Ind. Sec. Mkt. Rev. (2002) http://www.nseindia.com

Securities Market in India – An Overview

Introduction

The securities markets in India witnessed several policy initiatives during the year 2001-02, which further refined the market micro-structure, modernised operations and broadened investment choices for investors. The irregularities in the securities transactions in the last quarter of the previous financial year hastened the introduction and implementation of several reforms. While a Joint Parliamentary Committee was constituted to go into the irregularities and manipulations in transactions relating to securities, decisions were taken to complete the process of demutualisation and corporatisation of stock exchanges to implement the decision to separate ownership, management and operation of stock exchanges and to effect legislative changes for investor protection, and to enhance the effectiveness of SEBI as the capital market regulator. Rolling settlement on T+5 basis was introduced in respect of most active 251 securities from July 2, 2001 and in respect of balance securities from December 31, 2001. Rolling settlement on T+3 basis commenced for all listed securities from April 1, 2002. All deferral products such as carry forward were banned from July 2, 2002. Trading in index options commenced in June 2001 and trading in options on individual securities commenced in July 2001. Futures contracts on individual stock were launched in November 2001. The year 2001-02 has also been most eventful for debt markets in India, with implementation of several important decisions like setting up of a clearing corporation for government securities, a negotiated dealing system to facilitate transparent electronic bidding in auctions and secondary market transactions on a real time basis and dematerialisation of debt instruments. These reforms, other market developments and ongoing policy debates have been discussed in detail in the following chapters. This chapter, however, takes a review of the stock market developments during 1990s. These developments in the securities market, which support corporate initiatives and facilitate management of financial risk, hold out necessary impetus for growth, development and strength of the emerging market economy of India.

Products and Participants

Transfer of resources from those with idle resources to others who have a productive need for them is perhaps most efficiently achieved through the securities markets. Stated formally, securities markets provide channels for allocation of savings to investments and thereby decouple these two activities. As a result, the savers and investors are not constrained by their individual abilities, but by the economy's abilities to invest and save respectively, which inevitably enhances savings and investment in the economy.

Savings are linked to investments by a variety of intermediaries through a range of complex financial products called "securities" which is defined in the Securities Contracts (Regulation) Act, 1956 to include shares, bonds, scrips, stocks or other marketable securities of like nature in or of any incorporate company or body corporate, government securities,

PANTONE S212-1

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. There are a set of economic units who demand securities in lieu of funds and others who supply securities for funds. These demand for and supply of securities and funds determine, under competitive market conditions in both goods and securities market, the prices of securities which reflect the present value of future prospects of the issuer, adjusted for risks and also prices of funds.

It is not that the users and suppliers of funds meet each other and exchange funds for securities. It is difficult to accomplish such double coincidence of wants. The amount of funds supplied by the supplier may not be the amount needed by the user. Similarly, the risk, liquidity and maturity characteristics of the securities issued by the issuer may not match preference of the supplier. In such cases, they incur substantial search costs to find each other. Search costs are minimised by the intermediaries who match and bring the suppliers and users of funds together. These intermediaries may act as agents to match the needs of users and suppliers of funds for a commission, help suppliers and users in creation and sale of securities for a fee or buy the securities issued by users and in turn, sell their own securities to suppliers to book profit. It is, thus, a misnomer that securities market disintermediates by establishing a direct relationship between the savers and the users of funds. The market does not work in a vacuum, it requires services of a large variety of intermediaries. The disintermediation in the securities market is in fact an intermediation with a difference, it is a risk-less intermediation, where the ultimate risks are borne by the savers and not the intermediaries. A large variety and number of intermediaries provide intermediation services in the Indian securities market as may be seen from Table 1-1.

The securities market, thus, has essentially three categories of participants, namely the issuers of securities, investors in securities and the intermediaries and two

Table 1-1: Market Participants in Securities Market

Market Participants	Number as on	
	March 31, 2001	March 31, 2002
Securities Appellate Tribunal	1	1
Regulators*	4	4
Depositories	2	2
Stock Exchanges		
With Equities Trading	23	23
With Debt Market Segment	1	2
With Derivative Trading	2	2
Listed Securities	9,922	9,644
Brokers	9,782	9,687
Corporate Brokers	3,808	3,862
Sub-brokers	9,957	12,208
FIIs	527	490
Portfolio Managers	39	47
Custodians	14	12
Share Transfer Agents	186	161
Primary Dealers	15	18
Merchant Bankers	233	145
Bankers to an Issue	69	68
Debenture Trustees	37	40
Underwriters	57	54
Venture Capital Funds	35	34
Foreign Venture Capital Investors	1	2
Mutual Funds	39	37
Collective Investment Schemes	4	6

