146,663	142,446	127,526	142,039	137,095	150,929	158,017	197,749	190,496	192,825	193,187	181,036
17	HDFCBANK	108,063	100,403	105,676	107,395	105,234	115,066	118,944	142,326	149,103	161,782	168,481	168,836
18	HEROHONDA	96,209	89,031	101,192	85,706	88,452	89,500	84,598	98,406	114,291	107,452	108,740	109,429
19	HINDALCO	103,059	83,746	92,189	101,885	108,982	125,415	109,787	121,009	131,565	120,310	128,832	119,806
20	HINDLEVER	311,036	301,460	280,218	256,005	246,539	276,036	274,715	318,300	315,658	351,759	317,089	290,454
21	HINDPETRO	156,160	102,003	114,066	107,924	106,940	107,347	104,480	114,965	136,258	122,837	119,224	103,275
22	ICICIBANK	225,717	166,912	177,250	193,999	195,748	207,779	217,127	246,792	273,131	265,535	280,365	289,205
23	INFOSYSTCH	341,993	345,631	368,132	415,518	421,402	453,499	509,896	575,686	560,284	554,110	603,942	609,688
24	IPCL	46,952	34,851	36,452	43,601	49,806	51,408	46,555	44,718	45,252	43,924	44,569	40,213
25	ITC	266,651	217,462	219,666	257,016	259,471	281,866	269,745	319,617	325,110	337,785	321,134	333,055
26	LT	--	--	--	--	--	--	--	--	*127,828	130,585	141,367	129,838
27	MARUTI	157,312	111,693	116,489	122,642	110,291	102,346	108,558	121,371	133,448	131,093	136,683	121,718
28	M&M	54,483	49,077	51,293	52,424	49,698	49,634	51,595	56,798	63,277	62,656	62,320	57,645
29	MTNL	93,524	70,277	83,412	81,648	77,459	89,334	86,972	102,092	97,619	89,492	84,735	71,726
30	NATIONALUM	109,275	82,472	86,531	94,552	95,583	111,433	108,019	116,298	129,828	114,462	114,139	112,561
31	ONGC	1,197,785	892,920	896,770	1,022,252	1,018,331	1,068,452	1,125,775	1,161,994	1,169,195	1,167,270	1,215,894	1,262,379
32	ORIENTBANK	61,507	43,456	46,267	46,084	44,833	46,373	46,055	57,781	64,539	61,382	60,506	59,697
33	PNB	--	69,257	74,298	71,021	70,279	68,926	65,132	92,551	107,607	109,053	121,376	135,825
34	RANBAXY	197,018	183,758	168,921	175,183	178,268	202,900	204,220	208,514	232,577	201,486	190,122	187,620
35	REL	114,353	76,783	89,520	108,198	121,218	117,182	116,366	104,027	97,366	102,598	104,765	98,335
36	RELIANCE	735,123	600,163	599,954	682,689	664,187	723,184	738,893	721,997	745,247	743,292	775,496	760,925
37	SAIL	144,564	121,847	113,173	164,596	165,629	192,890	204,042	226,552	258,976	264,139	270,541	261,248
38	SATYAMCOMP	101,325	99,240	96,734	107,446	107,652	119,881	118,676	137,932	130,663	131,751	131,282	130,453
39	SBIN	338,015	244,808	226,624	232,677	233,071	246,361	235,466	278,781	343,147	338,410	376,119	344,621
40	SCI	33,425	24,490	28,823	35,274	33,495	40,553	48,118	50,857	48,500	46,382	45,888	42,190
41	SUNPHARMA	69,734	71,821	68,046	65,912	71,811	79,343	81,977	92,088	103,070	92,171	88,378	86,541
42	TATACHEM	25,046	22,200	21,288	21,496	26,683	28,340	27,608	31,362	35,599	33,954	33,696	32,610
43	TATAPOWER	75,132	51,928	45,893	52,295	51,394	62,249	59,379	68,008	77,467	76,201	80,742	70,966
44	TATATEA	21,400	18,575	20,574	23,587	23,258	23,747	23,047	24,948	26,603	27,520	30,668	29,375
45	TATAMOTORS	165,885	129,781	136,105	151,423	139,885	144,559	149,399	173,363	182,589	182,282	172,176	149,657
46	TCS	--	--	--	--	--	--	--	--	--	--	*662,973	687,531
47	TISCO	132,077	109,311	111,045	144,622	139,392	160,037	159,289	179,048	213,142	213,890	233,704	221,970
48	VSNL	46,612	40,812	46,142	51,614	47,723	50,075	47,638	65,094	66,149	65,507	62,600	52,383
49	WIPRO	359,642	354,695	371,622	381,946	404,052	416,927	459,569	536,008	524,076	494,373	491,576	471,744
50	ZEETELE	52,574	52,801	51,996	57,957	63,051	62,701	61,731	62,742	70,765	63,835	58,699	57,297
	Total	**7,537,593**	**6,296,045**	**6,391,717**	**6,950,152**	**6,950,518**	**7,436,118**	**7,612,888**	**8,357,156**	**9,004,016**	**8,911,746**	**9,784,397**	**9,516,720**

* 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 2004 - March 2005

(In per cent)

Sl . No.	Security	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05
1	ABB	0.43	0.43	0.44	0.43	0.46	0.43	0.42	0.48	0.46	0.46	0.56	0.52
2	ACC	0.64	0.67	0.67	0.61	0.69	0.64	0.60	0.61	0.67	0.71	0.67	0.68
3	BAJAJAUTO	1.21	1.39	1.39	1.19	1.35	1.39	1.27	1.22	1.27	1.18	1.07	1.15
4	BHARTI	4.08	4.06	3.94	4.04	3.71	3.63	3.81	3.83	4.44	4.78	4.27	4.04
5	BHEL	1.86	1.68	1.91	1.91	1.93	1.88	2.00	1.81	2.08	2.06	2.15	1.97
6	BPCL	1.83	1.41	1.66	1.49	1.51	1.41	1.36	1.40	1.53	1.43	1.31	1.11
7	CIPLA	1.07	1.11	0.99	1.07	1.02	1.19	1.09	0.99	1.06	0.96	0.80	0.81
8	COLGATE	0.23	0.26	0.27	0.29	0.28	0.27	0.26	0.28	0.27	0.28	0.26	0.26
9	DABUR	0.30	0.33	0.28	0.28	0.28	0.28	0.30	0.30	0.30	0.32	0.34	0.33
10	DRREDDY	0.86	0.96	0.88	0.83	0.77	0.75	0.75	0.72	0.73	0.63	0.56	0.59
11	GAIL	2.40	2.10	2.24	2.37	2.24	2.16	2.16	2.20	2.16	2.18	2.09	1.89
12	GLAXO	0.64	0.71	0.69	0.64	0.64	0.67	0.66	0.77	0.74	0.69	0.66	0.66
13	GRASIM	1.47	1.52	1.44	1.29	1.47	1.41	1.30	1.23	1.34	1.36	1.26	1.17
14	GUJAMBCEM	0.72	0.79	0.78	0.70	0.82	0.81	0.80	0.79	0.80	0.90	0.82	0.76
15	HCLTECH	1.06	1.40	1.38	1.34	1.35	1.41	1.41	1.32	1.13	1.17	1.10	1.24
16	HDFC	1.90	2.25	1.99	2.03	1.96	2.02	2.07	2.35	2.11	2.16	1.97	1.90
17	HDFCBANK	1.40	1.59	1.65	1.54	1.51	1.54	1.55	1.69	1.65	1.81	1.72	1.77
18	HEROHONDA	1.25	1.41	1.58	1.23	1.27	1.20	1.11	1.17	1.27	1.20	1.11	1.15
19	HINDALCO	1.34	1.32	1.44	1.46	1.56	1.68	1.43	1.44	1.46	1.35	1.32	1.26
20	HINDLEVER	4.03	4.77	4.36	3.67	3.53	3.69	3.59	3.79	3.50	3.94	3.24	3.05
21	HINDPETRO	2.03	1.61	1.78	1.55	1.53	1.44	1.37	1.37	1.51	1.37	1.22	1.09
22	ICICIBANK	2.93	2.64	2.76	2.78	2.80	2.78	2.84	2.94	3.03	2.97	2.87	3.04
23	INFOSYSTCH	4.43	5.46	5.73	5.95	6.03	6.07	6.66	6.85	6.21	6.20	6.17	6.41
24	IPCL	0.61	0.55	0.57	0.62	0.71	0.69	0.61	0.53	0.50	0.49	0.46	0.42
25	ITC	3.46	3.44	3.42	3.68	3.72	3.77	3.53	3.81	3.60	3.78	3.28	3.50
26	LT	--	--	--	--	--	--	--	--	*1.42	1.46	1.44	1.36
27	MARUTI	2.04	1.77	1.81	1.76	1.58	1.37	1.42	1.45	1.48	1.47	1.40	1.28
28	M&M	0.71	0.78	0.80	0.75	0.71	0.66	0.67	0.68	0.70	0.70	0.64	0.61
29	MTNL	1.21	1.11	1.30	1.17	1.11	1.20	1.14	1.22	1.08	1.00	0.87	0.75
30	NATIONALUM	1.42	1.30	1.35	1.35	1.37	1.49	1.41	1.38	1.44	1.28	1.17	1.18
31	ONGC	15.53	14.11	13.96	14.64	14.58	14.30	14.71	13.84	12.95	13.06	12.43	13.26
32	ORIENTBANK	0.80	0.69	0.72	0.66	0.64	0.62	0.60	0.69	0.71	0.69	0.62	0.63
33	PNB	--	1.09	1.16	1.02	1.01	0.92	0.85	1.10	1.19	1.22	1.24	1.43
34	RANBAXY	2.55	2.90	2.63	2.51	2.55	2.72	2.67	2.48	2.58	2.25	1.94	1.97
35	REL	1.48	1.21	1.39	1.55	1.74	1.57	1.52	1.24	1.08	1.15	1.07	1.03
36	RELIANCE	9.53	9.49	9.34	9.78	9.51	9.68	9.66	8.60	8.25	8.32	7.93	8.00
37	SAIL	1.87	1.93	1.76	2.36	2.37	2.58	2.67	2.70	2.87	2.96	2.77	2.75
38	SATYAMCOMP	1.31	1.57	1.51	1.54	1.54	1.60	1.55	1.64	1.45	1.47	1.34	1.37
39	SBIN	4.38	3.87	3.53	3.33	3.34	3.30	3.08	3.32	3.80	3.79	3.84	3.62
40	SCI	0.43	0.39	0.45	0.51	0.48	0.54	0.63	0.61	0.54	0.52	0.47	0.44
41	SUNPHARMA	0.90	1.14	1.06	0.94	1.03	1.06	1.07	1.10	1.14	1.03	0.90	0.91
42	TATACHEM	0.32	0.35	0.33	0.31	0.38	0.38	0.36	0.37	0.39	0.38	0.34	0.34
43	TATAPOWER	0.97	0.82	0.71	0.75	0.74	0.83	0.78	0.81	0.86	0.85	0.83	0.75
44	TATATEA	0.28	0.29	0.32	0.34	0.33	0.32	0.30	0.30	0.29	0.31	0.31	0.31
45	TATAMOTORS	2.15	2.05	2.12	2.17	2.00	1.93	1.95	2.06	2.02	2.04	1.76	1.57
46	TCS	--	--	--	--	--	--	--	--	--	--	*6.78	7.22
47	TISCO	1.71	1.73	1.73	2.07	2.00	2.14	2.08	2.13	2.36	2.39	2.39	2.33
48	VSNL	0.60	0.65	0.72	0.74	0.68	0.67	0.62	0.78	0.73	0.73	0.64	0.55
49	WIPRO	4.66	5.61	5.79	5.47	5.79	5.58	6.01	6.38	5.80	5.53	5.02	4.96
50	ZEETELE	0.68	0.83	0.81	0.83	0.90	0.84	0.81	0.75	0.78	0.71	0.60	0.60
	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 2004 to March 2005

(In per cent)

Sl . No.	Security	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05
1	ABB	0.44	0.54	0.51	0.52	0.48	0.48	0.53	0.54	0.52	0.49	0.52	0.57
2	ACC	1.31	1.05	1.04	1.01	1.00	0.97	0.96	0.94	0.93	0.84	0.79	0.73
3	BAJAJAUTO	0.60	0.54	0.54	0.56	0.55	0.55	0.58	0.59	0.60	0.59	0.57	0.55
4	BHARTI	0.80	0.84	0.84	0.84	0.86	0.88	0.89	0.92	0.97	1.02	1.03	0.99
5	BHEL	1.11	1.28	1.26	1.27	1.26	1.29	1.28	1.29	1.29	1.20	1.23	1.20
6	BPCL	1.00	0.81	0.84	0.86	0.84	0.86	0.86	0.90	0.90	0.89	0.88	0.82
7	CIPLA	0.48	0.65	0.68	0.67	0.68	0.69	0.70	0.71	0.72	0.78	0.80	0.84
8	COLGATE	0.40	0.38	0.36	0.38	0.37	0.37	0.37	0.38	0.39	0.38	0.39	0.40
9	DABUR	0.83	0.77	0.76	0.76	0.72	0.70	0.73	0.74	0.71	0.63	0.62	0.62
10	DRREDDY	0.47	0.57	0.53	0.54	0.56	0.56	0.57	0.53	0.52	0.55	0.57	0.66
11	GAIL	1.45	1.73	1.69	1.68	1.68	1.72	1.71	1.71	1.71	1.66	1.66	1.71
12	GLAXO	0.35	0.44	0.45	0.44	0.43	0.45	0.46	0.46	0.45	0.47	0.47	0.50
13	GRASIM	1.05	0.92	0.92	0.93	0.93	0.90	0.87	0.85	0.85	0.85	0.85	0.80
14	GUJAMBCEM	1.07	0.95	0.97	0.98	0.98	0.96	0.98	0.96	0.95	0.92	0.89	0.85
15	HCLTECH	1.32	0.99	0.99	0.92	0.92	0.84	0.84	0.81	0.78	0.73	0.70	0.70
16	HDFC	0.42	0.62	0.60	0.60	0.62	0.62	0.62	0.63	0.64	0.66	0.72	0.74
17	HDFCBANK	0.49	0.89	0.89	0.87	0.90	0.92	0.92	0.94	0.94	1.07	1.10	1.12
18	HEROHONDA	1.02	0.88	0.86	0.89	0.90	0.89	0.86	0.86	0.84	0.82	0.82	0.76
19	HINDALCO	0.86	0.76	0.76	0.77	0.78	0.77	0.75	0.72	0.71	0.69	0.69	0.72
20	HINDLEVER	0.74	0.75	0.73	0.69	0.68	0.65	0.63	0.63	0.64	0.63	0.65	0.67
21	HINDPETRO	0.86	0.80	0.82	0.81	0.80	0.84	0.88	0.91	0.93	0.97	0.95	0.93
22	ICICIBANK	0.80	0.85	0.86	0.86	0.85	0.86	0.87	0.87	0.86	0.89	0.90	0.90
23	INFOSYSTCH	1.00	0.89	0.86	0.82	0.81	0.82	0.82	0.80	0.79	0.80	0.81	0.81
24	IPCL	1.38	1.61	1.64	1.61	1.61	1.61	1.66	1.65	1.66	1.58	1.59	1.58
25	ITC	0.59	0.67	0.67	0.68	0.67	0.66	0.66	0.67	0.68	0.68	0.69	0.70
26	LT	--	--	--	--	--	--	--	--	*0.13	0.21	0.23	0.26
27	MARUTI	1.31	1.19	1.22	1.23	1.25	1.27	1.21	1.19	1.20	1.14	1.11	1.09
28	M&M	1.32	1.17	1.18	1.13	1.13	1.11	1.06	1.03	1.04	0.97	0.96	0.92
29	MTNL	0.92	1.00	1.00	0.99	0.99	0.99	1.02	1.01	1.01	1.04	1.02	1.05
30	NATIONALUM	1.34	1.25	1.31	1.36	1.33	1.34	1.36	1.31	1.29	1.27	1.21	1.24
31	ONGC	1.14	1.12	1.13	1.18	1.17	1.13	1.15	1.16	1.15	1.04	1.03	1.06
32	ORIENTBANK	1.47	1.71	1.72	1.72	1.73	1.73	1.72	1.74	1.76	1.76	1.75	1.75
33	PNB	--	1.33	1.37	1.38	1.38	1.37	1.31	1.32	1.34	1.41	1.38	1.43
34	RANBAXY	0.67	0.55	0.55	0.55	0.54	0.52	0.49	0.49	0.48	0.49	0.49	0.47
35	REL	1.15	1.45	1.46	1.41	1.41	1.38	1.36	1.35	1.35	1.31	1.36	1.37
36	RELIANCE	1.02	1.03	1.04	1.04	1.07	1.07	1.07	1.06	1.07	1.07	1.07	1.06
37	SAIL	1.79	1.69	1.71	1.75	1.61	1.66	1.68	1.72	1.70	1.69	1.69	1.69
38	SATYAMCOMP	1.49	1.09	1.10	1.02	1.01	0.98	0.94	0.93	0.91	0.88	0.82	0.81
39	SBIN	1.13	1.20	1.21	1.21	1.23	1.23	1.26	1.30	1.32	1.33	1.31	1.31
40	SCI	1.40	1.51	1.53	1.51	1.47	1.50	1.51	1.51	1.51	1.53	1.55	1.53
41	SUNPHARMA	0.59	0.57	0.56	0.55	0.59	0.55	0.54	0.53	0.54	0.59	0.61	0.60
42	TATACHEM	1.09	1.08	1.08	1.11	1.09	1.12	1.09	1.11	1.10	1.05	1.00	0.92
43	TATAPOWER	1.31	1.44	1.44	1.44	1.43	1.45	1.44	1.44	1.44	1.48	1.46	1.44
44	TATATEA	1.10	0.99	0.98	1.00	0.99	0.97	0.96	0.96	0.98	0.85	0.86	0.80
45	TATAMOTORS	1.39	1.24	1.26	1.25	1.26	1.26	1.24	1.25	1.27	1.19	1.16	1.14
46	TCS	--	--	--	--	--	--	--	--	--	--	*0.14	0.18
47	TISCO	1.41	1.29	1.32	1.34	1.33	1.35	1.33	1.33	1.32	1.30	1.27	1.24
48	VSNL	0.60	0.83	0.82	0.81	0.86	0.91	0.94	0.94	0.92	0.99	1.03	1.04
49	WIPRO	1.28	1.34	1.32	1.28	1.30	1.25	1.24	1.23	1.21	1.25	1.27	1.31
50	ZEETELE	1.17	0.70	0.74	0.73	0.74	0.73	0.73	0.69	0.70	0.61	0.45	0.45

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 2004 - March 2005

(In per cent)