* DCA, DEA, RBI & SEBI.

categories of products, namely the services of the intermediaries, the securities, including derivatives. The issuers and investors are the consumers of services rendered by the intermediaries while the investors are consumers (they subscribe for and trade in securities) of securities issued by issuers. In pursuit of providing a product to meet the needs of each investor and issuer, the intermediaries churn out more and more complicated products. They educate and guide them in their dealings and bring them together. Those who receive funds in exchange for securities and those who receive securities in exchange for funds often need the reassurance that it is safe to do so. This reassurance is provided by the law and by custom, often enforced by the regulator. The regulator develops fair market practices and regulates the conduct of issuers of securities and the intermediaries so as to protect the interests of suppliers of funds. The regulator ensures a high standard of service from intermediaries and supply of quality securities and non-manipulated demand for them in the market.

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 sale of new securities while the secondary market deals in securities previously issued. The price signals, which subsume all information about the issuer and his business including associated risk, generated in the secondary market, help the primary market in allocation of funds. The issuers of securities issue (create and sell) new securities in the primary market to raise funds for investment and/or to discharge some obligation. They do so either through public issues or private placement. It is a public issue if any body and everybody can subscribe for the securities. If the issue is made to select people, it is called private placement. In terms of the Companies Act, 1956, an issue becomes public if it results in allotment to more than 50 persons. This means an issue resulting in allotment to less than 50 persons is private placement. There are two major types of issuers who issue securities. The corporate entities issue mainly debt and equity instruments (shares, debentures, etc.), while the governments (central and state governments) issue debt securities (dated securities, treasury bills).

The secondary market enables participants who hold securities to adjust their holdings in response to changes in their assessment of risk and return. They also sell securities for cash to meet their liquidity needs. The secondary market has further two components, namely the over-the-counter (OTC) market and the exchange-traded market. OTC is different from the market place provided by the Over The Counter Exchange of India Limited. OTC markets are essentially informal markets where trades are negotiated. Most of the trades in 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 exchanges do not provide facility for spot trades in a strict sense. Closest to spot market is the cash market where settlement takes place after some time. Trades taking place over a trading cycle, i.e. a day under rolling settlement, are settled together after a certain time (currently 3 working days). All the 23 stock exchanges in the country provide facilities for trading of equities. Trades executed on the leading exchange (National Stock Exchange of India Limited (NSE)) are cleared and settled by a clearing corporation which provides novation and settlement guarantee. Over 99% of the trades settled by delivery are settled in demat form. NSE also provides a formal trading platform for trading of a wide range of debt securities including government securities. A variant of secondary market is the forward market, where securities are traded for future delivery and payment. Pure forward is out side the formal market. The versions of forward in formal

market are futures and options. In futures market, standardised securities are traded for future delivery and settlement. These futures can be on a basket of securities like an index or an individual security. In case of options, securities are traded for conditional future delivery. There are two types of options – a put option permits the owner to sell a security to the writer of options at a predetermined price while a call option permits the owner to purchase a security from the writer of the option at a predetermined price. These options can also be on individual stocks or basket of stocks like index. Two exchanges, namely NSE and the Stock Exchange, Mumbai (BSE) provide trading of derivatives of securities.

A Profile

The past decade in many ways has been remarkable for securities market in India. It has grown exponentially as measured in terms of amount raised from the market, number of stock exchanges and other intermediaries, the number of listed stocks, market capitalisation, trading volumes and turnover on stock exchanges, and investor population. Along with this growth, the profiles of the investors, issuers and intermediaries have changed significantly. The market has witnessed fundamental institutional changes resulting in drastic reduction in transaction costs and significant improvements in efficiency, transparency and safety.

International Scenario

Reforms in the securities market, particularly the establishment and empowerment of SEBI, market determined allocation of resources, screen based nation-wide trading, dematerialisation and electronic transfer of securities, rolling settlement and ban on deferral products, sophisticated risk management and derivatives trading, have greatly improved the regulatory framework and efficiency of trading and settlement. Indian market is now comparable to many developed markets in terms of a number of qualitative parameters.

As may be seen from Table 1-2, there are very few countries, which have higher turnover ratio than India. At the end of 2001, Standard and Poor's (S&P) ranked India 25th in terms of market capitalisation, 15th in terms of total value traded in stock exchanges and 6th in terms of turnover ratio. Except for USA, India has highest number of securities listed on exchanges. 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 9,644 listed companies at the end of March 2002, while S&P considers only 5,795 companies. If whole market is taken into consideration, India's position vis-à-vis other countries would look much better.

The stock markets worldwide have grown in size as well as depth over last one decade. Tables 1-3 and 1-4 present select indicators for major markets. As can be observed

Table 1-2: International Comparison: end December 2001

Particulars	USA	UK	Japan	Germany	Singapore	Hongkong	China	India
No. of listed Companies	6,355	1,923	2,471	988	386	857	1,160	5,795
Market Capitalisation ($ Bn.)	13,810	2,217	2,252	1,072	117	506	524	110
Market Capitalisation Ratio (%)	143.8	151.9	49.8	51.9	118.0	287.3	49.3	24.3
Turnover ($ Mn.)	29,041	1,872	1,826	1,420	63	196	449	249
Turnover Ratio (%)	201.3	78.4	67.9	124.7	46.9	34.8	81.3	191.4

Source: S&P Emerging Stock Market Factbook, 2002.

from Table 1-3, the turnover on all markets taken together has grown nearly nine times from US $ 5.5 trillion in 1990 to US $ 48 trillion in 2000 before depleting to about $42 trillion in 2001. The turnover in developed markets has, however, grown more sharply than that in emerging markets. It is significant to note that US alone accounted for about 70% of worldwide turnover in 2001. Despite having a large number of companies listed on its stock exchanges, India accounted for a meagre 0.59% in total turnover in 2001 down from 1.06% in 2000. The market capitalisation of all listed companies taken together on all markets increased by 245% from US$ 9.3 trillion as at end-1990 to US$ 32 trillion as at end-2000, but fell to about $28 trillion in end-2001. The share of US in worldwide market capitalisation increased from 32.5% as at end-1990 to 49.6% as at end-2001 while Indian listed companies accounted for 0.4% of total market capitalisation.

There has also been an increase in market capitalisation as per cent of GDP in all

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

(US $ million)

Country/Region	Market Capitalisation (end of period)			Turnover		
	1990	2000	2001	1990	2000	2001
Developed Markets	**8,795,239**	**29,614,264**	**25,246,554**	**4,616,473**	**43,912,999**	**39,676,018**
Australia	108,879	372,794	374,269	40,113	226,325	240,667
Japan	2,917,679	3,157,222	2,251,814	1,602,388	2,693,856	1,826,230
UK	848,866	2,576,992	2,217,324	278,740	1,835,278	1,871,894
USA	3,059,434	15,104,037	13,810,429	1,751,252	31,862,485	29,040,739
All Emerging Markets	**604,420**	**2,608,486**	**2,572,064**	**898,233**	**3,956,869**	**2,400,844**
China	-	580,991	523,952	-	721,538	448,928
India	38,567	148,064	110,396	21,918	509,812	249,298
Indonesia	8,081	26,834	23,006	3,992	14,311	9,667
Korea	110,594	148,649	220,046	75,949	1,067,669	703,960
Malaysia	48,611	116,935	120,007	10,871	58,500	20,772
Philippines	5,927	51,554	41,523	1,216	8,196	3,148
Taiwan	100,710	247,602	292,621	715,005	983,491	544,808
World Total	**9,399,659**	**32,222,750**	**27,818,618**	**5,514,706**	**47,869,867**	**42,076,862**
US as % of World	**32.55**	**46.87**	**49.64**	**31.76**	**66.56**	**69.02**
India as % of World	**0.41**	**0.46**	**0.40**	**0.40**	**1.06**	**0.59**

Source: S&P Emerging Stock Market Factbook, 2002.

Table 1-4: Select Stock Market Indicators

Markets	Market Capitalisation as % of GDP		Turnover Ratio (%)		Listed Domestic Companies	
	1990	2000	1990	2001	1990	2001
High Income	**51.7**	**120.6**	**59.5**	**129.9**	**17,078**	**25,548**
Middle Income	**21.2**	**41.2**	**78.3**	**84.9**	**4,900**	**15,364**
Low & Middle Income	**19.9**	**38.7**	**70.7**	**90.1**	**8,346**	**23,097**
East Asia & Pacific	21.3	48.3	117.2	149.9	1,443	3,486
Europe & Central Asia	2.1	20.5	-	83.1	110	8,220
Latin America & Caribbean	7.6	34	29.7	26.9	1,734	1,567
Middle East & N. Africa	27.8	34.8	-	22.3	817	1,596
South Asia	10.8	27	54.0	161.6	3,231	7,159
Sub-Saharan Africa	51.9	102.3	-	22.5	1,011	1,069
Low Income	**9.8**	**23.6**	**53.8**	**121.3**	**3,446**	**7,733**
India	**12.2**	**32.4**	**65.9**	**191.4**	**2,435**	**5,795**
World	**48.0**	**105.1**	**57.2**	**122.3**	**25,424**	**48,645**