Sl . No.	Security	Apr-04	May-04	Jun-04	Jul-04	Aug-04	Sep-04	Oct-04	Nov-04	Dec-04	Jan-05	Feb-05	Mar-05
1	ABB	(1.57)	(18.33)	5.02	5.51	7.16	(0.94)	1.25	25.06	1.79	0.36	31.99	(9.54)
2	ACC	9.99	(15.37)	2.13	(1.01)	12.41	(0.80)	(4.08)	11.94	18.02	5.51	2.85	(1.89)
3	BAJAJAUTO	1.09	(5.51)	1.57	(6.80)	13.25	10.14	(6.38)	4.90	12.12	(8.13)	(0.56)	4.71
4	BHARTI	8.99	(18.46)	(1.37)	11.57	(8.17)	4.57	7.42	10.53	24.55	6.54	(2.30)	(7.90)
5	BHEL	(3.14)	(25.78)	15.59	8.53	1.26	4.01	8.78	(0.74)	23.71	(1.90)	14.07	(10.69)
6	BPCL	(1.82)	(36.92)	19.74	(2.48)	1.34	0.01	(1.44)	13.47	16.89	(7.49)	0.79	(17.45)
7	CIPLA	16.69	(14.53)	(9.46)	17.71	(4.59)	24.46	(5.75)	(0.54)	14.40	(9.83)	(9.06)	(1.84)
8	COLGATE	(1.80)	(5.42)	4.54	16.10	(3.37)	5.56	(2.77)	18.81	3.32	3.99	(0.05)	(2.20)
9	DABUR	1.06	(10.51)	(13.60)	9.27	0.80	5.95	10.48	9.18	6.30	8.28	14.16	(4.02)
10	DRREDDY	(10.79)	(8.31)	(7.82)	3.44	(7.26)	4.59	1.91	5.87	8.80	(14.90)	(2.19)	2.62
11	GAIL	2.72	(28.26)	8.31	15.19	(5.74)	3.22	2.31	11.74	5.96	(0.19)	4.68	(12.08)
12	GLAXO	9.95	(9.17)	(2.12)	1.22	(0.70)	12.95	(0.03)	9.71	4.27	(8.38)	4.43	(2.42)
13	GRASIM	15.81	(15.34)	(3.50)	(2.95)	14.00	2.65	(5.36)	3.86	17.24	0.53	1.29	(9.83)
14	GUJAMBCEM	12.30	(15.05)	0.76	(2.08)	16.61	4.01	1.36	7.76	9.36	11.48	0.00	(10.85)
15	HCLTECH	11.08	8.60	(0.10)	5.86	0.79	11.84	2.23	2.49	(7.84)	(3.87)	2.42	10.00
16	HDFC	(7.55)	(2.88)	(10.47)	11.38	(3.49)	10.08	4.66	25.04	(3.96)	1.18	0.08	(6.39)
17	HDFCBANK	(0.18)	(7.09)	5.25	1.49	(2.01)	9.34	3.26	19.66	4.76	8.50	4.02	(7.23)
18	HEROHONDA	(1.79)	(7.46)	13.66	(15.30)	3.20	1.19	(5.48)	16.32	16.14	(5.98)	1.20	0.63
19	HINDALCO	(8.68)	(18.74)	10.08	10.52	6.97	15.08	(12.46)	10.22	8.72	(8.55)	7.08	(7.01)
20	HINDLEVER	(8.48)	(3.08)	(7.05)	(8.64)	(3.70)	11.96	(0.48)	15.87	(0.83)	11.44	(9.86)	(8.40)
21	HINDPETRO	(9.26)	(34.68)	11.83	(5.38)	(0.91)	0.38	(2.67)	10.04	18.52	(9.85)	(2.94)	(13.38)
22	ICICIBANK	6.31	(26.86)	6.12	9.41	0.86	6.10	4.47	13.61	9.30	(2.81)	5.54	3.12
23	INFOSYSTCH	4.21	1.06	6.21	12.49	1.42	7.62	12.44	12.74	(2.68)	(1.10)	8.29	0.76
24	IPCL	3.93	(25.77)	4.59	19.61	14.23	3.21	(9.44)	(3.95)	1.19	(2.93)	1.47	(9.77)
25	ITC	3.21	(18.45)	1.01	17.00	0.88	8.63	(4.35)	18.49	1.70	3.87	(4.95)	3.71
26	LT	--	--	--	--	--	--	--	--	*8.92	2.10	8.26	(8.16)
27	MARUTI	9.46	(29.00)	4.29	5.28	(10.07)	(7.20)	6.07	11.80	9.95	(1.76)	4.26	(10.95)
28	M&M	1.09	(9.92)	4.51	2.21	(5.20)	(0.13)	3.95	10.08	11.41	(0.98)	(0.54)	(7.50)
29	MTNL	15.75	(24.86)	18.69	(2.11)	(5.13)	15.33	(2.64)	17.39	(4.38)	(8.33)	(5.32)	(15.35)
30	NATIONALUM	(8.60)	(24.53)	4.92	9.27	1.09	16.58	(3.06)	7.66	11.63	(11.84)	(0.28)	(1.38)
31	ONGC	(0.08)	(25.45)	0.43	13.99	(0.38)	4.92	5.37	3.22	0.62	(0.16)	4.17	3.82
32	ORIENTBANK	6.01	(29.35)	6.47	(0.40)	(2.72)	3.44	(0.69)	25.46	11.70	(4.89)	(1.43)	(1.34)
33	PNB	--	(29.46)	7.28	(4.41)	(1.05)	(1.93)	(5.50)	42.10	16.27	1.34	11.30	(14.02)
34	RANBAXY	12.94	(6.77)	(8.07)	3.63	1.76	13.82	0.62	2.10	11.54	(13.41)	(5.64)	(1.32)
35	REL	(5.22)	(32.85)	16.59	2.98	11.91	(3.33)	(0.70)	(10.60)	(6.40)	5.37	2.10	(6.14)
36	RELIANCE	(2.16)	(18.36)	(0.03)	13.79	(2.71)	8.88	2.17	(2.29)	3.22	(0.26)	4.50	(1.83)
37	SAIL	8.53	(15.71)	(7.12)	45.44	0.63	16.46	5.78	11.03	14.31	1.99	2.42	(3.44)
38	SATYAMCOMP	9.13	(2.08)	(2.64)	11.01	0.19	11.21	(1.01)	15.96	(5.43)	0.72	(0.38)	(0.63)
39	SBIN	6.01	(27.57)	(7.43)	2.67	0.17	5.70	(4.42)	18.40	23.09	(1.38)	11.14	(8.37)
40	SCI	(6.92)	(26.73)	17.69	22.38	(5.04)	21.07	18.66	5.69	(4.64)	(4.37)	(1.07)	(8.06)
41	SUNPHARMA	15.40	2.99	(5.26)	(3.14)	8.95	10.49	3.32	12.33	11.93	(10.57)	(4.12)	(2.08)
42	TATACHEM	9.22	(11.36)	(4.11)	0.98	4.24	6.21	(2.58)	13.60	13.51	(4.62)	(0.76)	(3.22)
43	TATAPOWER	0.66	(30.88)	(11.62)	13.95	(1.72)	21.12	(4.61)	14.53	13.91	(1.63)	5.96	(12.11)
44	TATATEA	14.81	(13.20)	10.76	14.65	(1.39)	2.10	(2.95)	8.24	6.64	3.44	11.44	(4.22)
45	TATAMOTORS	(2.77)	(22.38)	3.71	11.25	(7.68)	3.24	3.35	16.04	4.48	(0.17)	(5.64)	(13.08)
46	TCS	--	--	--	--	--	--	--	--	--	--	*6.19	3.70
47	TISCO	(6.70)	(17.24)	1.59	30.24	(3.62)	14.81	(0.47)	12.40	19.04	0.35	9.26	(5.02)
48	VSNL	(20.26)	(12.44)	13.06	11.86	(7.54)	4.93	(4.87)	36.64	1.62	(0.97)	(4.44)	(16.32)
49	WIPRO	13.52	(1.39)	4.76	2.77	5.79	3.16	10.17	16.56	(2.30)	(5.80)	(0.83)	(4.08)
50	ZEETELE	(4.85)	0.43	(1.52)	11.46	8.79	(0.56)	(1.55)	1.64	12.79	(9.79)	(8.05)	(2.39)
	Total	**1.37**	**(17.40)**	**1.48**	**8.42**	**(0.03)**	**6.97**	**2.37**	**9.62**	**6.21**	**(1.10)**	**2.22**	**(3.21)**

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 Capital-isation (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**
1998-1999	**251**	**--**	**55**	**16,533**	**4,144,740**	**16,513**	**--**	**854**	**238,180**	**5.75**	**4,911,751**
1999-2000	**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**
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**
Apr-04	20	771	32	5,369	1,009,512	50,476	8.61	5,369	1,009,512	100.00	11,718,279
May-04	21	776	36	5,465	989,199	47,105	10.41	5,465	989,199	100.00	9,504,938
Jun-04	22	787	34	4,199	848,985	38,590	8.67	4,199	848,985	100.00	9,796,999
Jul-04	22	793	38	6,306	938,361	42,653	8.80	6,306	938,361	100.00	10,660,873
Aug-04	22	799	36	5,754	868,557	39,480	7.60	5,754	868,557	100.00	11,430,748
Sep-04	22	809	37	6,267	885,081	40,231	7.21	6,267	885,081	100.00	12,275,502
Oct-04	20	814	30	4,727	756,976	37,849	6.04	4,727	756,976	100.00	12,538,253
Nov-04	20	816	33	6,255	820,353	41,018	5.67	6,255	820,353	100.00	14,462,924
Dec-04	23	821	47	9,933	1,155,931	50,258	7.32	9,933	1,155,931	100.00	15,791,608
Jan-05	19	820	41	8,158	997,319	52,490	6.40	8,158	997,319	100.00	15,574,438
Feb-05	20	825	42	8,967	999,895	49,995	6.19	8,967	999,895	100.00	16,145,971
Mar-05	22	831	46	8,370	1,130,551	51,389	7.13	8,370	1,130,551	100.00	15,855,853
2004-05	**253**	**856**	**451**	**79,769**	**11,400,720**	**45,062**	**--**	**79,769**	**11,400,720**	**100.00**	**15,855,853**

* At the end of the period.
Source: NSE

Secondary Market - Clearing and Settlement

The *'Objective and Principles of Securities Regulation'* by the IOSCO sets out 30 principles of securities regulation which are based upon three objectives of securities regulation. These are

- The Protection of investors
- Ensuring that markets are fair, efficient and transparent, and
- The reduction of systemic risk.

The 30 principles need to be practically implemented under the relevant legal framework to achieve the objectives of regulation as mentioned above. Safe and stable securities settlement systems (SSSs) are very 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) has stressed on this and recommended measures 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 2004-05 witnessed major improvements in the market practices e.g. introduction and streamlining of Straight Through Processing (STP), RTGS services for bank customers, strengthening of the risk management measures etc. The major policy developments during the period April 2004 to June 2005 is presented below:

I. 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 be setup. 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 will 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.

II. 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.

III. Real Time Gross Settlement Services for Bank Customers

As a part of the payment system reform, RBI in March 2004 had introduced the Real Time Gross Settlement (RTGS) system for settling inter-bank transactions on transaction by transaction basis online at real time mode. Further to this, on August 16, 2004, RBI also announced that the RTGS system is also enabled for 'Straight through Processing (STP)' at the participants end i.e. at the banks end for putting through customer transactions. Straight through processing of customer transaction on receiving the credit advice shall allow banks to directly credit the customers account without any manual intervention. 32 banks offer customers related RTGS fund transfer services through 840 branches in 134 major centres across the country.

IV. Risk Management Framework

With an objective of aligning and streamlining the risk management framework across the cash and derivatives market and to consolidate all the existing circulars on risk management for the cash market, the Advisory Committee of Derivatives and Market Risk Management of SEBI revised the framework for the risk management as described below:

The core of the risk management system is the liquid assets deposited by the members which shall cover (a) MTM losses; (b) VaR Margins; (c) Extreme Loss Margins; (d) Base Minimum Capital. At all points, the liquid assets of the member shall be adequate to cover all the above four requirements. The acceptable liquid assets and the applicable haircuts are as listed below:

Item	Haircut	Limits
Cash Equivalents		
Cash	0	No Limit
Bank Fixed Deposits	0	No Limit
Bank Guarantees	0	Limit on Exchange's exposure to a single bank
Securities of the Central Govt.	10%	No Limit
Units of liquid MFs or G-Secs MFs	10	No Limit
Other Liquid Assets		
Liquid (Group I) Equity Shares	Same as the VaR margin for the respective shares	Limit on exchange's exposure to a single issuer
MF Units other than those listed under cash equivalents	Same as the VaR margin for the units computed using the traded price on stock Exchange, if available or else, using the NAV of the unit treating it as a liquid security	
Card value of eligible exchanges	50% if the last sale or auction of card in the exchange took place during the last six months. 75% if the last sale or auction of card in the exchange took place during the last twelve months but not within the last six months. 100% if no sale or auction of card in the exchange has taken place during the last twelve months.	Eligible only for Extreme Loss Margin

The securities shall be classified into three groups based on their liquidity:

Group	Trading Frequency (over the previous 6 months)	Impact Cost (over the previous 6 months)
Liquid Securities (Gr-I)	At least 80% of the days	Less than or equal to 1%
Less Liquid Securities (Gr-II)	At least 80% of the days	More than 1%
Illiquid Securities (Gr-III)	Less than 80% of the days	N/A

Note: For securities that have been listed for less than 6 months, the trading frequency and the impact cost shall be computed using the entire trading history of the scrip.

The trading frequency and impact cost shall be calculated on the 15th of each month on a rolling basis considering the previous six months for impact cost and previous six months for trading frequency. On the basis of the trading frequency and impact cost so calculated, the securities shall move from one group to another group from 1^{st} of the next month.

For the first month and till the time of monthly review, a newly listed stock shall be categorised in that group where the market capitalisation of the newly listed stock exceeds or equals the market capitalisation of 80% of the stocks in that particular group. Subsequently, after one month, whenever the next monthly review is carried out, the actual trading frequency and impact cost of the security shall be computed, to determine the liquidity categorisation of the security.

The mean impact cost shall be calculated by taking four snapshots in a day from the order book in the past 6 months. These four snapshots shall be randomly chosen from within 4 fixed ten minutes windows spread through the day. It shall be the percentage price movement caused by an order size of Rs. 1 lakh from the average of the best bid and offer price in the order book snapshot. It shall be calculated for both, the buy and the sell side in each order book snapshot. The computation of the impact cost adopted by the Exchange shall be disseminated on the website of the Exchange. The exchanges shall use a common methodology for carrying out the calculations for mean impact cost. Those exchanges that are unable to compute the mean impact cost calculations at their exchanges shall use the impact cost calculations of BSE/NSE after entering into a formal legal agreement with the relevant stock exchanges for liquidating the positions of their members if unnecessary, on that stock exchange. If a stock exchange is unable to compute the mean impact cost of the scrip's traded at the Exchange, as well as not been able to enter into a formal arrangement for liquidation of positions, it shall levy margins on the scrips as applicable to Group II or Group III as explained above, as classification between scrip in Group I or Group II would not be possible at that Exchange.

The stock exchanges shall collect the mark to market margin (MTM) from the member/broker before the start of the trading of the next day. The MTM margin shall also be collected/adjusted from/against the cash/cash equivalent component of the liquid net worth deposited with the Exchange. This margin shall be collected on the gross open position of the member. The gross open position for this purpose would mean the gross of all net positions across all the clients of a member including his proprietary position. For this purpose, the position of a client would be netted across his various securities and the positions of all clients of a broker would be grossed. Further, there would be no netting across two different settlements. There shall be no netting off the positions and set off against MTM profits across 2 rolling settlements i.e. T day and T-1 day. However, for computation of MTM profits/losses for the day, netting or setoff against MTM profits would be permitted. The margin so collected shall be released along with the pay-in, including early pay-in of securities.

The VaR margin is a margin intended to cover the largest loss that can be encountered on 99% of the days. For liquid stocks, the margin covers one-day losses while for illiquid stocks it covers three-day losses so as to allow the clearing corporation to liquidate the position over three days. For liquid stocks, the VaR margins are based only on the volatility of the stock while for other stocks, the volatility of the market index in the computation. The VaR margins are specified as follows for the specified groups of stocks:

Liquidity Categorisation	**1-day VaR**	**Scaling factor for illiquidity**	**VaR margin**
Liquid Sec. (Gr-I)	Scrip VaR	1.00	Scrip VaR
Less Liquid Sec. (Gr-II)	Higher of Scrip VaR and 3 times Index VaR	1.73 ($\sqrt{3.00}$)	Higher of 1.73 times scrip VaR and 5.20 time Index VaR
Illiquid Sec. (Gr-III)	5 times Index VaR	1.73 ($\sqrt{3.00}$)	8.66 times Index VaR

The Extreme Loss Margin for any stock shall be higher of (i) 5%, and (ii) 1.5 times the standard deviation of daily logarithmic returns of the stock price in the last six months. This margin shall be collected/adjusted against the total liquid assets of the member on a real time basis and shall be collected on the gross open position of the member. The gross open position for this purpose would mean the gross of all net positions across all the clients of a member including his proprietary position. For this purpose, there shall be no netting of positions across different settlements. The extreme loss margin so collected shall be released along with the pay-in.

In case of any shortfall in margin, the terminals of the broker shall be immediately deactivated.

In cases where the amount of shortage in a settlement for a trading member is in excess of the BMC prescribed, the trading facility of the member shall be withdrawn and the securities pay-out due to the member shall be withheld. In cases where the amount of shortage exceeds 20% of the BMC but less than the BMC on six occasions within a period of 3 months, then the trading facility of the member shall be withdrawn and the securities pay-out due to the member shall be withheld. Upon recovery of the complete shortages, the member shall be permitted to trade subject to his providing a deposit equivalent to his cumulative funds shortage as the 'funds shortage collateral'.

The BMC with the exchange shall be as follows provided that the exchange maintains the BMC at Rs. 1 lakh of the avg. daily turnover is less than Rs. 1 crore for any 3 consecutive months.

NSE, BSE and Calcutta Stock Exchange	Rs. 10 lakh
Ahmedabad Stock Exchange & Delhi Stock Exchange	Rs. 0.07 lakh
Other Exchanges	Rs. 0.04 lakh

Members should have a prudent system of risk management to protect themselves from client default. Margins are likely to be an important element of such a system. The same shall be well documented and be made accessible to the clients and the Stock Exchanges.

V. Margin Trading Facility and Securities Lending and Borrowing

Pursuant to the recommendations of the Secondary Market Advisory Committee (SMAC) and further to the SEBI circulars[1] the regulatory framework for Margin Trading Facility and

[1] Reference No. 15/2004 & 16/2004 dated March 19, 2004.

Securities Lending and Borrowing have been modified as below:

Margin Trading Facility

In addition to the Group 1 securities[2] all the securities which are offered in the IPOs and which meet the conditions for inclusion in the derivatives segment of the stock exchanges would be eligible for Margin Trading facility. The fixed deposits with banks and bank guarantees would be treated as cash equivalent and considered as acceptable form of initial and maintenance margins for the purpose of availing the Margin Trading facility. Before providing this facility to a client who has already availed of Margin Trading Facility from another broker, the broker is required to obtain a no-objection certificate in writing from the other broker. The other broker shall be required to convey his objection, if any, in writing, within a period of 21 days from the date of receipt of query from the broker, failing which the broker would be free to proceed with providing Margin Trading Facility to the client.