Source: World Development Indicators 2002, World Bank.

major country groups as is evident from Table 1-4. The increase has, however, not been uniform across countries. As expected, the market capitalisation as per cent of GDP was the highest at 120.6% for high-income countries as at end-2000 and lowest for low-income countries at 23.6%. Market capitalisation as per cent of GDP for India stood at 32.4% as at end-2000. The turnover ratio, which is a measure of liquidity, was lower for low-income countries at 121.3% in 2001 as compared to 129.9% for high-income countries. The corresponding figure for India was only 191.4%. The total number of listed companies stood at 25,548 for high-income countries, 15,364 for middle-income countries and 7,733 for low-income countries as at end-2001. The number of listed companies in India was 5,795 as at end-2001. It may, however, be noted that these figures differ from the similar figures presented in this chapter and also in other chapters, as the coverage of international publications differ from one another.

Dependence on Securities Market

Three main sets of entities depend on securities market. While the corporates and governments raise resources from the securities market to meet their obligations, the households invest their savings in the securities.

Corporate Sector: The 1990s witnessed emergence of the securities market as a major source of finance for trade and industry. A growing number of companies are accessing the securities market rather than depending on loans from FIs/banks. The corporate sector is increasingly depending on external sources for meeting its funding requirements. There appears to be growing preference for direct financing (equity and debt) to indirect financing (bank loan) within the external sources. According to CMIE data (Table 1-5), the share of capital market based instruments in resources raised externally increased to 53% in 1993-94, but declined thereafter to 31% by 2000-01.

Table 1-5: Dependence on Securities Market

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

Source: Economic Intelligence Service - Corporate Sector, CMIE & RBI.

The listing agreements have been amended recently requiring the companies to disclose shareholding pattern on a quarterly basis. Table 1-6 presents sector-wise shareholding pattern of companies listed on NSE. It is observed that on an average the promoters hold nearly 51% of total shares. Though the non-promoter holding is about 49%, Indian

public held only 17.3% and the public float (holding by FIIs, MFs, Indian public) is at best 32%. There is not much difference in the shareholding pattern of companies in different sectors. Strangely, 63% of shares in companies in media and entertainment sector are held by private corporate bodies though the requirement of public offer was relaxed to 10% for them. The promoter holding is not strikingly high in respect of companies in the IT and telecom sectors where similar relaxation was granted. The table reveals the preference of different kinds of investors for companies in different sectors.

Governments: Along with increase in fiscal deficits of the governments, the dependence on market borrowings to finance fiscal deficits has increased over the years. 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 (Table 1-5). In percentage terms, dependence of the state governments on market borrowing did not increase much during the decade 1991-2001. In case of central government, it increased to 69.4% by 2001-02. The central government and the state governments together borrowed Rs. 110,510 crore from market during 2001-02 against Rs. 10,557 crore in 1990-91.

Households: According to RBI data, household sector accounted for 89% of gross domestic savings during 2000-01, 53% of their savings were in financial assets. They invested 44% of financial savings in deposits, 34% in insurance/provident funds, 12% on small savings, and 4% in securities, including government securities and units of mutual funds during 2000-01 (Table 1-7). Thus the fixed income bearing instruments are the most preferred assets of the household sector. Their share in total financial savings of the household sector witnessed an increasing trend in the recent past and is estimated at 89.4% in 2000-01. In contrast, the share of financial savings of the household sector in securities (shares, debentures, public sector bonds and units of UTI and other mutual funds and government securities) is estimated to have gone down from 22.9% in 1991-92 to 4.3% in 2000-01.

Though there was a major shift in the saving pattern of the household sector from physical assets to financial assets and within financial assets, from bank deposits to securities, the trend got reversed in the recent past due to high real interest rates, prolonged subdued conditions in the secondary market, lack of confidence by the issuers in the success of issue process as well as of investors in the credibility of the issuers and the systems and poor performance of mutual funds. The portfolio of household sector remains heavily weighted in favour of physical assets and fixed income bearing instruments.