Securities Lending and Borrowing

Only the clearing corporation/house of the Stock Exchanges shall be permitted to act as approved intermediaries (AIs) under the Securities Lending Scheme (SLS) to borrow and lend securities to meet the settlement shortages. Further, to the conditions already specified in the SEBI circular dated March 19, 2004, the stock exchanges would be required to comply with the following:-

a. In order to enable lending of idle securities by investors, the clearing corporation/house may borrow securities from any person through his account with the depository participant and select the borrower on a random basis.

b. The clearing corporation/house of the exchanges shall work out a mechanism to borrow securities at a market determined rate.

Clearing and Settlement Processes

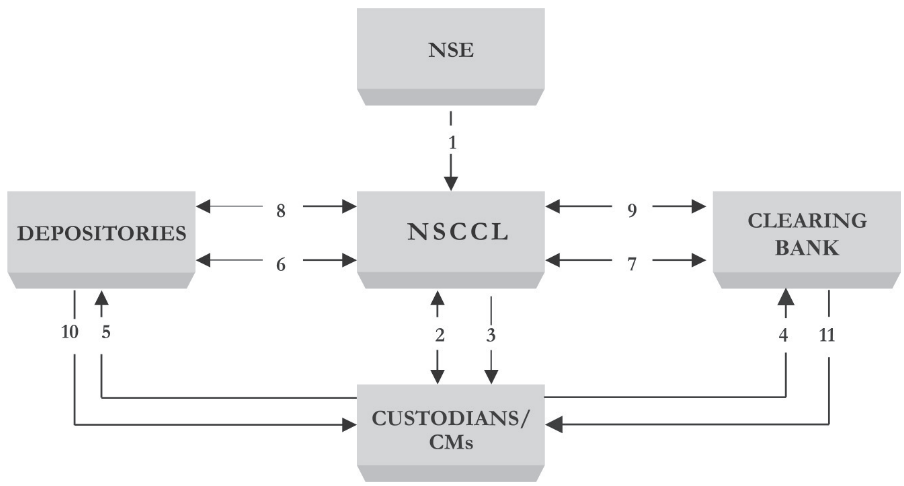
The transactions in secondary market pass through three distinct phases, *viz.*, trading, clearing and settlement. While the stock exchanges provide the platform for trading, the clearing corporation determines the funds and securities obligations of the trading members and ensures that the trade is 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.

[2] Refer para 1.2.2 of SEBI circular 15/2004 and 16/2004 dated March 19, 2004.

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.

- *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. 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. They are ABN Amro N.V., Citibank N.A., Deutsche Bank A.G., HDFC Bank Limited, HSBC Limited, ICICI Limited, IndusInd Bank Limited, IL&FS Limited, Standard Chartered Bank, State Bank of India and SHCIL.

- *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. There are 11 clearing banks of NSE, *viz.*, Canara Bank, HDFC Bank, IndusInd Bank, ICICI Bank, UTI Bank, Bank of India, IDBI Bank, HSBC Limited, Kotak Mahindra Bank, Standard Chartered Bank and Union Bank of India.
- *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). All the 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

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.

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.

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 being 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 14^{th} and 17^{th} 2004 where the market benchmark index moved down by almost 7.87% and 12.24% respectively.

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 2005.

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. 10 million and keep an interest free security deposit of Rs. 12.5 million and collateral security deposit of Rs. 2.5 million with the Exchange/NSCCL. The capital adequacy norms to be followed by members are presented in Table 5.2.

On-Line Monitoring

NSCCL has put in place an on-line monitoring and surveillance system, whereby positions 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 when the margins of a member approaches pre-set levels (70%, 85%, 90%, 95% and 100%). The system enables NSSCL to further check the micro-details of members' positions, if required and take pro-active action.

Table 5.2: Capital Adequacy Norms for Membership on NSE

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	Rs. 100 lakh	Rs. 200 lakh	Rs. 200 lakh	Rs. 300 lakh	Rs. 300 lakh
Interest Free Security Deposit (IFSD)	Rs. 125 lakh	Rs. 250 lakh	Rs. 275 lakh	Rs. 25 lakh	Rs. 34 lakh
Collateral Security Deposit (CSD)	Rs. 25 lakh	Rs. 25 lakh	Rs. 25 lakh	Rs. 25 lakh	Rs. 50 lakh

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.

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 20% 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 6 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.
- For securities that have been listed for less than six months, the trading frequency and the impact cost shall be computed using the entire trading history of the security.
- A newly listed security is categorized in that Group where the market capitalization of the newly listed security exceeds or equals the market capitalization of 80% of the securities in that particular group. Subsequently, after one month, whenever the next monthly review is carried out, the actual trading frequency and impact cost of the security is computed, to determine the liquidity categorization of the security.
- In case any corporate action results in a change in ISIN, then the securities bearing the new ISIN is treated as newly listed security for group categorization.

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

VaR Based Margins

VaR margin is a margin intended to cover the largest loss that can be encountered on 99% of the days (99% Value at Risk). For liquid securities the margin covers one-day losses while for illiquid securities, it covers three-day losses so as to allow the clearing corporation to liquidate the position over three days. This leads to a scaling factor of square root of three for illiquid securities. For liquid securities, the VaR margins are based only on the volatility of the security while for other securities, the volatility of the market index is also used in the computation. Computation of the VaR margin requires the following definitions:

- Security sigma means the volatility of the security computed as at the end of the previous trading day. The computation uses the exponentially weighted moving average method applied to daily returns in the same manner as in the derivatives market.
- Security VaR means the higher of 7.5% or 3.5 security sigmas.
- Index sigma means the daily volatility of the market index (S&P CNX Nifty or BSE Sensex) computed as at the end of the previous trading day. The computation uses the exponentially weighted moving average method applied to daily returns in the same manner as in the derivatives market.
- Index VaR means the higher of 5% or 3 index sigmas. The higher of the Sensex VaR or Nifty VaR would be used for this purpose.

The VaR Margins are specified as follows for different groups of securities:

Liquidity Categorization	One-Day VaR	Scaling factor for illiquidity	VaR Margin
Liquid Securities (Gr-I)	Security VaR	1.00	Security VaR
Less Liquid Securities (Gr- II)	Higher of Security VaR and three times Index VaR	1.73 (√3)	Higher of 1.73 times Security VaR and 5.20 times Index VaR
Illiquid Securities (Gr- III)	Five times Index VaR	1.73 (√3)	8.66 times Index VaR

NSCCL stipulates security specific margins for the securities from time to time.

The VaR based margin shall 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 trading member clearing 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.

Extreme Loss Margin

The Extreme Loss Margin for any security shall be higher of:

1. 5%, or
2. 1.5 times the standard deviation of daily logarithmic returns of the security price in the last six months. This computation shall be done at the end of each month by taking the price data on a rolling basis for the past six months. The resulting value shall be applicable for the next month.

The Extreme Loss Margin shall be collected/adjusted against the total liquid assets of the member on a real time basis. This margin shall be collected on the gross open position of the member. The gross open position for this purpose would mean the gross of all net positions across all the clients of a member including its proprietary position. There would be no netting off of positions across different settlements. The Extreme Loss Margin collected shall be released on completion of pay-in of the settlement

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 demat delivery in total delivery at NSE touched 99.99% in terms of value during 2004-05.

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 0.42% of total delivery in 2004-05. The ratio of bad deliveries to net deliveries progressively declined to almost negligible in 2004-05.

During 2004-05, taking all stock exchanges together, 30.92% of securities accounting for 25.05% turnover were settled by delivery and the balance were squared up/netted out (Table 5.3). In the preceding year, 28.72% of shares accounting for 21.60% of turnover were settled by delivery. This indicates preference for non-delivery-based trades.

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). It provides an indication of the aggregate level of post-trade operational efficiency in securities markets. The Settlement Benchmark provides a means of tracking

Table 5.3: Delivery Pattern in Stock Exchanges

(In per cent)

Exchange	2003-04		2004-05	
	Quantity	Value	Quantity	Value
NSEIL	24.47	20.04	25.67	24.22
Mumbai	37.18	25.73	39.62	27.00
Calcutta	27.98	13.79	40.91	46.48
Delhi	100.00	4.12	0.00	0.00
Ahmedabad	4.57	0.00	1.25	3.13
Uttar Pradesh	1.10	0.65	1.46	0.52
Bangalore	100.00	--	0.00	0.00
Ludhiana	0.00	0.00	0.00	0.00
Pune	0.00	0.00	0.00	0.00
OTCEI	0.00	0.00	0.00	0.00
Hyderabad	97.31	97.89	82.22	65.00
ICSEIL	66.67	60.00	0.00	0.00
Chennai	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	0.00	0.00	0.00	0.00
SKSE	0.00	0.00	0.00	0.00
Cochin	0.00	0.00	0.00	0.00
Total	**28.72**	**21.60**	**30.92**	**25.05**

* Delivery ratio represents percentage of delivery to turnover of a Stock Exchange
Source: SEBI.

Table 5.4: Benchmarks of Settlement Efficiency

(Score out of 100)

Benchmark	1994	1995	1998	1999	2000	2001	2002	2003	2004
Settlement	8.3	-16.8	10.0	41.9	59.6	75.8	89.3	93.6	93.1
Safekeeping	71.8	75.0	69.7	78.1	81.9	86.7	89.7	88.1	91.8
Operational Risk	28.0	0.0	47.3	43.6	51.4	59.1	65.2	66.0	67.2

Source: S&P Global Stock Markets Fact Book 2005

the evolution of settlement performance over a period of time. The Settlement Benchmark for India has improved from 8.30 in 1994 to 93.1 in 2004. 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 91.8 in 2004. 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 67.2 out of 100 in it in 2004 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.	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.
1b.	Matched trade details should be linked to the settlement system.	
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 tarde detaisl as soon as trades are executed. Institutional clients are issued electrnic contract notes.
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.	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.
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.	
4a.	Each market is encouraged to reduce settlement risk by introducing either Real Time Gross Settlement or	RBI launched the RTGS system in March 2004. This system seeks to settle inter-bank transcations on transction by transcation basis online at real time mode. For the time being however only inter bank transcations are being put through and the customer related transfers shall be enabled in due course. 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.
4b.	a trade netting system that fully meets the Lamfalussy-recommendations"	

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	Recommendations	Corporate Securities Market
5	Delivery based payment (DvP) should be employed as the method of settling all securities transactions. DvP 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 teh 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.cThe 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 DvP 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.	The pay-in and pay-outs for both funds and securities take place on the same day.
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.	
7a.	A rolling settlement system should be adopted by all markets.	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.
7b.	Final settlement for all trades should occur no later than T+3.	
8a.	Securities lending and borrowing should be encouraged as a method of expediting the settlement of securities transactions.	SEBI has framed securities lending and borrowing scheme under which approved intermediaries can lend securities.
8b.	Existing regulatory and taxation barriers that inhibit the practice of lending and borrowing of securities should be removed.	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 Staright through processing, the common messaging standards is ISO 15022.	The depositories and clearing coprorations use message structure based on SWIFT standards.
9b.	In particular, countries should adopt the ISIN numbering system for securities issues as defined in the ISO Standard 6166.	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. 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.

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.
	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 intrenational 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.

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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 electrnic 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.
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.

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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.
	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.

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	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 can not 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 web sites of the company, exchanges and depositories. 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

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		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 future.
	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.
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.

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	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 xempted 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.
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 amd 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.

Table 5.1: Settlement Statistics in CM Segment of NSE

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	Unrectified Bad Delivery (Auctioned quantity (mn.)	% of Unrectified 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
2001-2002	**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**

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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	Unrectified Bad Delivery (Auctioned quantity (mn.)	% of Unrectified Bad Delivery to Delivery	Funds Pay-in (Rs. mn.)
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**
Apr-04	33	5,421	1,293	23.86	1,031,538	217,188	21.05	216,169	6	0.50	0.00	0.00	78,701
May-04	35	5,478	1,386	25.30	1,002,034	227,273	22.68	226,682	5	0.35	0.00	0.00	89,604
Jun-04	32	3,928	858	21.84	810,205	139,991	17.28	139,477	3	0.33	0.00	0.00	58,624
Jul-04	39	6,378	1,403	22.00	973,090	181,640	18.67	180,994	5	0.37	0.00	0.00	65,226
Aug-04	36	5,830	1,395	23.92	895,965	186,053	20.77	185,536	6	0.40	0.00	0.00	64,628
Sep-04	35	5,734	1,559	27.19	819,131	196,555	24.00	195,847	7	0.46	0.00	0.00	61,712
Oct-04	32	5,140	1,518	29.53	798,785	216,597	27.12	215,880	7	0.46	0.00	0.00	73,043
Nov-04	32	5,912	1,897	32.08	799,208	243,593	30.48	242,687	9	0.49	0.00	0.00	84,007
Dec-04	47	9,524	2,746	28.84	1,158,667	331,205	28.59	329,938	14	0.49	0.00	0.00	113,855
Jan-05	41	8,211	1,950	23.74	977,548	250,311	25.61	249,447	9	0.44	0.00	0.00	80,827
Feb-05	42	8,815	2,221	25.19	1,002,669	281,575	28.08	280,621	9	0.40	0.00	0.00	98,015
Mar-05	47	8,428	2,002	23.76	1,140,848	299,025	26.21	297,920	8	0.40	0.00	0.00	104,171
2004-05	**449**	**78,799**	**20,228**	**25.67**	**11,409,686**	**2,771,007**	**24.29**	**2,761,199**	**87**	**--**	**0.00**	**0.00**	**972,411**

Debt Market

Introduction

The debt market in India comprises mainly of two segments *viz.*, the Government securities market consisting of Central and State Governments securities, Zero Coupon Bonds (ZCBs), Floating Rate Bonds (FRBs), T-Bills and the corporate securities market* consisting of FI bonds, PSU bonds, and Debentures/Corporate bonds. Government securities form the major part of the market in terms of outstanding issues, market capitalization and trading value. It sets benchmark for the rest of the market. 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 last two years was a very eventful year with the operationalisation of real time gross settlement (RTGS) system. 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 2004-05, the government and corporate sector collectively mobilized Rs. 2,048,808 million from primary debt market, a decline of 18.34% as compared to the preceding year (Table 6.1). About 71.1% of these were raised by the government (Central and State Governments), while the balance amount was mobilized by the corporate sector through public and private placement issues. The turnover in secondary debt market during 2004-05 aggregated Rs. 29,936,813 million, 10% higher than that in the previous year. The share of NSE in total turnover in debt securities remained at about 29.7% during 2004-05.

Table 6.1: Debt Market: Selected Indicators

(In Rs. mn.)

Issuer/Securities	Amount raised form Primary Market		Turnover in Secondary Market	
	2003-04	2004-05	2003-04	2004-05
Government	1,981,570	1,456,020	26,792,084	29,552,626
Corporate/Non Government	527,519	592,788	422,622	384,187
Total	**2,509,089**	**2,048,808**	**27,214,706**	**29,936,813**

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 2004 to June 2005 are enumerated in this section.

I. Union Budget 2005-06

- The Banking Regulation Act, 1949 was proposed to be amended to
    a. Allow banking companies to issue preference shares; to introduce specific provisions to enable the consolidated supervision of banks and their subsidiaries by RBI.
    b. Remove the lower and upper bounds to the statutory Liquidity Ratio (SLR) and provide flexibility to RBI to prescribe prudential norms.
- The Reserve Bank of India Act was proposed to be amended to
    a. Remove the limits of the cash reserve ratio (CRR) to facilitate more flexible conduct of monetary policy; and
    b. Enable RBI to lend or borrow securities by way of repo, reverse repo or otherwise.
- A high level expert committee on corporate bonds and securitization is to be formed which will look into the legal, regulatory, tax and market design issues in the development of the corporate bond market.

II. Monetary & Credit Policy and Mid-term Review of Monetary and 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 was further reduced by the RBI from 60% to 45% w.e.f. June 26, 2004.
- With a view to encourage further development of the Collateralized Borrowing and Lending Obligation (CBLO) segment, it was 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 was 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.

The mid term review of the Annual Policy Statement for 2004-05 proposed the following:

- With a view to enhance further the effectiveness of liquidity adjustment facility (LAF) and to facilitate liquidity management in a flexible manner, it was proposed that the LAF scheme be operated with over night fixed rate repo w.e.f November 1, 2004. Accordingly, auctions of 7-day and 14-day repo will be discontinued from November 1, 2004.
- In a bid to move towards a pure inter-bank call/notice money market, it was proposed that w.e.f the fortnight beginning January 8, 2005, non-bank participants would be allowed to lend, on average in a reporting fortnight, up to 30% of their average daily lending in call/notice money market during 2000-01.
- The minimum maturity period of Commercial Paper (CP) has been reduced from 15 days to 7 days from immediate effect. This will provide an option to issuers to raise short-term resources through CP as also an avenue to investors to invest in quality short-term papers. To provide transparency and facilitate benchmarking of CP issues, the issuing and paying agents (IPAs) shall report the issuance of CP on the NDS platform by the end of the day.
- The ceiling on the outstanding obligation of the Government under the Market Stabilisation Scheme (MSS) was raised from Rs. 60,000 crore to Rs. 80,000 crore with the threshold level for further review of the ceiling placed at Rs. 70,000 crore.

III. Annual Policy Statement for 2005-06

RBI announced the Annual Policy Statement for 2005-06 on April 28, 2005. The overall stance of the monetary policy for the year 2005-06 has remained as set out in the mid-term review of October 2004. The annual policy envisaged the following:

- The Reverse Repo Rate was increased by 25 paise points from 4.75% to 5.0%.
- W.e.f June 11, 2005, non-bank participants are allowed to lend up to 10% of their average daily lending in call/notice money market during 2000-01.
- W.e.f August 6, 2005, non-bank participants have been completely phased out from the call/notice money market.
- W.e.f April 30, 2005, the benchmark for fixing prudential limits on exposure to call/notice money market in the case of Scheduled Commercial Banks (SCBs) are linked to their capital funds (sum of Tier I and Tier II capital).
- From April 30, 2005 all NDS members are required to report their term money deals on NDS platform. A screen-based negotiated quote-driven system for all dealings in call/notice and term money market transactions is proposed.

- An electronic trading platform for conduct of market repo operations in government securities, in addition to the existing voice based system is to be facilitated.
- Participation in market repo facility in government securities for non-scheduled Urban Cooperative Banks (UCBs) and listed companies having gilt accounts with SCBs will be allowed subject to eligibility criteria and safeguards.
- The minimum maturity period of CDs have been reduced from 15 days to 7 days with immediate effect.
- The settlement system for transactions in government securities will be standardised to T+1 basis.
- Permission of sale of Government securities allotted in primary issues with and between CSGL account holders shall also take place on the same day.
- The closing time for inter-bank foreign exchange market in India to be extended by one hour up to 5.00 p.m.
- The RBI has proposed to operationalise National Electronic Funds Transfer (NEFT) System and NEFT (Extended).

Other Measures

The other developments during April 2004-June 2005 include:

Government Securities Transaction –T+1 Settlement

Further to the Annual Policy Statement for the year 2005-06 wherein it was proposed that the settlement system for transactions in Government Securities would be standardised to T+1 basis, it was decided by RBI to adopt a standardised settlement on T+1 basis of all outright secondary market transactions in Government securities w.e.f May 24, 2005. In case of repo transactions in Government Securities, however, market participants have the choice of settling the first leg on T+0 basis or T+1 basis as per their requirements

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 17 PDs operating in the market at the end of March 2005. 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 mutual funds 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 up to 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 Individuals	Debentures	1 - 12 years	Banks, Mutual Funds, Corporates,
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 the tapping the market frequently such as the local governments and mutual funds. 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 as 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 securitized 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 corportaes.
- Recently, international financial institutions such as Asian Development Bank have also tapped the debt market to mobilize 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 member 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.

NDS-Order Matching System

Based on the recommendations of the Dr. Patil Committee Report, RBI recently introduced an electronic order matching system in the Indian Gilts Market as a part of the NDS referred hereafter as the NDS-Order Matching system. The trading system is purely order driven with all orders from market participants being matched based on strict price/time priority, providing fairness to all market users. The system is an anonymous order matching wherein identity of parties is not revealed at the time of order entry. The trading system provides timely information, both pre-trade and post-trade and disseminates it widely in real-time to all interested entities both within the NDS domain as also non-NDS entities through the RBI website. This system also allows STP i.e. the seamless integration of the different parts of the trading process, starting from displaying pre-trade information and ending with settlement and risk management. This system allows traders to set their preferences in terms of orders either to be entered as price based orders or time based orders.

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	Private Placement
a.	Central/State Government	Deemed listed	Deemed listed
b.	Public Sector Undertakings/ Statutory Corporations		
	- Minimum 51% holding by Govt.	As applicable to corporates	As applicable to corporates
	- Less than 51% holding by Govt.	As applicable to corporates	As applicable to corporates
c.	Financial Institutions (SLR and Non-SLR Bonds)	- 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	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.	SEBI registered Mutual Fund/Scheme having an investment objective to invest predominantly in debt instruments.
h.	Securitised Debt	Minimum tranche of Rs. 20 crore Investment Grade Credit Rating	Minimum tranche of Rs. 20 crore Investment Grade Credit Rating

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, securitized 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.

Dematerialization of Debt Instruments

Dematerialized 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 dematerialization, 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 2005, debentures/bonds worth Rs. 2,818,240 million were available in demat form. 600 issuers have issued 15,036 debentures/bonds in demat form. 365 issuers have issued 6,234 commercial papers 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 dematerialized 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 gross basis through the D*v*P system, where funds and securities are transferred simultaneously. 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 Delivery *versus* Payment-III basis, which provides for settlement of securities and funds on net basis. CCIL acts as a central counterparty 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 -		
1	Securities Settlement of Outright Trades (Payable by each counter-party)	Rs. 150 per crore of face value, Minimum Rs. 25/- Maximum Rs. 5,000/- 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. 5,000/- 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. 1,000/- 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. 1,000/- 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 initially in batches.

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 D*v*P 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 results from a members 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
2004-05	160,682	11,342,221	24,364	15,579,066	185,046	26,921,287

Source: CCIL Fact Book 2005.

Collateralized Borrowing and Lending Obligation

Collateralised Borrowing and Lending Obligation (CBLO) is a money market product developed by CCIL and approved by RBI to address regulatory concerns arising out of market dependence on the largely unsecured call and notice money avenues for funding operations. As a repo variant, CBLO enables borrowing/lending of funds of various maturities up to one year fully backed by collaterals in the form of Central Government Securities/Treasury Bills. The borrowing and lending takes place through an electronic anonymous order matching platform based on best yield-time priority. Overcoming the limitation of the traditional repo, CBLO facilitates unwinding of both borrowing and/or lending positions. It also does not entail physical transfer of relative securities from borrower to lender or vice versa. CBLO settlements are guarantees by CCIL as the central counterparty. CBLO operates in an STP enabled environment seamlessly encompassing dealing to settlement.

The daily average turnover in CBLO increased from Rs. 12,480 million in April 2004 to Rs. 48,127 million in March 2005. As at end March 2005, there were 112 members in the CCIL's CBLO segment as against 67 in the previous year.

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 volumes in FRAs/IRSs market during 2004-05. FRAs/IRS transactions rose from 20,413 contracts amounting to Rs. 5,768,080 crore in April 2004 to 37,864 contracts for Rs. 1,0622,420 million in March 2005. The major participants in this market include select foreign banks, private sector banks and PDs. In a majority of these contracts, the NSE MIBID and MIBOR were used as the benchmark rates. The other benchmark rates used included secondary market yields of GOI securities having a residual maturity of one year and primary cut off yields on 364-day T-Bills.

Market Outcome

Primary Market

Resource Mobilisation

During 2004-05, the central government and state governments borrowed Rs. 1,065,010 million and Rs. 391,010 million, respectively. The gross borrowings of the central and state governments taken together decreased by 26.5% from Rs. 1,981,570 million in 2003-04 to Rs. 1,456,020 million during 2004-05 (Table 6.4). Their net borrowings also decreased by 40.8% from Rs. 1,351,910 million (in the previous year) to Rs. 800,280 million during 2004-05. The gross and net market borrowings of central government are budgeted to increase further to Rs. 1,655,730 million and Rs. 1,037,910 million, respectively during 2005-06, while those of the state governments are to decrease to Rs. 226,760 million and Rs. 164,020 million in the same period.

Table 6.4: Market Borrowings of Governments

(Rs. million)

Security	Gross			Repayment			Net		
	2004-05*	2004-05	2003-04	2004-05*	2004-05	2003-04	2004-05*	2004-05	2003-04
1. Central Government (a+b)	1,655,730	1,065,010	1,476,360	617,820	604,510	588,200	1,037,910	460,500	888,150
a) Dated Securities	1,395,730	803,500	1,215,000	356,310	343,160	326,940	1,039,420	460,340	888,060
b) 364-day T-bills	260,000	261,510	261,360	261,510	261,360	261,260	-1,510	160	90
2 State Government	226,760	391,010	505,210	62,740	51,230	41,450	164,020	339,780	463,760
Total (1+2)	**1,882,490**	**1,456,020**	**1,981,570**	**680,560**	**655,740**	**629,650**	**1,201,930**	**800,280**	**1,351,910**

* Budget Estimates (BE).
Source: RBI Annual Report, 2004-05

The Central Government mobilised Rs. 803,500 million through issue of dated securities and Rs. 261,510 million through issue of T-bills. After meeting repayment liabilities of Rs. 343,160 million for dated securities, and redemption of T-bills of Rs. 261,360 million, net market borrowing of Central Government amounted to Rs. 460,500 million for the year 2004-05. The state governments collectively raised Rs. 391,010 million during 2004-05 as against Rs. 505,210 million in the preceding year. The net borrowings of State Governments in 2004-05 amounted to Rs. 339,780 million.

Yields

The year 2004-05 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 4.49% and 8.24% during 2004-05 as against the range of 4.69% to 6.34% during the preceding year. The weighted average yield on government dated securities increased to 6.11% in 2004-05 from 5.71% in 2003-04 (Table 6.5).

Table 6.5: Profile of Central Government Dated Securities

(Amount in Rs. mn.)

	Items	2003-04	2004-05
1	Gross Borrowing	1,215,000	803,500
2	Repayments	326,930	343,160
3	Net Borrowings	888,070	460,340
4	Weighted Average Maturity (In years)	14.94	14.13
5	Weighted Average Yield (Per cent)	5.71	6.11
6	(A) Maturity Distribution (Amount)		
	a Upto 5 years	65,000	30,000
	b Above 5 and upto 10 years	220,000	150,000
	c Above 10 years	930,000	623,500
	Total	1,215,000	803,500
	(B) Maturity Distribution (Per cent)		
	a Upto 5 years	5	4
	b Above 5 and upto 10 years	18	19
	c Above 10 years	77	77
	Total	100	100
7	Price based Auctions Amount	740,000	723,500
8	Yield - (Per cent)		
	Minimum	4.69	4.49 @
		(4 years)	(12 years)
	Maximum	6.34	8.24
		(20 years)	(27 years, 10 months)
9	Yield - Maturity Distribution-wise		
	(A) Less than 10 years		
	Minimum	4.69	5.47
		(4 years)	(9 years)
	Maximum	4.62	7.20
		(8 years)	(5 years, 6 months)
	(B) 10 years		
	Minimum	5.32	Nil
	Maximum		Nil
	(C) Above 10 years		
	Minimum	5.96	4.49
		(10 years, 3 months)	(12 years)
	Maximum	6.32	8.24
		(29 years, 4 months)	(27 years, 10 months)

Note: Figures in brackets indicate residual maturity in years.
@ FRB is Floating Rate Bonds
Source: RBI Annual Report 2004-05

Maturity Structure

Government has been consciously trying to lengthen maturity profile. During 2004-05, around 77% 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. The weighted average maturity of dated securities issued during the year was 14.13 (in years) in 2004-05.

Secondary Market

Turnover

The aggregate secondary market transactions in debt securities (including government and non-government securities) increased by 10.0% to Rs. 29,936,813 million in 2004-05 from Rs. 27,214,706 million in 2003-04, (Table 6.6). Non-government securities accounted for a meager 1.3% of total turnover in debt market. NSE accounted for about 29.6% of total turnover in debt securities during 2004-05.

Table 6.6: Turnover of Debt Securities

(Rs. mn.)

Securities	2003-04	2004-05
Government Securities	**26,792,084**	**29,552,626**
WDM Segment of NSE	12,743,020	8,496,166
Rest of SGL	14,049,064	21,056,460
Non Government Securities	**422,622**	**384,187**
CM Segment of NSE	2,220	5,215
WDM Segment of NSE	417,947	376,771
'F' Category of BSE	2,455	2,202
Total	**27,214,706**	**29,936,813**

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. 376,771 million in 2004-05, lower by 9.85% than that during the preceding year. BSE reported a turnover of Rs. 2,202 million during 2004-05. 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. 12,608,667 million, recording a slight decline of 25.9% from Rs. 17,013,632 million in the previous year (Table 6.7). The details of non-repo SGL transactions in government securities are presented in

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
2004-05	12,608,667	76.27	2.27	21.46

Source: RBI.

Annexure 6.1. The volume of transactions in state government securities increased to Rs. 285,845 million in 2004-05 from Rs. 171,957 million in 2003-04. The monthly turnover in non-repo transactions for the year 2004-05 ranged between Rs. 677,434 million and Rs. 1,815,561 million, with a monthly average of Rs. 1,050,722 million.

The share of WDM segment of NSE in the total turnover of Non-repo SGL transaction decreased marginally from 74.89% in 2003-04 to 67.36% in 2004-05 (Table 6.8). The share of WDM in turnover of non-repo dated securities (central and state government securities) witnessed a considerable increase from 49.01% in 2003-04 to 73.18% in 2004-05 (Chart 6.1). The turnover in T-bills has almost maintained a similar contribution of 46.06% in 2004-05 as noticed in 2003-04 of 46.31%.

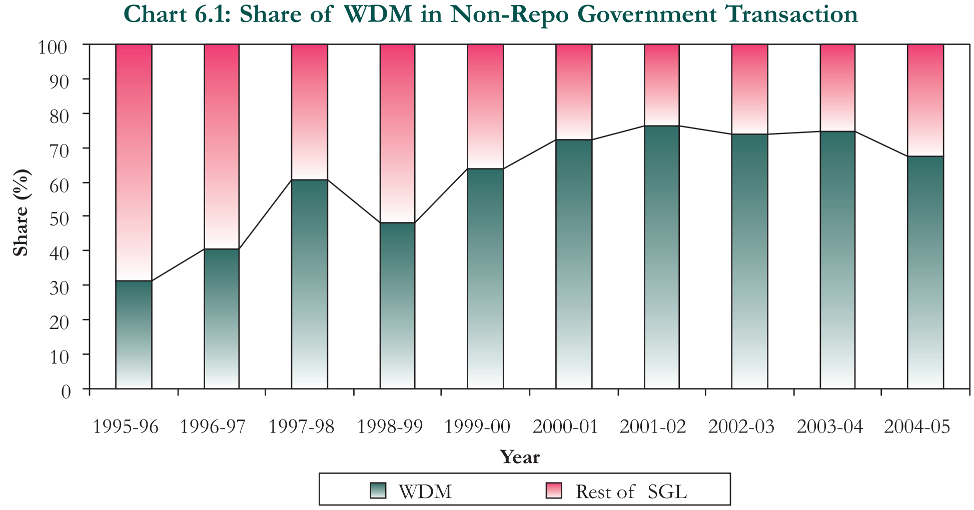
Table 6.8: Share of WDM in Transactions of Government Securities

(Amount in Rs. mn.)

Year	Turnover of Non-Repo Govt Securities			Turnover of Non-Repo Central & State Govt Sec.			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	6.97	115,130	22,548	19.58
1996-97	939,210	381,023	40.57	604,990	271,902	31.84	334,220	109,121	32.65
1997-98	1,610,900	975,152	60.53	1,198,890	804,943	60.21	412,010	170,209	41.31
1998-99	1,875,310	904,158	48.21	1,446,410	798,295	46.29	428,900	105,863	24.68
1999-00	4,564,910	2,915,915	63.88	4,089,160	2,809,475	58.37	475,750	106,440	22.37
2000-01	5,721,456	4,124,958	72.10	5,120,836	3,893,523	62.94	600,620	231,435	38.53
2001-02	12,119,658	9,269,955	76.49	11,446,342	9,015,121	60.91	673,316	254,834	37.85
2003-03	13,923,834	10,305,497	74.01	13,155,989	9,991,507	55.42	767,845	313,990	40.89
2003-04	17,013,632	12741190	74.89	15,813,076	12,185,221	49.01	1,200,556	555,969	46.31
2004-05	12,608,667	8,493,250	67.36	9,902,244	7,246,655	73.18	2,706,422	1,246,595	46.06

Source: RBI & NSE.

Chart 6.1: Share of WDM in Non-Repo Government Transaction



Developments in WDM

A total of 1,299 securities with a total outstanding debt of Rs. 2,836,385 million were made available for trading in 2004-05. As at end March 2005, 3,097 securities were available for trading on the WDM Segment. Of which, 1,151 securities were active during 2004-05 as compared to 1,078 in the previous year.

The turnover on WDM segment has been growing rapidly over time, however, the year 2004-05 witnessed decline in the turnover when compared to its past performances. The monthly turnover at times far exceeds the turnover in the equity market segment. It has registered a decrease of 32.6% from Rs. 13,160,962 million during 2003-04 to Rs. 8,872,936 million during 2004-05. The average daily turnover also decreased from Rs. 44,765 million to Rs. 30,283 million during the same period. However, the average trade size increased from 69.4 million to 71.4 million. The business growth of WDM segment is presented in Table 6.9, Chart 6.2 and Annexure 6.2.

Compared to the previous year 2003-04, the market did not perform remarkably well in this year (2004-05). Only the first few months the volumes were considerably good, thereafter a decline was noticed in the subsequent months. The highest turnover of Rs. 1,334,778 million was witnessed in April 2004. The average daily turnover ranged between Rs. 19,801 million and Rs. 60,372 million.

Retail Trades

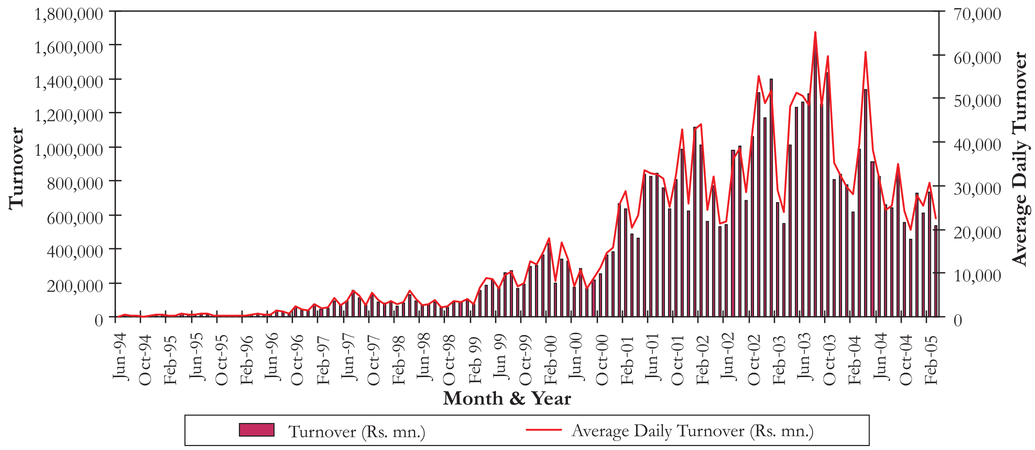
The number of retail trades had been increasing till 1998-99 thereafter it witnessed a decline. However, in the past two years there has been a turnaround in the number of retail trades. The number of retail trades decreased slightly from 1,400 in 2003-04 to

Table 6.9: Business Growth of WDM Segment of NSE

Parameter	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
No. of Active Securities	719	1,071	1,057	1,038	979	1,123	1,078	1,151
No. of Trades	16,821	16,092	46,987	64,470	144,851	167,778	189,518	124,308
No. of Retail Trades	1,390	1,522	936	498	378	1,252	1,400	1,278
Turnover (Rs. mn.)	1,112,633	1,054,691	3,042,162	4,285,815	9,471,912	10,687,015	13,160,962	8,872,936
Average Daily Turnover (Rs. mn.)	3,850	3,650	10,348	14,830	32,775	35,983	44,765	30,283
Retail Turnover (Rs. mn.)	2,887	3,078	2,185	1,318	1,094	2,995	3,317	4,101
Share of Retail Trades (%)	0.26	0.29	0.07	0.03	0.01	0.03	0.03	0.05
Average Trade Size (Rs. mn.)	66.15	65.54	64.74	66.48	65.39	63.70	69.4	71.4
Average Size of Retail Trade (Rs. mn.)	2.08	2.02	2.33	2.65	2.89	2.39	2.37	3.21

Source: NSE.

Chart 6.2: Growth of WDM Segment



1,278 in this year. The retail trade market is picking up as a result of the several efforts made by policy makers yet it has not shown very promising results.

Securities Profile

Long-term securities dominated the market during 2004-05 revealing the interest of investors to hold on to long term of assets. Though the turnover in Government securities decreased by 40.5% in 2004-05 as compared to the previous year, yet it accounted for the bulk of trading with a turnover of Rs. 7,248,097 million. Its share in total turnover also decreased marginally to 81.7% from 92.6% 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 14.07% share in the total turnover. The PSU bonds witnessed a turnover of Rs. 109,061 million in 2004-05 as against Rs. 158,946 million in 2003-04 (Annexure 6.3). The share of institutional bonds decreased marginally from 0.85% in the year 2003-04 to 0.78% in the previous year (Chart 6.3).