The disenchantment of household sector with securities is confirmed by the SEBI-NCAER survey (June 2000), which found that only 2.8% of investment of all households were in securities (1.4% in equity shares, 1.3% in mutual funds and 0.4% in debentures), while the remaining 97% in non-securities, indicating low priority of investor for securities. Despite the expansion of the securities market, a very small percentage of household savings is channelised into the securities market. What is of further worry is the intention revealed in the survey that majority of existing shareholders are unlikely to invest in the securities market in the next year. 56% of urban and 72% of rural households are unlikely to make fresh investments in equity shares. This indicates a lack of confidence by the investors in the securities market.

Investor Population

The Society for Capital Market Research and Development carries out periodical surveys of household investors to estimate the number of investors. Their first survey carried out in 1990 placed the total number of share owners at 90-100 lakh. Their second survey

Table 1-6: Shareholding Pattern at the end of March 2002 of Companies Listed on NSE

(In per cent)

Sectors	Non-Pomoters' Holding							Promoters' Holding		
	Institutional Investors			Non - Institutional Investors						
	FIs	FIIs	MFs	Indian Public	NRIs/ OCBs	Private Corporate Bodies	Others	Indian Promoters	Foreign Promoters	Persons Acting in Concert
Finance	15.72	5.77	2.80	20.01	1.03	4.69	4.80	43.36	0.81	1.02
FMCG	9.42	11.37	4.05	21.31	3.60	1.50	0.22	6.78	41.03	0.73
Infrastructure	20.91	3.55	5.88	22.95	1.33	11.43	2.88	29.39	0.73	0.96
IT	1.56	8.59	3.68	22.41	2.11	15.16	4.04	36.14	3.13	3.19
Manufacturing	7.65	2.89	4.73	14.24	1.45	3.45	2.03	53.80	7.64	2.13
Media & Entertainment	0.15	1.95	0.58	27.06	0.19	63.19	0.25	4.44	2.17	0.00
Petrochemicals	5.89	4.55	6.10	17.39	0.53	3.17	2.03	46.68	0.96	12.70
Pharmaceuticals	7.86	4.09	4.30	21.92	6.89	4.97	2.78	37.84	7.32	2.02
Services	7.40	2.44	4.75	18.89	2.04	4.99	3.57	49.14	4.49	2.28
Telecommunications	7.88	10.12	4.23	5.27	18.11	3.47	0.69	39.53	10.36	0.35
Miscellaneous	7.40	0.96	1.49	22.51	3.74	9.10	1.25	47.67	2.06	3.82
All Companies	**7.86**	**4.65**	**4.12**	**17.31**	**2.66**	**10.22**	**2.18**	**41.29**	**6.45**	**3.26**

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

(In per cent)

Financial Assets	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
Currency	**10.6**	**12.0**	**8.2**	**12.2**	**10.9**	**13.3**	**8.6**	**7.4**	**10.4**	**8.6**	**6.4**
Fixed income investments	**74.9**	**65.1**	**74.6**	**73.9**	**77.0**	**79.1**	**84.5**	**88.0**	**85.3**	**84.2**	**89.4**
Deposits	33.3	28.9	42.5	42.6	45.5	42.5	48.1	46.6	39.2	39.2	44.3
Insurance/Provident/ Pension Funds	28.4	28.6	27.2	25.4	22.5	29.2	29.4	30.1	33.3	34.0	33.5
Small Savings	13.2	7.6	4.9	5.9	9.0	7.4	7.0	11.3	12.8	11	11.6
Securities Market	**14.4**	**22.9**	**17.2**	**14.0**	**12.1**	**7.7**	**6.9**	**4.5**	**4.2**	**7.3**	**4.3**
Mutual Funds	9.1	16.4	8.6	5.5	3.8	0.5	2.7	1.4	1.9	4.9	1.3
Government Securities	0.2	-0.4	0	0.4	0.1	0.4	0.4	1.6	0.6	0.9	1.6
Other Securities	5.1	6.9	8.6	8.1	8.2	6.8	3.8	1.5	1.7	1.5	1.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: RBI.

estimated the number of share owners at around 140-150 lakh as of mid-1993. Their latest survey estimates the number of shareowners at around 2 crore at 1997 end, after which it remained stagnant upto the end of 1990s. The bulk of increase in number of investors took place during 1991-94 and tapered off thereafter. 49% of the share owners at the end of 2000 had, for the first time, entered the market before the end of 1990, 44% entered during 1991-94, 6.3% during 1995-96 and 0.8% since 1997. The survey attributes such tapering off to persistent depression in the share market and investors' bad experience with many unscrupulous company promoters and managements.