The share of top '10' securities over the past three years has been witnessing a decline, however, this year there was a slight increase from 54.43% in 2003-04 to 57.51% in 2004-05 (Table 6.11). Top 50 securities accounted for over 80.59% of turnover.

Table 6.10: Security wise Distribution of Turnover

Securities	Turnover (Rs. mn.)		% of Turnover	
	2003-04	2004-05	2003-04	2004-05
Government Securities	12,186,448	7,248,097	92.60	81.69
T-Bills	556,567	1,248,069	4.23	14.07
PSU Bonds	158,946	109,061	1.21	1.23
Institutional Bonds	111,950	69,043	0.85	0.78
Bank Bonds & CDs	43,756	26,917	0.33	0.30
Corporate Bonds & CPs	102,945	168,100	0.78	1.89
Others	350	3,650	0.00	0.04
Total	**13,160,962**	**8,872,937**	**100.00**	**100.00**

Source: NSE.

Chart 6.3: Security-wise Distribution of Turnover, 2004-05

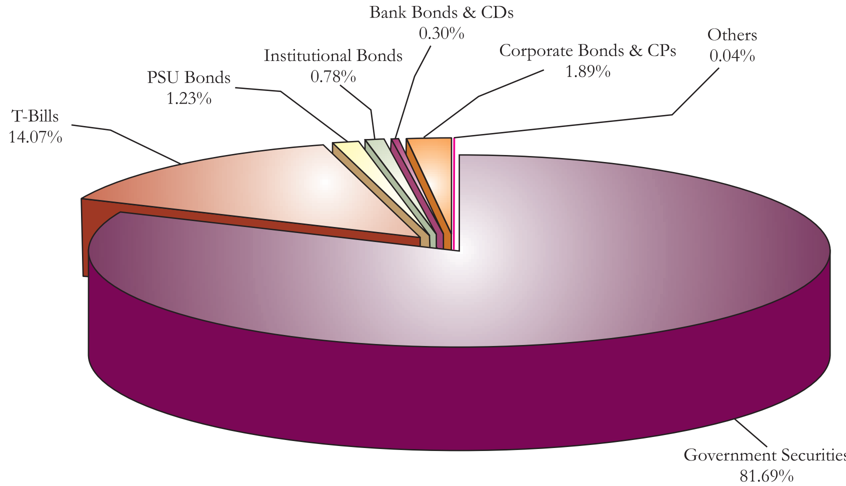


Table 6.11: Share of Top 'N' Securities/Trading Members/ Participants in Turnover in WDM Segment

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
2004-05	43.70	57.51	71.72	80.59	89.55
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	--
2004-05	35.75	56.84	86.74	100.00	--
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

Cont...

Cont...

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
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
2004-05	16.82	28.64	47.24	61.71	66.00

Source: NSE.

Participant Profile

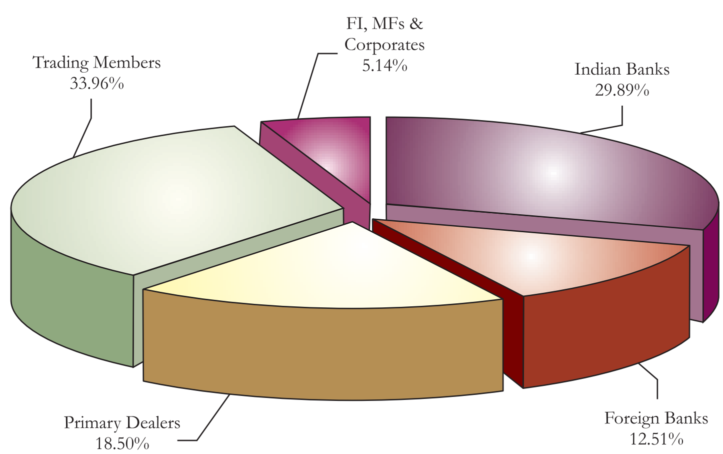
Indian banks, foreign banks and PDs together accounted for over 60.9% of WDM turnover during 2004-05 (Table 6.12). The share of the Indian banks fell from 36.36% to 29.89% in 2004-05. Though the trading member's contribution declined from 34.38% to 33.96%, it proved to be market leader followed by Indian Banks (Annexure 6.3).

Table 6.12: Participant-wise Distribution of Turnover

Participants	2003-04	2004-05
Indian Banks	36.36	29.89
Foreign Banks	7.25	12.51
Primary Dealers	17.03	18.50
Trading Members	34.80	33.96
FI, MFs & Corporates	4.56	5.14
Total	**100.00**	**100.00**

Source: NSE.

Chart 6.4: Participant-wise Distribution of Turnover, 2004-05



Top '50' trading members accounted for the total turnover of WDM in 2004-05, which is indicative of the narrow membership structure of WDM segment (Table 6.11). As at March 31, 2005, there were 75 members on the WDM segment.

Market Capitalisation

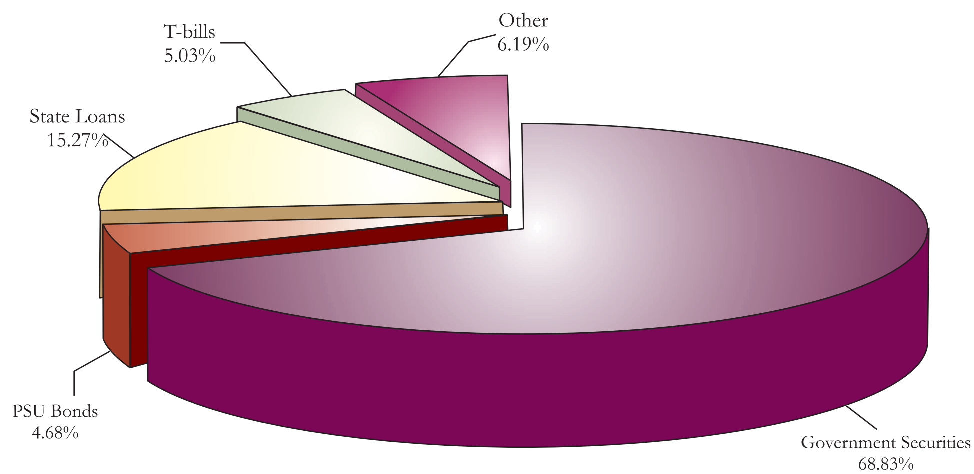
Market capitalisation of the WDM segment has witnessed a constant increase indicating an increase in activity in the market. The total market capitalisation of securities available for trading on WDM segment stood at Rs. 14,617,344 million as at end-March 2005, registering a growth of 20.22% over end-March 2004 (Table 6.13). The relative shares of different securities in market capitalisation maintained the trend of 2003-04. Government securities accounted for 68.83% of total market capitalisation at the end of March 2005 (Chart 6.5). The growth of market capitalisation of WDM is presented in Annexure 6.4.

Table 6.13 : Market Capitalisation of WDM Segment

	(In Rs. mn.)		(In per cent)	
Securities	**Market Capitalisatoin (end of period)**		**% to total**	
	March-04	**March-05**	**March-04**	**March-05**
Government Securities	9,593,017	10,061,070	78.90	68.83
PSU Bonds	568,319	683,981	4.67	4.68
State Loans	793,403	2,232,082	6.53	15.27
T-bills	326,920	735,018	2.69	5.03
Other	876,979	905,193	7.21	6.19
Total	**12,158,638**	**14,617,344**	**100.00**	**100.00**

Source: NSE.

Chart 6.5: Market Capitalisation of WDM Segment at the end of March 2005



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 upward trend through out 2004-05.

Table 6.14: Yields on Government and Corporate Securities, 2004-05

(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-04	4.52	4.89	5.06	5.41	4.75	5.58	5.99	6.19
May-04	4.55	4.94	5.15	5.51	4.68	5.85	6.11	6.14
Jun-04	4.76	5.29	5.49	5.81	4.82	6.28	6.69	6.46
Jul-04	4.62	5.71	5.91	6.09	4.87	6.66	7.00	6.68
Aug-04	5.08	6.26	6.47	6.50	–	7.00	7.46	7.24
Sep-04	5.15	5.98	6.29	6.32	5.06	6.97	7.55	7.82
Oct-04	5.40	6.30	6.72	6.81	5.17	7.41	7.48	7.99
Nov-04	5.82	6.87	7.13	7.17	5.84	6.97	7.90	7.35
Dec-04	5.62	6.44	6.74	6.71	5.49	7.29	7.40	7.21
Jan-05	5.55	6.43	6.62	6.67	5.70	6.93	7.22	7.54
Feb-05	5.46	6.37	6.54	6.61	5.89	6.85	6.99	8.76
Mar-05	5.40	6.41	6.60	6.69	6.03	6.97	7.06	7.79

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) to help 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 and been successfully tested by using daily WDM trades data. This is being disseminated daily.

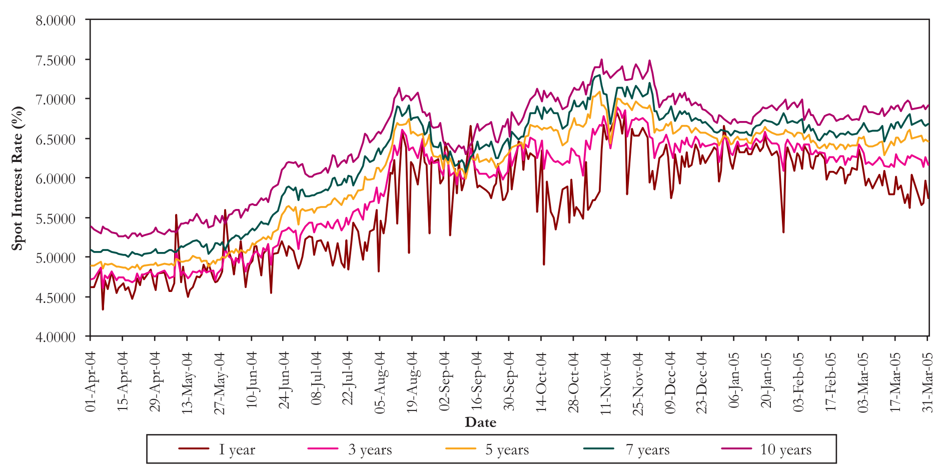
The ZCYC depicts the relationship between interest rates in the economy and the associated terms to maturity. It provides daily estimates of the term structure of interest rates using information on secondary market trades in government securities from the WDM segment. The term structure forms the basis 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 2004-05.

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

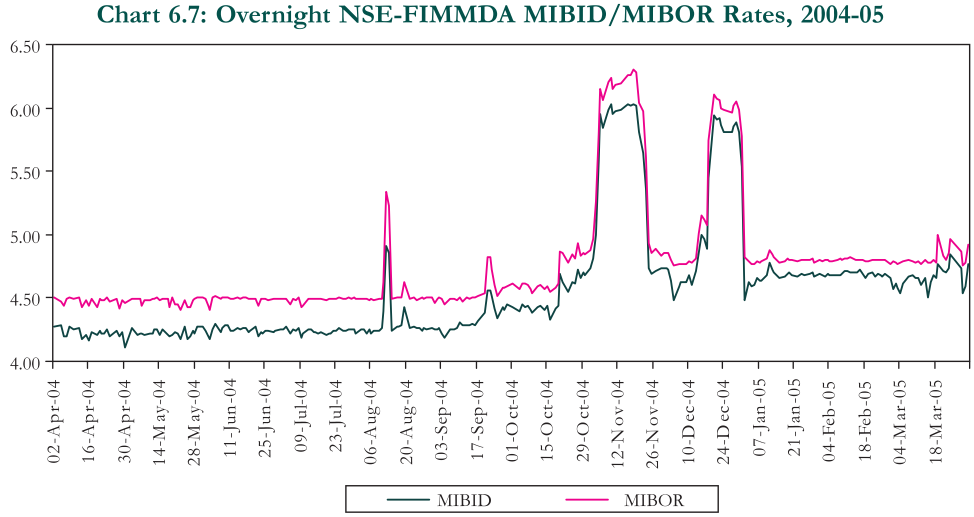
Chart 6.6: Zero Coupon Yield Curve, 2004-05



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 are now known as FIMMDA-NSE MIBID/MIBOR. Chart 6.7 presents overnight FIMMDA-NSE MIBID/MIBOR from April 2002 to March 2003. 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 2004-05. These rates touched the peak of 5.54% and 5.78%, respectively, on December 31, 2004 and the low of 4.11% and 4.46%, respectively, on April 30, 2004. The

Chart 6.7: Overnight NSE-FIMMDA MIBID/MIBOR Rates, 2004-05



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, 2005 is presented in 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 BSE 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), which measures the performance of the bond markets by tracking returns on government securities 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 2004-05, the PRI of i-BEX and NSE G-Sec Index decreased by 8.87% and 9.71% 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 2004-05, the TRI also registered falls of 2.14% and 4.58% 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, 2004-05

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-04	3781.77	1462.71	188.67	188.67	255.63	133.98
May-04	3740.19	1438.01	189.11	189.11	250.58	130.94
Jun-04	3625.38	1384.89	190.32	190.32	246.53	128.01
Jul-04	3578.73	1358.05	190.61	190.61	243.17	125.48
Aug-04	3571.45	1346.80	191.16	191.16	243.08	124.72
Sep-04	3599.17	1348.76	191.54	191.54	242.35	123.48
Oct-04	3523.65	1310.71	193.22	193.22	236.82	120.04
Nov-04	3481.54	1286.01	194.02	194.02	233.16	117.70
Dec-04	3640.49	1337.05	194.51	194.51	241.34	121.25
Jan-05	3638.32	1327.49	195.37	195.37	238.38	119.41
Feb-05	3693.01	1339.67	196.41	196.41	243.70	121.49
Mar-05	3700.92	1333.04	197.68	197.68	243.92	120.97

Source: ICICI Securities and NSE

Annexure 6.1: Secondary Market Transactions in Government Securities

Month/Year	SGL/NDS Non-Repo Transactions				WDM Non-Repo Transactions in Govt. Sec.			
	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**
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**
Apr-04	1,675,727	13,537	126,297	1,815,561	1,230,497	3,383	53,399	1,287,278
May-04	1,042,848	17,468	191,697	1,252,013	792,919	7,595	80,854	881,368
Jun-04	1,019,694	34,065	199,611	1,253,370	686,290	12,822	87,664	786,777
Jul-04	690,184	26,898	194,045	911,127	530,350	8,642	90,343	629,336
Aug-04	712,238	10,396	196,797	919,431	545,141	2,056	63,295	610,492
Sep-04	961,442	27,525	225,008	1,213,975	738,151	6,388	99,226	843,765
Oct-04	579,305	39,790	200,767	819,862	446,924	14,542	75,930	537,396
Nov-04	433,090	22,417	221,927	677,434	310,337	9,090	116,651	436,078
Dec-04	754,370	36,540	263,734	1,054,644	558,937	10,333	121,625	690,896
Jan-05	568,678	32,098	264,172	864,948	443,227	8,443	131,458	583,128
Feb-05	700,335	12,399	294,047	1,006,781	541,361	3,099	157,274	701,734
Mar-05	473,595	12,712	333,212	819,519	332,980	3,148	168,875	505,003
2004-05	**9,611,506**	**285,845**	**2,711,314**	**12,608,665**	**7,157,115**	**89,540**	**1,246,595**	**8,493,250**

Annexure 6.2: Business Growth of WDM Segment

Month/Year	All Trades					Retail Trades		
	No. of Active Securities	Number of Trades	Average Daily Turnover (Rs. mn.)	Turnover (Rs. mn.)	Average Trade Size (Rs. mn.)	Number 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**
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**

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Annexure 6.2: Business Growth of WDM Segment

Month/Year	All Trades					Retail Trades		
	No. of Active Securities	Number of Trades	Average Daily Turnover (Rs. mn.)	Turnover (Rs. mn.)	Average Trade Size (Rs. mn.)	Number of Trades	Turnover (Rs. mn.)	Share in Total Turnover (%)
Apr-04	285	19,075	60,672	1,334,778	69.98	33	112	0.01
May-04	275	13,097	38,058	913,397	69.74	27	79	0.01
Jun-04	347	11,382	31,712	824,528	72.44	56	176	0.02
Jul-04	302	9,303	24,449	660,124	70.96	55	167	0.03
Aug-04	243	9,241	25,523	638,063	69.05	68	212	0.03
Sep-04	288	12,659	35,078	876,945	69.27	103	368	0.04
Oct-04	291	8,437	24,248	557,698	66.10	79	365	0.07
Nov-04	329	5,767	19,801	455,414	78.97	134	436	0.10
Dec-04	333	10,321	27,921	725,933	70.34	154	406	0.06
Jan-05	273	8,384	25,502	612,049	73.00	131	450	0.07
Feb-05	251	10,156	30,662	735,883	72.46	133	432	0.06
Mar-05	303	6,486	22,422	538,124	82.97	305	899	0.17
2004-05	**1,151**	**124,308**	**30,283**	**8,872,936**	**71.38**	**1,278**	**4,101**	**0.05**

Source: NSE.