According to the SEBI- NCAER survey of Indian investors conducted in early 1999, an estimated 12.8 million, or 7.6%, of all Indian households representing 19 million individuals had directly invested in equity shares and or debentures as at the end of financial year 1998-99. The investor households increased at a compound growth rate of 22%, between 1985-86 and 1998-99. There was a sharper rise in investor households between 1991-92 and 1998-99 than between 1985-86 and 1991-92. About 35% of investor households became investors in equity shares prior to 1991, while 47% of the investors entered the market between 1991 and 1995 and 17% after 1995. More than 156 million, or 92%, of all Indian households were non-investor households who did not have any investments in equity/debentures. Low per capita income, apprehension of loss of capital, and economic insecurity, which are all inter-related factors, significantly influenced the investment attitude of the households. The lack of awareness about securities market and absence of a dependable infrastructure and distribution network coupled with aversion to risk inhibited non-investor households from investing in the securities market.

An estimated 15 million, or nearly 9%, of all households representing at least 23 million unit holders had invested in units of mutual funds. Total investible resources of mutual funds account for about 23% of market capitalisation compared to more than 50% in developed countries. The mutual funds have not yet become an attractive investment avenue for the low and middle-income groups.

Distribution of Investors: According to SEBI-NCAER survey, of the 48 million urban households, an estimated 8.8 million households, or 18%, representing approximately 13 million urban investors owned equity shares and/or debentures. Of the 121 million rural households, only about 4 million households, or 3%, representing nearly 6 million rural investors owned these instruments. The rural investor households have increased at a compound growth rate of 30% compared to 19% for urban investor households. The Society for Capital Market Research & Development estimates that 15% of urban households and only 0.5-1.0% of semi-urban and rural households own shares. It is estimated that 4% of all households own shares.

An indirect, but very authentic source of information about distribution of investors is the data base of beneficial accounts with the depositories. By February 2002, there were 4 million beneficial accounts with the National Securities Depository Limited (NSDL). The state-wise distribution of beneficial accounts with NSDL is presented in Table 1-8. As expected Maharastra and Gujarat account for nearly 50% of total beneficial accounts.

Investors' Perception

SEBI-NCAER Survey: According to the survey, safety and liquidity are the primary considerations that determine the choice of an asset. Ranked by an ascending order of risk perception, bank fixed deposits were considered very safe, i.e., least risky, followed by gold, units of UTI-US 64, UTI- other schemes, fixed deposits of non-government

Table 1-8: Distribution of Beneficial Accounts with NSDL at the end of February 2002

Sl. No.	States/Union Territories	Beneficial Accounts Number	Beneficial Accounts % to Total
1	Andhra Pradesh	206,757	5.17
2	Assam	9,079	0.23
3	Bihar	44,574	1.11
5	Delhi	367,377	9.18
6	Goa	12,888	0.32
7	Gujarat	709,719	17.74
8	Haryana	45,133	1.13
9	Himachal Pradesh	3,228	0.08
10	Jammu & Kashmir	3,590	0.09
12	Karnataka	240,007	6.00
13	Kerala	94,281	2.36
14	Madhya Pradesh	73,714	1.84
15	Maharashtra	1,238,500	30.96
16	Orissa	14,969	0.37
17	Punjab	50,116	1.25
18	Rajasthan	79,157	1.98
19	Tamil Nadu	264,943	6.62
21	Uttar Pradesh	209,632	5.24
22	West Bengal	320,216	8.00
23	Others	12,426	0.31
Total		**4,000,306**	**100.00**

Source: NSDL.

companies, mutual funds, equity shares and debentures. Debentures were perceived to be as risky as equity. About 65% of all households and 76% of investor households consider bank fixed deposits as very safe. 30% of all households and 37% of investor households regard gold as very safe. About 26% of all households and 32% of investor households consider investment in equity as risky. Table 1-9A presents distribution of investor households in terms of their risk perception of different instruments.

The distribution of investments of all households into different financial instruments corresponds to their risk perception, i.e. higher proportion of households invest in instruments with a lower risk perception. For example, 76% of all households invested in fixed deposits, while 65% of all households consider fixed deposits to be very safe. It is clear from Table 1-9B that fixed deposits with banks, post office, government and non-government undertakings, NBFCs and term lending institutions are the most preferred choice of investors. About three-fourth of households own a fixed deposit. 45% of the households have invested in fixed deposits with banks and post offices, 17% each in fixed deposits with government undertakings and non-government undertakings, 7% in NBFCs and 2% in term-lending institutions. The second preference is the recurring deposits of banks and post offices, where 45% of households have invested. LIC policy is another preferred investment instrument for 39% of households, while 27% of households have invested in small savings instruments. This brings out the importance of distribution network. Banks and post offices have wide network of branches and are in a better position to garner a large chunk of savings of households.