Annexure 6.3: Security-wise and Participant wise Distribution of WDM Trades

(In percent)

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**
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	15.9
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	3.60	21.83	41.67	10.46
Sep-02	94.70	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	24.70	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**
Apr-04	92.46	4.01	1.72	1.81	33.75	5.69	18.92	35.71	5.93
May-04	87.67	8.89	1.89	1.55	32.90	5.24	17.88	35.57	8.41
Jun-04	84.82	10.63	2.55	2.00	30.78	6.03	19.60	33.96	9.63
Jul-04	81.72	13.72	2.07	2.49	33.33	7.03	19.15	28.88	11.61
Aug-04	85.79	10.04	2.15	2.02	32.27	6.04	20.60	25.23	15.86
Sep-04	84.90	11.32	1.54	2.24	33.97	4.99	21.49	25.79	13.76
Oct-04	82.74	13.61	1.58	2.07	34.17	4.54	18.64	27.08	15.57
Nov-04	70.14	25.61	1.96	2.29	36.30	4.28	16.73	23.30	19.39
Dec-04	78.42	16.75	1.88	2.95	39.94	3.33	18.10	23.94	14.69
Jan-05	73.80	21.48	2.15	2.57	34.07	4.04	16.80	26.64	18.45
Feb-05	73.99	21.37	2.51	2.13	34.26	4.66	15.27	29.74	16.07
Mar-05	62.46	31.38	2.42	3.74	33.15	4.73	16.91	33.49	11.72
2004-05	**81.69**	**14.07**	**2.01**	**2.23**	**33.96**	**5.14**	**18.50**	**29.89**	**12.51**

Annexure 6.4: Market Capitalisation of WDM Securities

Month/ Year (end of period)	Govt. Securities	PSU bonds	State loans	T-bills	Others	Total (In Rs. mn.)	Govt. securities	PSU bonds	State loans	T-bills	Others (In per cent)
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
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	6.38
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	81.83	3.79	6.58	3.11	4.69
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	5.95
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
Apr-04	9,725,430	540,010	763,911	405,555	687,034	12,121,940	80.23	4.45	6.30	3.35	5.67
May-04	9,690,356	615,908	771,051	488,246	716,340	12,281,901	78.90	5.01	6.28	3.98	5.83
Jun-04	9,902,437	660,797	775,886	561,549	792,093	12,692,762	78.02	5.21	6.11	4.42	6.24
Jul-04	9,856,949	673,996	1,798,584	594,616	806,840	13,730,985	71.79	4.91	13.10	4.33	5.87
Aug-04	9,757,119	677,634	1,858,639	598,941	815,104	13,707,437	71.18	4.94	13.56	4.37	5.95
Sep-04	9,971,626	676,059	1,853,590	606,082	832,916	13,940,273	71.53	4.85	13.30	4.35	5.97
Oct-04	9,874,540	685,464	1,837,708	637,550	842,065	13,877,327	71.16	4.94	13.24	4.59	6.07
Nov-04	9,812,375	676,668	1,834,617	608,970	834,637	13,767,267	71.27	4.92	13.33	4.42	6.06
Dec-04	9,963,410	679,400	2,145,190	620,830	866,230	14,275,060	69.80	4.76	15.03	4.35	6.06
Jan-05	10,020,056	678,127	2,148,977	636,791	862,398	14,346,348	69.84	4.73	14.98	4.44	6.01
Feb-05	10,109,360	672,550	2,233,950	696,600	894,930	14,607,390	69.21	4.60	15.29	4.77	6.13
Mar-05	10,061,070	683,981	2,232,082	735,018	905,193	14,617,344	68.83	4.68	15.27	5.03	6.19

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
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

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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
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
30-Apr-04	4.11	4.46	4.37	4.55	4.45	4.65	4.59	4.90
31-May-04	4.27	4.50	4.35	4.55	4.44	4.64	4.56	4.83
29-Jun-04	4.24	4.49	4.33	4.51	4.41	4.62	4.55	4.83
31-Jul-04	4.22	4.49	4.37	4.56	4.46	4.67	4.62	4.89
31-Aug-04	4.25	4.46	4.44	4.65	4.53	4.76	4.67	4.94
29-Sep-04	4.45	4.59	4.50	4.69	4.58	4.81	4.74	5.03
30-Oct-04	4.68	4.84	4.78	5.03	4.85	5.11	5.00	5.31
30-Nov-04	4.74	4.85	4.99	5.30	5.05	5.39	5.16	5.57
31-Dec-04	5.54	5.78	5.22	5.49	5.20	5.48	5.38	5.68
31-Jan-05	4.69	4.80	4.87	5.13	5.00	5.30	5.35	5.70
28-Feb-05	4.66	4.77	4.87	5.25	5.01	5.51	5.44	6.10
31-Mar-05	4.77	4.92	5.06	5.46	5.23	5.63	5.62	6.11

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, 2005

Security Type	Security Name	Issue Name (%)	VaR (%)					Clean Price (off NSE-ZCYC)
			Normal	Weighted Normal	Historical Simul-ation	Weighted Historical Simul-ation	EVT	
GS	CG2006	11.68%	0.5560	0.5380	0.7690	0.4620	0.6610	105.7340
GS	CG2006	11.75%	0.5610	0.5420	0.7740	0.4650	0.6610	105.8880
GS	CG2006A	11.50%	0.5780	0.5610	0.8030	0.4550	0.6860	105.9910
GS	CG2007	11.50%	0.7120	0.6410	0.9210	0.5140	0.7890	112.3060
GS	CG2007	11.90%	0.6950	0.6530	0.9240	0.6620	0.7800	111.6090
GS	CG2007	13.05%	0.6860	0.6500	0.9190	0.6920	0.7730	113.3480
GS	CG2008	11.40%	0.7590	0.5880	0.9200	0.5530	0.7540	115.4050
GS	CG2008	12.00%	0.7380	0.6070	0.9380	0.4710	0.7730	115.9570
GS	CG2008	12.25%	0.7550	0.5850	0.9160	0.5500	0.7500	118.1690
GS	CG2009	11.99%	0.7960	0.5590	0.9080	0.3970	0.7670	119.6480
GS	CG2010	12%	0.9160	0.5700	0.9110	0.5110	0.7590	121.6650
GS	CG2010	12.25%	0.9130	0.5680	0.9090	0.5090	0.7550	125.1430
GS	CG2010	6.20%	0.9510	0.5940	0.9550	0.5750	0.7940	98.7710
GS	CG2010	7.55%	0.9650	0.5970	0.9760	0.5520	0.7900	104.3960
GS	CG2011	9.39%	1.0810	0.6540	1.0530	0.5770	0.7600	113.9190
GS	CG2011A	11.50%	1.0870	0.6520	1.0390	0.5690	0.7540	125.6780
GS	CG2012	11.03%	1.1760	0.6970	1.0870	0.7370	0.7950	124.5900
GS	CG2012	6.85%	1.2610	0.7590	1.1710	1.0030	0.8610	100.7330
GS	CG2012	7.40%	1.2530	0.7520	1.1700	0.7940	0.8540	103.7830
GS	CG2013	7.27%	1.4480	0.8360	1.2290	1.0030	0.9760	102.8360
GS	CG2014	7.37%	1.5270	0.8590	1.3250	0.9380	1.0320	103.3910
GS	CG2015	11.50%	1.4820	0.8010	1.3270	0.7050	0.9620	133.2740
GS	CG2015	7.38%	1.7010	0.9160	1.5720	1.0210	1.1170	103.2460
GS	CG2017	8.07%	1.8140	0.9900	1.7480	1.0000	1.1960	108.5580
GS	CG2018	5.69%	2.2100	1.4090	2.2210	1.3420	1.5480	88.0190
GS	CG2018	6.25%	2.0650	1.2130	2.0650	1.3830	1.3910	93.3290
GS	CG2020	6.35%	2.2790	1.6810	2.3030	1.3520	1.6490	93.0910
GS	CG2021	10.25%	2.1020	1.7120	2.1770	1.2910	1.5530	129.9590
GS	CG2022	8.35%	2.3260	2.1740	2.5120	1.7110	1.8080	111.8090
GS	CG2034	7.50%	3.7120	6.3380	4.6440	4.2760	3.3120	102.5340
TB	364D	030206	0.5150	0.4920	0.7070	0.4310	0.6200	95.2820
TB	364D	030306	0.5390	0.5180	0.7440	0.4510	0.6540	94.8490
TB	364D	050805	0.2870	0.2550	0.3960	0.2230	0.3420	98.0770
TB	364D	060106	0.4890	0.4630	0.6660	0.4040	0.5820	95.7140
TB	364D	130505	0.1160	0.0980	0.1550	0.0790	0.1370	99.3520
TB	364D	160905	0.3540	0.3210	0.4840	0.2840	0.4190	97.4350
TB	364D	170306	0.5500	0.5300	0.7590	0.4590	0.6530	94.6330
TB	364D	210106	0.5030	0.4790	0.6890	0.4140	0.6110	95.4820
TB	364D	270505	0.1490	0.1270	0.1970	0.1390	0.1760	99.1400
TB	91D	030605	0.1640	0.1410	0.2180	0.1560	0.1930	99.0340
TB	91D	060505	0.0990	0.0830	0.1310	0.0670	0.1160	99.4580
TB	91D	080405	0.0240	0.0190	0.0310	0.0150	0.0270	99.8800
TB	91D	150405	0.0440	0.0360	0.0570	0.0290	0.0500	99.7740
TB	91D	200505	0.1330	0.1120	0.1770	0.1230	0.1550	99.2460
TB	91D	230405	0.0660	0.0540	0.0860	0.0590	0.0760	99.6540
TB	91D	230605	0.2070	0.1790	0.2790	0.1490	0.2450	98.7310
TB	91D	290405	0.0810	0.0670	0.1070	0.0540	0.0950	99.5630

Source: NSE.

Derivatives Market

Introduction

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 and their turnover.

Need for a Derivatives Market

Why is there a need for a Derivatives market? The derivatives market performs a number of economic functions and that is why it is very important. 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 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. This market helps to transfer risks from those who have them but may not like them to those who have appetite for them. Derivatives due to their inherent nature are linked to the underlying cash markets. With the introduction of derivatives, the underlying market also witness higher trading volumes because of participation by more players who would not otherwise participate for lack of an arrangement to transfer risk. Speculative trades also shifts 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. This market helps 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 (a) *Interest rate swaps* entails swapping only the interest related cash flows between the parties in the same currency; (b) *Currency swaps* entails 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 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.

Development of Derivatives Market in India

The first step towards introduction of derivatives trading in India was the promulgation of the Securities Laws (Amendment) Ordinance, 1995. It withdrew the prohibition on options in securities. The market for derivatives however, did not take off, as there was no regulatory framework to govern trading of derivatives. SEBI set up a 24 -member committee under the Chairmanship of Dr. L. C. Gupta on November 18, 1996 to develop regulatory framework for derivatives trading in India. In its report, the committee prescribed necessary pre-conditions for introduction of derivatives trading in India; it recommended that derivatives should be declared as 'securities' so that the regulatory framework applicable to trading of 'securities' could also govern trading of securities. SEBI also set up a group in June 1998 under the Chairmanship of Prof. J. R. Varma 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.

The Securities Contract Regulation Act SC(R)A was amended in December 1999 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 other indices *viz.,* CNX IT Index and Bank Index as well as options ands futures on single stocks (currently on 119 stocks) and also futures on interest rates.

Box 1: Chronology of the Development of Derivatives Market in India	
December '95	Permission sought by the Exchanges from SEBI to start trading in derivatives
November '96	Setting up of L C Gupta Committee to design a policy framework for derivatives trading in India
July '99	RBI Permitted OTC Forward rate agreement (FRAs) and interest rate swaps
May '00	S&P CNX Nifty was chosen by SIMEX for trading futures and options.
May '00	SEBI permitted the Exchanges (NSE and BSE) to start trading in derivatives
9 June '00	BSE commenced trading of Index futures based on SENSEX 30 Index
12 June '00	NSE commenced trading of index futures based on S&P CNX Nifty Index
25 September '00	S&P CNX Nifty futures commenced trading at SGX
June '01	Index Options Introduced on NSE based on S&P CNX Nifty Index
July '01	Stock Options introduced on NSE on 31 securities only. Now the list has been broadened and includes 119 securities.[1]
November '01	Stock Futures introduced on NSE on 31 securities. The list now has been broadened to include 119 securities.
June '03	Futures trading commenced on Interest rates (Notional 10 year bond, Notional 10 year zero coupon bond and Notional 91-day T-bill).

Global Derivatives Markets[2]

As per the *FIA Annual Volume Survey* the global overall futures and options contract volume was up nearly 8.92% in 2004. The individual futures and options contract volume registered a growth of 16.27% and 4.60%, respectively, in the year 2004.

[1] 119 securities as on end August 2005.
[2] Data source is Futures Industry Magazine, March/April 2004.

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	5,990.22	8,162.54
2004	2,793.16	6,095.54	8,890.75

Looking at the individual sectors, growth have been fairly strong across the board with the main exception being equity index trading. The trading in foreign currency/index has grown by 35.4% in 2004, followed by Individual equities which registered growth of 28.4%.

Global Futures and Options Volume

(in million)

GLOBAL	2004	2003	% Change
Equity Indices	3775.43	3,959.17	-4.64
Interest Rate	2271.25	1,881.27	20.73
Individual Equities	2002.43	1,560.17	28.35
Energy Products	243.46	217.56	11.90
Ag Commodities	326.15	311.01	4.87
Non-Precious Metals	105.23	90.39	16.42
Foreign Currency/Index	105.37	77.85	35.35
Precious Metals	60.56	64.46	-6.05
Other	0.86	0.66	30.30
Total Volume	**8,890.74**	**8,162.54**	**8.92**

The details for the top 20 contracts for the year 2004 are presented in Table 7.1. Kospi 200 options of Kofex led the table with more than 2.5 billion contracts in 2004 followed by Euro-Dollar Futures of CME. Though Kospi 200 has witnessed a huge decline of 11.14%, it still maintained its position of number 1.

NSE, too, has been making huge strides by moving upwards in the global ranking. NSEIL ranked first (1^{st}) in the single stock future category (Table 7.2) in the year 2004. NSE has been ranked 17^{th} in the global futures and options volume in 2004 against its rank of 21^{st} in the previous year (Table 7.3). In the top 40 Futures Exchanges of the World, NSE stands at the 10^{th} position in 2004 as against 15^{th} in the year 2003 (Table 7.4).

Table 7.1: Top 20 Contracts for the year 2004

(in miilions - net of individual equities)

Rank	Contract	2004	2003	Volume Change	% Change
1	Kospi 200 Options, Kofex	2521.56	2,837.72	-316.16	-11.14
2	3-Month Eurodollar Futures, CME	297.58	208.77	88.81	42.54
3	Euro-Bund Futures, Eurex	239.79	244.41	-4.62	-1.89
4	TIIE 28 Futures, MexDer	206.03	162.08	43.95	27.12
5	10-Year T- Note Futures, CBOT	196.12	146.45	49.67	33.92
6	E-mini S&P 500 Index Futures, CME	167.2	161.18	6.02	3.73
7	Euro-Bobl Futures, Eurex	159.17	150.09	9.08	6.05
8	3-Month Euribor Futures, Euronext.liffe	157.75	137.69	20.06	14.57
9	3-Month Eurodollar Options, CME	130.6	100.82	29.78	29.54
10	Euro-Schatz futures, Eurex	122.93	117.37	5.56	4.74
11	DJ Euro Stoxx 50 Futures, Eurex	121.66	116.04	5.62	4.84
12	5-Year T-Note Futures, CBOT	105.47	73.75	31.72	43.01
13	Interest Rate Futures, BM&F	100.29	57.64	42.65	73.99
14	E-mini Nasdaq 100 Futures, CME	77.17	67.89	9.28	13.67
15	30-Year T-Bond Futures, CBOT	72.95	63.52	9.43	14.85
16	DJ Euro Stoxx 50 Options, Eurex	71.41	61.79	9.62	15.57
17	CAC 40 Index Options, Euronext.liffe	63.15	73.67	-10.52	-14.28
18	No. 1 Suybean Futures, DCE	57.34	60.00	-2.66	-4.43
19	10-Year T-Note Options, CBOT	56.88	41.17	15.71	38.16
20	Kospi 200 Futures, Kofex	55.61	62.20	-6.59	-10.59

Source: Futures Industry, March/April 2005. The monthly magazine of the FIA.

Table 7.2: Futures on Individual Equities (Stock Futures)

(Number of Contracts)

Exchange	2003	2004
National Stock Exchange of India	**25,572,505**	**44,020,670**
RTS Stock Exchange	31,782,174	39,061,704
Euronext	7,004,235	13,491,781
Spanish Exchange (BME)	12,492,568	12,054,799
Stockholm	1,424,890	4,533,805
Borsa Italiana	468,083	1,734,256
Athens Derivatives Exchange	477,464	919,679
JSE South Africa	4,585,919	883,587
Budapest	618,261	706,386
Australian	267,630	459,801
Warsaw	93,055	87,888
Mumbai	103,936	38,383
SFE Corporation	47,822	29,986
Hongkong	18,654	17,274
Copenhagen	310	1,685

Source: WFE 2004 Annual Report and Statistics.

Table 7.3: Global Futures and Options Volume

Rank		Exchange	Volume		% Change
2004	2003		2004	2003	
1	1	Korea Futures Exchange	2,586,818,602	2,912,894,034	-11.19
2	2	Eurex	1,065,639,010	1,014,932,312	5.00
3	4	Chicago Mercantile Exchange	815,341,681	640,209,634	27.36
4	3	Euronext.liffe	790,381,989	694,970,981	13.73
5	5	Chicago Board of Trade	599,994,386	454,190,749	32.10
6	6	Chicago Board of Options Exchange	361,086,774	283,946,495	27.17
7	7	International Securities Exchange	360,852,519	244,968,190	47.31
8	9	Bovespa	235,349,514	177,223,140	32.80
9	10	Mexican derivatives Exchange	210,395,264	173,820,944	21.04
10	8	American Stock Exchange	202,680,929	180,074,778	12.55
11	12	Bolsa de Mercadorias & Futuros	183,427,938	120,785,602	51.86
12	11	New York Mercantile Exchange	161,103,746	137,225,439	17.40
13	13	Philadelphia Stock Exchange	133,401,278	112,705,597	18.36
14	15	Pacific Exchange	103,262,458	86,152,637	19.86
15	17	OMX Exchange	94,382,633	74,105,690	27.36
16	16	Dalian Commodity Exchange	88,034,153	74,973,493	17.42
17	**21**	**National Stock Exchange of India**	**75,093,629**	**43,081,968**	**74.30**
18	14	The Tokyo Commodity Exchange	74,511,734	87,252,219	-14.60
19	18	London Metal Exchange	71,906,901	72,308,327	-0.56
20	27	Taiwan Futures Exchange	64,973,429	31,874,934	103.84
21	20	Sydney Futures Exchange	53,969,445	44,755,340	20.59
22	19	Zhengzhou Commodity Exchange	48,474,548	49,817,798	-2.70
23	23	Tel-Aviv Stock Exchange	43,375,943	38,098,479	13.85
24	22	Shanghai Futures Exchange	40,577,373	40,079,750	1.24
25	26	JSE Securities Exchange South Africa	38,347,861	33,001,743	16.20
26	25	International Pteroleum Exchange	35,540,783	33,341,244	6.60
27	28	Central Japan Commodity Exchange	33,193,259	34,538,530	-3.89
28	30	Osaka Securities Exchange	32,626,063	28,235,033	15.55
29	31	New York board of Trade	31,729,591	24,832,158	27.78
30	29	MEFF	28,740,102	31,471,330	-8.68
31	24	Singapore Exchanges	28,418,757	35,648,224	-20.28
32	32	Tokyo Grain Exchange	25,744,922	21,120,468	21.90
33	34	Bourse De Montreal	21,815,128	17,682,999	23.37
34	59	Boston Options Exchange	20,741,271	--	--
35	36	Australian Stock Exchange	20,485,729	16,902,205	21.20
36	37	Hong Kong Exchanges & Clearing	19,629,692	14,546,213	34.95
37	35	Tokyo Stock Exchange	19,612,565	17,035,830	15.13
38	33	Italian Derivatives Market	18,272,516	17,731,994	3.05
39	45	Mercado a Termino de Roasario	8,163,545	2,842,496	187.20
40	40	Tokyo International Financial Futures Exchange	7,657,510	4,771,917	60.47
41	60	Eurex US	6,186,808	--	--
42	41	Oslo Stock Exchange	5,351,734	3,823,814	39.96
43	39	Budapest Stock Exchange	4,252,595	4,939,893	-13.91
44	38	Osaka Mercantile Exchange	3,842,553	6,162,589	-37.65
45	44	Kansas City Board of Trade	3,089,103	3,099,805	-0.35
46	46	Fukuoka Futures Exchange	3,036,733	2,739,383	10.85
47	43	Kansai Commodities Exchange	2,806,740	3,444,296	-18.51
48	47	Malaysia Derivatives Exchange Berhad	2,632,543	2,009,460	31.01

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Table 7.3: Global Futures and Options Volume

Rank		Exchange	Volume		% Change
2004	2003		2004	2003	
49	51	Wiener Borse	2,242,475	1,392,529	61.04
50	49	Winnipeg Commodity Exchange	2,054,296	1,842,776	11.48
51	50	One Chicago	1,922,726	1,619,194	18.75
52	53	Minneapolis Grain Exchange	1,416,282	1,133,731	24.92
53	42	Budapest Commodity Exchange	1,300,726	3,673,978	-64.60
54	48	Yokohama commodity Exchange	1,164,811	1,852,158	-37.11
55	55	copenhagen Stock Exchange	704,006	762,050	-7.62
56	56	New Zealand Futures Exchange	497,181	493,250	0.80
57	54	NQLX	257,000	858,900	-70.08
58	61	CBOE Futures Exchange	91,332	--	--
59	58	Mercado a Termino de Buenos Aires	85,593	39,610	116.09
60	52	BrokerTec Futures Exchange	--	1,356,825	--
61	57	MidAmerica Commodity Exchange	--	142,298	--

Source: Futures Industry, March / April 2005. The monthly magazine of the FIA.

Table 7.4: Top 40 Futures Exchanges ***(Volume figures do not include options on futures)***

Rank		Exchange	Volume		% Change
2004	2003		2004	2003	
1	1	Eurex	684,630,502	668,650,028	2.39
2	2	Chicago Mercantile Exchange	664,884,607	530,989,007	25.22
3	3	Chicago Board of Trade	489,230,144	373,669,290	30.93
4	4	Euronext.liffe	310,673,375	267,822,143	16.00
5	5	Mexican Derivatives Exchange	210,355,031	173,820,944	21.02
6	6	Bolsa de Mercandorias & Futuros	173,533,508	113,895,061	52.36
7	7	New York Mercantile Exchange	133,284,248	111,789,658	19.23
8	10	Dalian Commodity Exchange	88,034,153	74,973,493	17.42
9	8	The Tokyo Commodity Exchange	74,447,426	87,252,219	-14.68
10	**15**	**National Stock Exchange of India**	**67,406,562**	**36,141,561**	**86.51**
11	11	London Metal Exchange	67,171,973	68,570,154	-2.04
12	9	Korea Futures Exchange	65,261,326	75,159,690	-13.17
13	13	Sydney Futures Exchange	50,968,901	41,831,862	21.84
14	12	Zhengzhou Commodity Exchange	48,474,548	49,817,798	-2.70
15	14	Shanghai Futures Exchange	40,577,373	40,079,750	1.24
16	17	International Petroleum Exchange	35,466,941	33,258,385	6.64
17	16	Singapore Exchange	28,169,379	35,356,776	-20.33
18	18	OMX Exchanges	27,264,123	24,315,286	12.13
19	19	Tokyo Grain Exchange	25,705,687	21,084,727	21.92
20	20	New York Board of Trade	23,955,212	18,822,048	27.27
21	23	JSE Securities Exchange South Africa	19,811,664	14,947,523	32.54
22	22	Tokyo Stock Exchange	18,331,928	15,965,175	14.82
23	21	MEFF	17,592,259	17,110,745	2.81
24	26	Taiwan Futures Exchange	14,911,839	9,953,118	49.82
25	24	Osaka Securities Exchange	14,583,283	13,231,287	10.22

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Table 7.4: Top 40 Futures Exchanges

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Rank		Exchange	Volume		% Change
2004	2003		2004	2003	
26	25	Bourse de Montréal	12,900,821	10,676,279	20.84
27	27	Hong Kong Exchanges & Clearing	11,884,152	8,174,652	45.38
28	34	Mercado a Termino de Rosario	7,735,890	2,708,313	185.64
29	31	Tokyo Interntional Financial Futures Exchange	7,655,510	4,771,917	60.43
30	28	Italian Derivatives Market	6,551,211	7,302,565	-10.29
31	41	Eurex US	6,186,008	--	--
32	30	Budapest Stock Exchange	4,252,595	4,939,893	-13.91
33	29	Osaka Mercantile Exchange	3,842,553	6,162,589	-37.65
34	33	Fukuoka Futures Exchange	3,036,733	2,739,383	10.85
35	35	Kansas City Board of Trade	2,834,799	2,634,424	7.61
36	32	Kansai Commodities Exchange	2,803,812	3,441,365	-18.53
37	36	Malaysia Derivatives Exchange Berhad	2,632,543	2,009,460	31.01
38	37	Winnipeg Commodity Exchange	2,030,455	1,811,616	12.08
39	38	One Chicago	1,922,726	1,619,194	18.75
40	39	Oslo Stock Exchange	1,748,742	1,201,319	45.57

Source: 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 2004 to June 2005.

I. Trading by FIIs in Exchange Traded Equity Index Derivatives Contracts

Pursuant to the recommendations of the Advisory Committee on Derivatives and Market Risk Management, SEBI approved certain provisions with regards to the position limits for FIIs in equity index derivative contracts. The provisions of this circular have come into effect from September 1, 2004.

1. *FII position limits in index option contracts* on a particular underlying index will be Rs. 2,500 million (Rs. 250 crore) or 15% of the total open interest of the market in index options, whichever is higher, per exchange. This limit will be applicable on open positions in all option contracts on a particular underlying index.
2. *FII position limits in all index futures contracts* on a particular underlying index will be the same as mentioned above for FII position limits in index option contracts. This limit will be applicable on open positions in all futures contracts on a particular underlying index.

In addition to the above, FIIs will take exposure in equity index derivatives subject to certain limits (a) Short positions in index derivatives (short futures, short calls and long puts) will not exceed (in notional value) the FIIs holding of stocks; (b) Long positions in index derivatives (long futures, long calls and short puts) will not exceed (in notional value) the FIIs holding of cash, government securities, T-bills and similar instruments. The FIIs reports to the clearing member (custodian) about the extent of the FII holding of stocks, cash, government securities, t-bills and similar instruments before the end of the day. The clearing member (custodian) in turn shall report the same to the Exchange.

II. Risk Containment Measures

SEBI prescribed the following risk containment measures in addition to the already specified measures:

a) Collection of Mark to Market Margin/Settlement: In case the mark to market margin/ settlements (MTM) for the derivative contracts are not collected before the start of the next day's trading, the Exchange shall collect correspondingly higher initial margins to cover the potential for losses over the time elapsed in the collection of MTM. Henceforth, the Exchange will offer a choice to the members to opt for payment of MTM; (a) either before the start of trading of the next day i.e. T+0, or (b) on the next day i.e. T+1. If the member opts for payment of MTM by T+1, then correspondingly higher initial margin is collected.[3]

b) The stocks which have a mean impact cost greater than 1%, in addition to the price scanning range, the minimum initial margin for single stock futures contracts and the short option minimum charge for stock option contracts will be scaled up by $\sqrt{3}$.

c) In order to align the collateral requirements in the cash market and the derivative market, the following modifications in components of liquid asset are specified;

    a. *Cash equivalent component of liquid assets:* Units of money market mutual funds and the units of gilt funds can be accepted towards cash equivalent components of the liquid assets of a clearing member. The unit will be valued on the basis of its net asset value (NAV) after applying a hair cut of 10% on the NAV and any exit load charged by the mutual fund. The valuation or the marking to market of such units shall be carried out on a daily basis.

    b. *Securities component of liquid assets*: Equity securities classified under Group I in the underlying cash market[4], will also be accepted towards liquid assets in the derivative markets. Securities categorised under group I are those which have traded for at least 80% (+/- 5%) of the days for the previous eighteen months and which have a mean impact cost of less than or equal to 1% for an order size of Rs. 1 lakh. The list of acceptable equity securities will be updated on the basis of impact cost and trading on 15th of each month. However, when a security is dropped from the list of acceptable equity schemes, the existing deposits of that security will continue to be counted towards liquid assets till the end of the month. Units of all MFs will also be accepted as the securities component of liquid assets, valuation of which will be done on the basis of its NAV after applying a hair cut equivalent to the VaR of the units NAV and any exit load charged by the MF. The valuation of such units will be on daily basis.

Position Limits

The market wide limit of open position (in terms of the number of underlying stock) on futures and option contracts on a particular underlying stock will be lower of; (a) 30 times the average number of shares traded daily, during the previous calendar month, in the relevant underlying security in the underlying segment, OR (b) 20% of the number of

[3]As prescribed in the SEBI Circulars Ref. No. IES/DC/Cir-4/99 Dated Jul 28, 99 & Ref. No. SMDRP/DC/Cir-10/01 Dated Nov 2, 2001.
[4] As specified in the SEBI circular no. SMD/Policy/Cir-9/2003 dated March 11, 2003

shares held by non-promoters in the relevant underlying security i.e. free-float holding. This limit will be applicable on all open positions in all futures and option contracts on a particular underlying stock. The requirement for doubling the price scan range and volatility scan range when the total open interest in a contract reaches 80% of the market wide limit in that contract stands revoked. It was also advised to the Exchanges to enforce the market wide limits in the following manner:

- At end of the day the exchange will test whether the market wide open interest for any scrip exceeds 95% of the market wide position limit for that scrip. In case it does so, the exchange will take note of open position of all client/TMs as at end of that day for that scrip and from next day onwards they will trade only to decrease their positions through offsetting positions.
- At the end of each day during which the ban on fresh positions is in force for any scrip, the Exchange will test whether any member or client has increased his existing positions or has created a new position in that scrip. If so, that client will be subject to a penalty equal to a specified percentage (or basis points) of the increase in the position (in terms of notional value). The penalty will be recovered before trading begins next day.
- The normal trading in the scrip will be resumed after the open outstanding position comes down to 80% or below of the market wide position limit.

Further, the Exchange will also check on a monthly basis, whether a stock has remained subject to the ban on new position for a significant part of the month consistently for three months. If so, then the Exchange will phase out derivative contracts on that underlying.

Trading member position limits in index derivative contracts

a. *Trading Member Position limits in equity index option contracts:* The trading member position limits in equity index option contracts will be higher of Rs. 2,500 million (Rs. 250 crore) Or 15% of the total open interest in the market in equity index option contracts. This limit will be applicable on open positions in all option contracts on a particular underlying index.

b. *Trading Member Position limits in equity index futures contracts:* The trading member position limits in equity index futures contracts will be higher of Rs. 2,500 million (Rs. 250 crore) Or 15% of the total open interest in the market in equity index futures contracts. This limit will be applicable on open positions in all futures contracts on a particular underlying index.

Trading Member position limits in exchange traded interest rate derivative contracts

Trading member position limit in exchange traded interest rate derivative contracts shall be higher of Rs. 5,000 million (Rs. 500 crore) Or 15 % of the total open interest in the market in exchange traded interest rate derivative contracts.

III. Eligibility Criteria for selection of stocks and indices for futures and options contracts

Pursuant to the recommendations of the Advisory Committee on Derivatives and Market Risk Management, SEBI revised the requirement of the stocks quarter sigma order size from Rs. 5 lakh to Rs. 1 lakh. Similarly the market wide position limit of the eligible stocks has also been prescribed at a minimum of Rs. 50 crore. This provision aimed at preventing the stocks with low market capitalization from becoming eligible for derivative trading.

In order to encourage the introduction of derivative contracts on sectoral indices, the eligibility criteria for indices on which futures and options are permitted to be introduced has also been modified. The derivative contracts on a new index will be permitted if the stocks contributing 80 per cent weightage in the index are individually eligible for derivatives trading. However, no single ineligible stock in the index shall have a weightage of more than 5 per cent in the index. The index on which the futures and options contracts are permitted.

IV. Alignment of contract sizes of existing derivative contracts

SEBI has prescribed the methodology for alignment of contract sizes of existing derivative contracts to Rs. 2 lakh. SEBI in its circular dated March 17, 2005, delegated the authority to the exchanges to align the contract sizes of derivative contracts whenever necessary, in consultation with each other.

Market Design

Only two exchanges in India have been permitted to trade in derivatives contracts, the NSE and the BSE. 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 (hereafter referred to as the 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. 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 2005, there were 661 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 119 securities. Interest rate future contracts are available on notional 91 day T-bill and 10 year bonds (6% coupon bearing and zero coupon bonds). While the index options are European style, stock options are American style. There are a minimum of 7 strike prices, three *'in-the-money'*, one *'at-the-money'* and three *'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. The number of strikes provided in options on Nifty index is related to the range in which previous day's closing value if Nifty index falls as per the following table:

Nifty Index Level	Strike Interval	Scheme of strikes to be introduced (ITM-ATM-OTM)
Up to 1500	10	3-1-3
> 1500 up to 2000	10	5-1-5
> 2000 up to 2500	10	7-1-7
> 2500	10	9-1-9

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 the 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)] 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. However for the transactions in the options sub-segment the transaction charges will be levied on the premium value at the rate of 0.05% (each side) instead of on the strike price as levied earlier.

The trading members contribute to Investor Protection Fund of F&O segment at the rate of Rs. 10 per crore of turnover (0.0001%).

The trading members are also required to pay securities transaction tax (STT) on non-delivery transactions at the rate of 0.0133% w.e.f June 1, 2005[5].

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

[5] This rate was 0.01% prior to the revision.

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 (CMs). 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 happens on a continuous basis at the end of each day, and the final settlement, which is on the last trading day of the futures contract.

- **MTM Settlement for futures**

All futures contracts for each member are marked-to-market (MTM) to the daily settlement price of the relevant futures contract at the end of each day. The CMs who have suffered a loss 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. CMs are responsible to collect and settle the daily MTM profits/losses incurred by the TMs and their clients clearing and settling through them. Similarly, 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			**1,200**

- ## 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 contract is currently calculated as the weighted average price of the contract executed in the last half an hour of trading hours. In case the futures contract is not traded in the last half an hour, the theoretical futures price is computed and used as daily settlement price. 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 for options**

Buyer of an option is obligated to pay the premium towards the options purchased by him. Similarly, the seller of an option is entitled to receive the premium for the option sold by him. The premium payable and receivable are netted to compute the net premium payable or receivable for each client for each option contract. The CMs, who have a premium payable positions are required to pay the premium amount to NSCCL, which in turn is passed on to the members who have a premium receivable position. This is known as daily premium settlement. CMs are also responsible to collect and settle for the premium amounts from the TMs and their clients clearing and settling through them. 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 individual securities. An investor can exercise his in-the-money options at any time during trading hours through his TM. Interim exercise settlement is effected for such options at the close of the trading hours, on the day of exercise. 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 who has been assigned the option contract. 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 positions at in–the–money strike prices existing at the close of trading hours on the day of expiry of the contract. All long positions at in-the-money strike prices are automatically assigned to short positions in option contracts with the same series, on a random basis. 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 in respect of admitted deals in the 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 contract 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 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 T+1 settlement.

  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 contract. 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 facility to entities like institutions/foreign institutional investors (FIIs)/ MFs to execute trades through any TM, which may be cleared and settled by their own CM. These entities 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. The financial soundness of the members is the key to risk management. Therefore, the requirements for membership in terms of capital adequacy (net worth, security deposits) are quite stringent.
2. NSCCL charges an upfront initial margin for all the open positions of a CM. It specifies the initial margin requirements for each futures/options contract on a daily basis. It also follows VaR based margining computed through SPAN. 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. NSCCL's on-line position monitoring system monitors a CM's open position on a real-time basis. Limits are set for each CM based on his base capital. The on-line position monitoring system generates alerts whenever a CM reaches a position limit set up by NSCCL. NSCCL monitors the CMs for MTM value violation, while TMs are monitored for contract-wise position limit violation.
5. CMs are provided with a trading terminal for the purpose of monitoring the open positions of all the TMs clearing and settling through him. A CM may set exposure limits for the TM clearing and settling through him. 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 result in disablement of trading facility for all TMs of a CM in case of a violation by the CM.
7. A separate settlement guarantee fund for this segment has been created out of the base capital of members.

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®[6] (Standard Portfolio Analysis of Risk). SPAN system is for the purpose of computation of on-line margins, based on the parameters defined by SEBI.

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.

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 setoffs 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 Standard Deviation (3.5 sigma) 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 contract.

(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

[6] SPAN® is a registered trademark of the Chicago Mercantile Exchange (CME) used here under licence.

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 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 contract 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 over–riding 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 form 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 base capital.
- *Member-wise Position Limit Violation (Future and Option contracts on Equity index)*: 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. 250 crore, whichever is

higher at any time, including during trading hours. This limit shall be applicable on open positions in all option contracts on a particular underlying index.

- *Member-wise Position Limit Violation (Future and Option contracts on Individual Securities):* The TM position limits in equity index futures contracts shall be higher of Rs. 250 crore or 15% of the total open interest in the market in equity index futures contracts. This limit would be applicable on open positions in all future contracts on a particular underlying index.
- *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 contract 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 20% of the number of shares held by non-promoters in the relevant underlying security i.e. 20% 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 60% 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 utilizes the collateral of one TM and/or constituent towards the exposure and/or obligations of a TM and/or constituent.
- *Violation of Exercised Positions*: When option contracts are exercised by a CM, wjhere no open long positions for such CM/TM and/or constituent exist at the end of the day, at the time the exercise processing is carried out, it is termed as violation of exercised positions.

Market Outcome

Trading Volumes

Derivatives are traded in India on only two exchanges *viz.,* the NSE and the BSE (Table 7.8). The total exchange traded derivatives volume witnessed an increase (19.69%) to Rs. 25,641,269 million during 2004-05 as against Rs. 21,422,690 million during the preceding year. NSE emerged as a market leader in the Indian Market by accounting for about 99.3% of total turnover. Since more than 99% of volumes came from NSE, the further detailed analysis is based on NSE data.