About 80% of equity investor households were the first generation investors. Majority of equity owning households have inadequate diversification of portfolio. About 23% of the households have invested in one company, 38% in two companies, while only

Table 1-9A: Percentage Distribution of Risk Perception in Various Instruments

Instruments	All Households					Investor Households				
	Very Safe	Resasonably Safe	Somewhat Safe	Risky	No Opinion	Very Safe	Resasonably Safe	Somewhat Safe	Risky	No Opinion
UTI - US64	10.62	9.97	11.97	11.18	56.25	25.39	25.98	10.76	8.07	29.80
UTI – Other Schemes	7.07	11.12	8.59	12.78	60.44	17.18	24.92	15.31	11.89	30.70
Mutual Fund - Public Sector	4.15	9.44	9.34	16.42	60.65	11.92	20.67	15.83	16.79	34.79
Mutual Fund - Private Sector	1.84	5.72	9.58	21.78	61.09	4.71	12.34	18.19	26.13	28.64
Fixed Deposits - Banks	64.91	15.00	2.83	3.60	13.67	76.49	15.19	2.41	1.81	4.10
Fixed Deposits - Non-Govt. Cos.	6.15	11.84	12.95	28.32	40.75	13.46	20.28	21.25	25.92	19.09
Fixed Deposits - NBFCs	2.71	8.68	10.74	30.37	47.52	8.44	13.81	17.64	32.95	27.17
Equity Shares	2.06	6.91	8.06	25.53	57.44	10.22	23.97	18.69	31.78	15.33
Convertible Debentures	2.07	4.85	6.67	20.81	65.60	7.83	14.37	19.99	23.55	34.26
Non-Convertible Debentures	1.24	4.22	7.34	20.69	66.52	5.55	11.96	20.11	26.07	36.31
Chit Fund	2.43	4.99	6.87	27.38	58.34	4.54	9.89	12.95	35.20	37.43
Gold	30.07	19.23	7.04	13.00	30.66	36.54	25.97	11.50	11.94	14.05

Source: SEBI-NCAER Survey of Indian Investors, June 2000.

Table 1-9B: Distribution of Households by Instruments

(In per cent)

Instruments	All India	Urban	Rural
UTI Schemes	8.45	19.52	4.05
Other MFs	5.45	12.02	2.84
Fixed Deposits	76.23	83.89	73.18
Bonds	6.21	11.56	4.08
Provident Fund	20.92	40.24	13.24
Life Insurance	39.21	57.31	32.01
Chit Funds	5.94	9.51	4.52
Post Office RDs	44.73	40.77	46.3
Small Savings	27.46	35.98	24.07
Preference Shares	2.63	6.59	1.06
Others	8.75	11.85	7.52

Source: SEBI-NCAER Survey of Indian Investors, June 2000.

about 5% in more than five companies. These data indicate lack of experience in stock market operations. Out of 12.1 million equity investor households, 84% have invested in equity shares through the primary market, and 63% have bought equity shares in the secondary market. It has been estimated that 16% of equity investor households have invested only through the secondary market, 37% invested only through the primary market and 47% invested through both the primary and secondary markets. Difficulties faced by households in investing through secondary market-lack of easy access to the market, inadequacy of the market infrastructure, problems in locating the right intermediary, lack of guidance and advice-inhibited the households from investing in the secondary market. The number of broker related problems is higher than the number of issuer related problems.

SCMRD Survey: An all-India survey of household investors, conducted by the Society for Capital Market Research and Development (SCMRD) during April–June 2001, has thrown up some interesting findings. These findings can be helpful in understanding the recent changes in the household investors' general attitude towards participation in the equity market and also their problems.

General Image: Table 1-10A brings out the general image of the stock market among household investors. It found that only 18.1% of the respondents taken as a whole viewed the Indian stock market as a "good place for long-term investment" and 44% of them regarded it as "a place where a majority of people are likely to lose money". About one-third of the respondents regard the stock market as "suitable for knowledgeable investors only."

Perceptions about Instruments: Table 1-10B shows how the respondents perceived the various types of capital market instruments. It brings out that only about 29% of the respondents regarded IPOs as "reasonably good long-term investment". The corresponding percentage for shares purchased from the secondary market was much higher at 39%. A decade ago, the position was just the reverse. The IPOs have gone down in the investors' preference, while the attraction of shares purchased from the secondary market has gone up. The reforms of the secondary market have made it a safer place but the new issue market is perceived as much riskier than before.