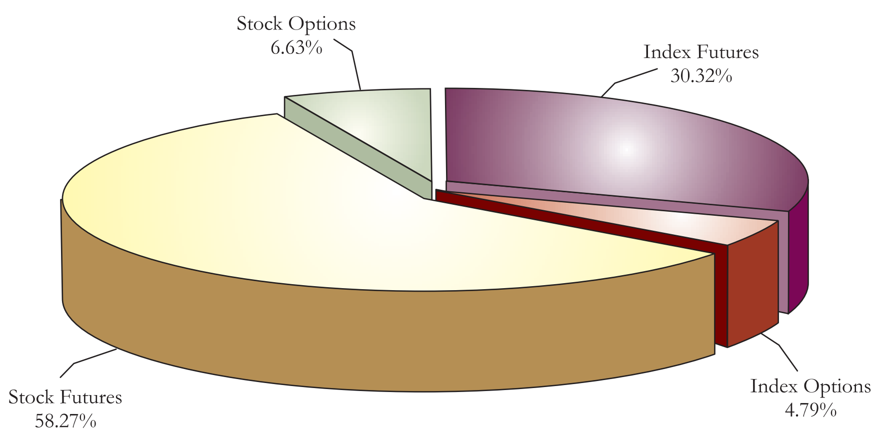
Table 7.8: Trade Details of Derivatives Market*

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-02	804,602	216,736	1,079	238	805,681	216,974
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	5090	4,337,732	1,408,715
Sep-03	5,481,939	1,851,509	34,274	8509	5,516,213	1,860,018
Oct-03	5,989,205	2,303,645	30,668	8574	6,019,873	2,312,219
Nov-03	4,769,938	1,921,714	31,337	9287	4,801,275	1,931,001
Dec-03	5,724,035	2,389,067	107,545	36840	5,831,580	2,425,907
Jan-04	6,976,023	3,240,630	103,573	37869	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**
Apr-04	6,568,668	2,202,995	2,892	850	6,571,560	2,203,845
May-04	6,481,198	1,947,629	1,146	390	6,482,344	1,948,019
Jun-04	5,822,819	1,583,055	0	0	5,822,819	1,583,055
Jul-04	6,134,513	1,753,454	10	3	6,134,523	1,753,457
Aug-04	5,978,503	1,760,057	0	0	5,978,503	1,760,057
Sep-04	5,931,706	1,783,796	39,788	20,560	5,971,494	1,804,356
Oct-04	5,666,914	1,822,237	115,298	32,900	5,782,212	1,855,137
Nov-04	5,314,655	1,758,045	157,458	46,950	5,472,113	1,804,995
Dec-04	7,515,469	2,682,275	154,902	49,470	7,670,371	2,731,745
Jan-05	7,246,915	2,652,899	43,942	14,150	7,290,857	2,667,049
Feb-05	6,661,661	2,535,514	9,213	3,040	6,670,874	2,538,554
Mar-05	7,694,164	2,988,571	7,070	2,430	7,701,234	2,991,001
2004-05	**77,017,185**	**25,470,526**	**531,719**	**170,743**	**77,548,904**	**25,641,269**

Source: NSE and SEBI Bulletin.

During 2004-05, the F&O segment of NSE reported a total turnover for Rs. 25,470,526 million as against Rs. 21,306,492 million during the preceding year. The number of contracts traded in 2004-05 amounted to 770 lakh as against 569 lakh in the previous year. The segment witnessed a record turnover of Rs. 257,986 million on August 24, 2005 and record daily number of trades to the tune of 5.2 lakh on July 29, 2005. The monthly turnover increased from Rs. 2,202,995 million in April 2004 to Rs. 2,988,571 million in March 2005. Though this segment witnessed a downtrend in the months in the middle yet it pulled back and started on its upward trend in the later months of the fiscal. The average daily turnover increased from Rs. 110,150 million in April 2004 to Rs. 135,844 million in March 2005. 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, 2004-05



Open Interest

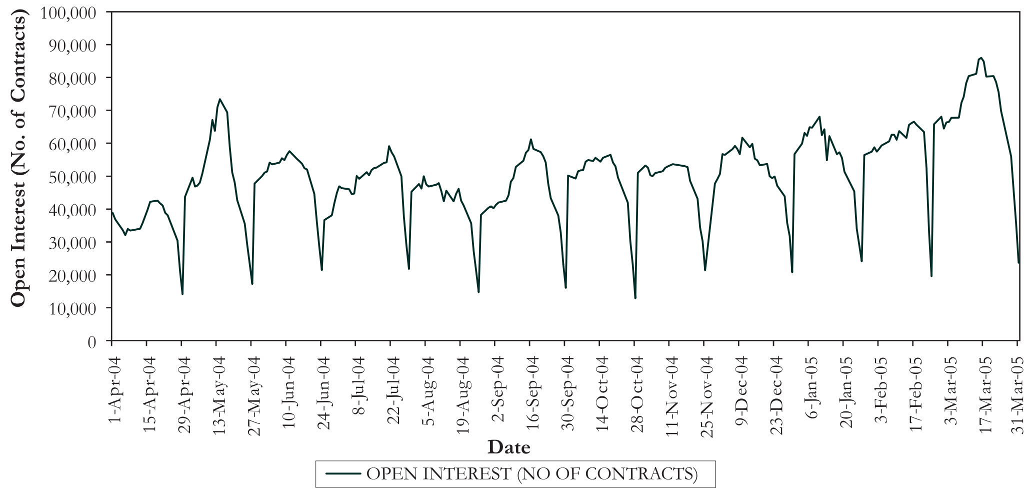
Open interest is the total number of outstanding contracts that are held by market participants at the end of each day. Putting it simply, open interest is a measure of how much interest is there in a particular option or future. Increasing open interest means that fresh funds are flowing in the market, while declining open interest means that the market is liquidating. The highest open interest in index futures at NSE was recorded at 85,992 contracts on March 16, 2005. The daily open interest for near month index futures at NSE is presented in Chart 7.2.

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

Chart 7.2. Daily Open Interest for Near Month Nifty Futures for 2004-05



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 2004 to March 2005. 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 2004 to March 2005 is presented in Chart 7.4. The implied interest rate for near month Nifty futures as on last trading of the month is presented in Table 7.9.

Chart 7.3. Nifty Futures and Spot Price (2004-05)

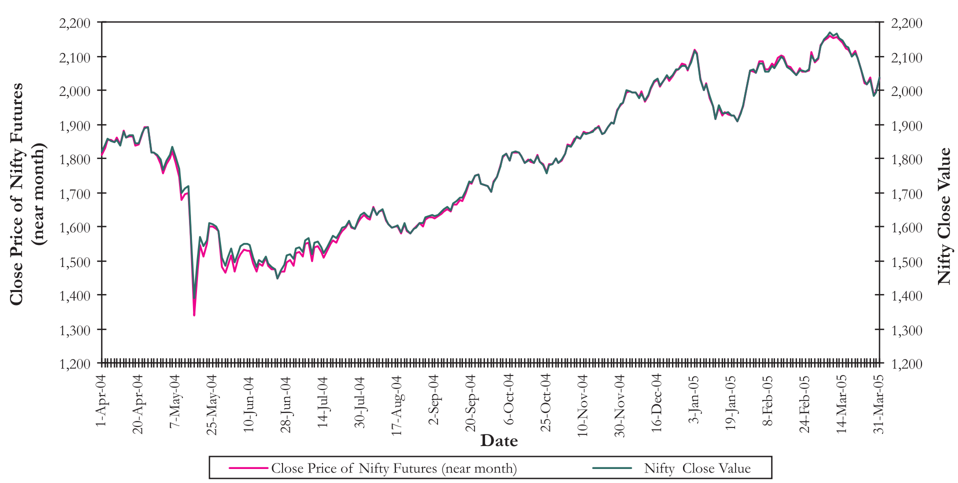
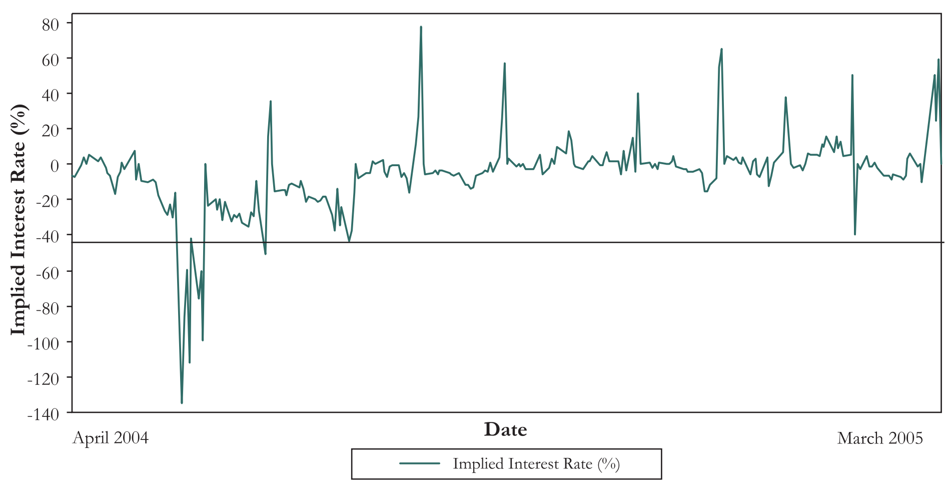


Table 7.9: Implied Interest Rate for Near Month Nifty Futures (April 2004 - March 2005)

Month	Expiry Date of near month Contract	Closing Future Price	Closing Spot Price	Implied Interest Rate (%)
Apr-04	27-May-2004	1783.35	1796.10	-9.60
May-04	24-Jun-2004	1464.15	1483.60	-19.94
Jun-04	29-Jul-2004	1484.90	1505.60	-17.30
Jul-04	26-Aug-2004	1622.95	1632.30	-7.74
Aug-04	30-Sep-2004	1627.00	1631.75	-3.54
Sep-04	30-Sep-2004	1744.75	1745.50	0.00
Oct-04	25-Nov-2004	1785.25	1786.90	-1.25
Nov-04	30-Dec-2004	1955.00	1958.80	-2.36
Dec-04	27-Jan-2005	2087.20	2080.50	4.35
Jan-05	24-Feb-2005	2057.30	2057.60	-0.22
Feb-05	31-Mar-2005	2111.65	2103.25	4.70
Mar-05	31-Mar-2005	2033.20	2035.65	N.A.

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.

Chart 7.4: Implied Interest Rate for Near Month Nifty Futures (April 1, 2004 to March 31, 2005)



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.

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 are 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 2004-05, the cash settlement amounted to Rs. 146,486.15 million with settlement of futures and of options accounting for Rs. 132,516.81 million and Rs. 13,969.34 million, respectively. The detail of the settlement statistics in the F&O segment is presented in Table 7.10.

Table 7.10: 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

Contd...

Contd...

Table 7.10: 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	
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	1074.58	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**
Apr-04	8,372.79	156.72	647.04	252.90	9,429.45
May-04	25,561.30	134.70	912.90	358.20	26,967.10
Jun-04	5,352.50	200.50	468.10	98.50	6,119.60
Jul-04	4,511.50	151.40	721.30	427.70	5,811.90
Aug-04	5,480.10	86.60	509.00	146.50	6,222.20
Sep-04	4,801.20	126.30	562.10	397.40	5,887.00
Oct-04	8,378.20	231.80	685.00	310.00	9,605.00
Nov-04	6,911.70	102.10	768.20	419.50	8,201.50
Dec-04	12,385.80	223.10	1,040.90	565.40	14,215.20
Jan-05	23,176.90	317.40	963.60	423.70	24,881.60
Feb-05	9,916.30	106.20	963.50	393.00	11,379.00
Mar-05	15,393.50	438.20	1,169.00	765.90	17,766.60
2004-05	**130,241.79**	**2,275.02**	**9,410.64**	**4,558.70**	**146,486.15**

Annexure 7.1: Contract Specification for F&O

Particulars	Index Futures	Stock Futures	Index Options	Stock Options	Interest Rate Futures
Security Description	FUTIDX	FUTSTK ----	OPTIDX	OPTSTK ---	FUTINT
Underlying	S&P CNX Nifty Index/ CNX IT Index/Bank Index	Individual Securities	S&P CNX Nifty Index/ CNX IT Index/Bank 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	As specified by NSE subject to minimum value of Rs. 2 lakh	As specified by NSE subject to minimum value of Rs. 2 lakh	As specified by NSE subject to minimum value of Rs. 2 lakh	As specified by NSE subject to minimum value of Rs. 2 lakh	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 contracts 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 contractshall 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 7 (three 'in the money', one 'at the money' and three 'out of the money') for every option type (i.e. call and put)	Minimum of 7 (three 'in the money', one 'at the money' and three 'out of the money') for every 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 contract on the trading day	Closing price of futures contract 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 contract.	Closing value of such underlying security (index) on the last trading day of the options contract.	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 Option				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

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Annexure 7.2: Business Growth of Derivatives Segment

Month/ Year	Index Futures		Stock Futures		Interest Rate Futures		Index Options				Stock Option				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.)
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**
Apr-04	2,164,528	795,603	3,829,403	1,210,478	0	0	115,378	43,469	80,733	29,681	292,628	96,401	85,998	27,363	6,568,668	2,202,995	110,150	249,845	76,677
May-04	2,551,985	821,494	3,322,799	926,276	0	0	196,198	68,238	100,430	34,689	246,630	77,171	63,156	19,762	6,481,198	1,947,629	92,744	179,487	46,958
Jun-04	2,152,644	640,171	3,125,283	783,916	0	0	158,784	49,141	117,041	35,589	193,687	53,395	75,380	20,843	5,822,819	1,583,055	71,957	201,871	53,673
Jul-04	1,971,231	611,250	3,492,774	940,092	0	0	189,179	60,590	124,352	38,561	262,755	76,138	94,222	26,823	6,134,513	1,753,454	79,702	206,709	59,639
Aug-04	1,803,263	579,263	3,577,911	995,909	0	0	127,779	41,921	98,618	31,927	284,013	84,991	86,919	26,044	5,978,503	1,760,057	80,003	261,185	73,317
Sep-04	1,463,682	495,001	3,768,178	1,071,234	0	0	124,547	42,825	93,808	31,642	365,187	107,626	116,304	35,469	5,931,706	1,783,796	81,082	446,299	133,535
Oct-04	1,320,173	471,906	3,660,047	1,116,951	0	0	138,099	50,298	97,628	35,003	357,625	116,838	93,342	31,241	5,666,914	1,822,237	91,112	321,545	98,451
Nov-04	1,023,111	382,770	3,600,135	1,135,246	0	0	131,218	49,794	102,223	38,135	363,158	119,710	94,810	32,390	5,314,655	1,758,045	87,902	371,842	122,392
Dec-04	1,447,464	583,330	5,238,498	1,793,867	0	0	130,557	53,553	108,650	43,561	481,349	169,515	108,951	38,449	7,515,469	2,682,275	116,621	426,606	152,211
Jan-05	1,931,290	761,508	4,551,564	1,595,642	0	0	176,682	71,877	143,416	57,857	362,345	135,017	81,618	30,998	7,246,915	2,652,899	139,626	388,354	136,037
Feb-05	1,729,103	715,456	4,167,787	1,517,428	0	0	168,594	71,280	144,627	59,982	367,707	138,902	83,843	32,465	6,661,661	2,535,514	126,776	404,809	149,005
Mar-05	2,076,975	863,983	4,708,687	1,753,635	0	0	213,632	90,743	211,385	89,179	369,895	144,955	113,590	46,075	7,694,164	2,988,571	135,844	592,646	210,523
2004-05	**21,635,449**	**7,721,735**	**47,043,066**	**14,840,674**	**0**	**0**	**1,870,647**	**693,729**	**1,422,911**	**525,807**	**3,946,979**	**1,320,660**	**1,098,133**	**367,921**	**77,017,185**	**25,470,526**	**100,674**	**592,646**	**210,523**

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 has set up the National Institute of Securities Markets (NISM). NISM would look into both training as well as certification. NISM would design and implement the entire gamut of educational initiatives, including education, training, certification, research and consultancy in the area of securities market and allied subjects for securities market professionals in India and neighboring countries.

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 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 and his ability to provide sound advice to investors.

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 making it mandatory 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, 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). More than 2 lakh candidates have taken tests of different modules of NCFM as at end June 2005.

Table 8.1: NCFM Modules

Sl. No.	Name of Modules
1.	Derivatives Core Module
2.	NSDL - Depository Operations Module
3.	Surveillance in Stock Exchanges Module
4.	AMFI - Mutual Funds (Advisors) Module
5.	AMFI - Mutual Funds (Basic) Module
6.	Capital Market (Dealers) Module
7.	FIMMDA - NSE Debt Market (Basic) Module
8.	Securities Market (Basic) Module
9.	Commodities Market Module

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. Thus, it is required that all new employees joining the intermediaries and all intermediaries joining the market, should be certified. 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

Knowledge management is very important in today's competitive world. It acts as a tool which helps to acquire the cutting edge in a globalised financial market. 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., Security Market and Poverty Alleviation, IPO Pricing by Dutch Auction System, Regulatory Framework of Debt Market and Capital Structure Theories.*

Table 8.2: Research Outputs and Working Papers of SEBI

Sl. No.	Title of Study
1.	Securities Market and Poverty Alleviation
2.	IPO pricing by Dutch Auction System
3.	Regulatory Framework of Debt Market
4.	Capital Structure Theories
5.	Market for Corporate Control and Takeover Regulations: Trends and Analysis
6.	Stock Market Volatility: An International Comparison
7.	Transaction Cost for Equity Shares in India
8.	Stock Market Volatility-A Comparative Study of Selected Markets
9.	Transaction Cost for Equity Shares in India (Revised)
10.	Dematerialisation: A Silient Revolution in the Indian Capital Market
11.	Impact of Takeover Regulations on Corporate Sector in India - A Critical Appraisal
12.	Trade Execution Cost of Equity Shares in India
13.	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 research initiative are presented in table 8.3.

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

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Table 8.3: Studies under the NSE Research Initiative

Sl. No.	Title of Study
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
33.	Insider Ownership, Corporate Governance and Corporate Performance
34.	Improving Index Fund Implementation in India
35.	Seasoned Capital Offerings: Earnings Management and Long-Run Operating Performance of Indian Firms
36.	Volatility Spillovers Across Stock, Call Money And Foreign Exchange Markets
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

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Table 8.3: Studies under the NSE Research Initiative

Sl. No.	Title of Study
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
13.	A New Approach for Measuring Value-at-Risk for Fixed Income Portfolios – Proposal
14.	On The New Transformation-Based Approach To Measuring Value-At-Risk: An Application To Forex Market In India
15.	Understanding the Microstructure in Indian Markets
16.	Monetary Policy and the Term Structure of Interest Rates: The Case of India
17.	Forecasting Volatility in Indian Stock Market Using Volatility Index– An Exploratory Study
18.	Evaluating Corporate Governance Risk: A Fuzzy logic approach
19.	Lead-Lag relationship between Equities and Stock Index Futures Market and its variation around Information Release: Empirical Evidence from India
20.	The Effect of Board Composition and Ownership Structure on Firm Performance:Evidence from India

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.

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 also is 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 associations need to take steps to educate the investors. SEBI launched a comprehensive education campaign which aimed at investors in securities market, which has been christened – "Securities Market Awareness Campaign". The motto of this campaign is – *"An Educated Investor is a Protected Investor"*. Following the national launch, the campaign has already been extended to 20 states and Union territories. Approximately 2,000 workshops spread around 480 cities were held during the fiscal 2004-05. 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. The following Investors Associations are 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 and 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 all the 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 also has a 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. In the year 2004-05 approximately 200 seminars/workshops have been conducted in three states *viz.,* Uttar Pradesh, Madhya Pradesh and Kerala.

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. This system is being introduced in phases and is applicable to 2,583 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. EDIFAR is available at http://sebiedifar.nic.in.

NOTES

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