Mutual fund (MF) equity schemes were regarded as "reasonably good long-term investment" by an average of 40% of respondents, varying in the range of 31-44% among the income classes. This percentage for MF equity schemes is not significantly higher

Table 1-10A: Income-Class wise Distribution of Respondents who had the Particular Mental Image about the Indian Stock Market

(% of respondents)

Mental Image Category	Household Income (Rs. per month)					
	Upto 10,000	10,001– 15,000	15,001– 20,000	20,001- 25,000	Over 25,000	All classes
Good place for long-term investment	17.52	20.00	17.72	17.72	17.78	18.08
A place where a majority of people are likely to lose money	45.26	36.80	46.53	43.04	54.44	44.26
A place suitable for knowledgeable investors only	37.96	33.60	30.69	35.44	23.33	33.21
A place for making quick money	14.60	12.80	12.87	6.33	7.78	11.44
Any other (unclassified)	1.46	4.00	6.93	8.86	4.44	4.61
All categories	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
No. of respondents analysed	**137**	**125**	**101**	**79**	**90**	**542***

* This includes 10 respondents who had not mentioned their income class and who are, therefore, not included under any of the income classes.

Note: Actual column total of percentages exceeds 100 because many respondents have ticked more than one category.

Table 1-10B: Income-Class wise Percentage of Respondents who regarded the Particular Investment Category as "Reasonably Good Long-Term Investments"

(% of respondents)

Investment Category	Household Income (Rs. per month)					All classes
	Upto 10,000	10,001- 15,000	15,001- 20,000	20,001- 25,000	Over 25,000	
IPOs (Initial Public Offers)	22.63	24	24.75	32.91	33.33	28.71
Shares purchased in the market	41.61	35.2	31.68	31.65	44.44	39.14
MF Equity Schemes	33.58	44.8	41.58	31.65	36.67	40.35
MF Income Schemes	47.45	62.4	54.46	45.57	51.11	56.24
Index Funds	16.79	16	12.87	18.99	16.67	17.71
Debentures of non-govt companies	20.44	26.4	33.66	31.65	24.44	28.43
All respondents	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Absolute number of respondents analysed	**137**	**125**	**101**	**79**	**90**	**542***

* This includes 10 respondents who had not mentioned their income-class and who are, therefore, not included under income-class wise analysis.

Note: Actual column total of percentages exceeds 100 because several respondents have ticked against more than one category.

than the percentage for equity shares held directly. In other words, MF equity schemes do not command any better image or "rating" among investors than direct equity holding. This means that investors are not impressed by the often-repeated claim of mutual funds that they provide a superior return due to professional management and diversification. However, MF *income* schemes were regarded by every class of investors as substantially better than equity shares directly held as also compared to MF equity schemes. Among capital market instruments, the MF income schemes were regarded as the best.

Investment Intentions: Respondents intending to invest in "new share issues" were much fewer than those intending to buy shares from the secondary market, the respective percentages being 16% and 41% (Table 1-10C). It implies that there is a decline in the

capital-raising role of the market. Household investors have largely withdrawn from the new issue market. Earlier, during the 1980s and early 1990s, new issue subscription was the favourite and the dominant form of household investor's participation in the share market. However, since the mid-1990s, the raising of new money from capital market through prospectus and rights issues of shares and debentures has sharply declined. More recently, household investors have increasingly taken to secondary market purchases. Such purchases represent transfers of existing securities from one set of households to another without providing any finance to the companies.

Table 1-10C: Investment Intentions: Percentage of Respondents who intended to invest in the various Investment Categories during next 12 months

Investment Category	Percent of respondents
Tax-saving (infrastructure) bonds	52.21
Buying shares from the market	40.59
Tax-free bonds of govt. cos.	29.52
Tax-saving mutual fund schemes (i.e. equity-linked saving schemes)	25.46
9% Tax-free RBI Bonds	22.51
Mutual fund income schemes	19
UTI US-64 units	18.08
New share issues	16.05
Mutual fund equity schemes	14.76
Debentures of non-govt. cos.	8.67
Mutual fund balanced schemes	6.27
Gilt funds	5.54
Index funds	4.8
Total no. of respondents analysed	**542**

Note: Actual column total of percentages exceeds 100 because several respondents have ticked against more than one category.

Investors' Concerns: Table 1-10D indicates investors' single most important concern or worry about the stock market. The topmost concerns of investors are: (a) too much price manipulation, and (b) too much price volatility. Nearly 62% of the respondents indicated

Table 1-10D: Income-Class wise Analysis of Investors' Most Important Concerns

(% of respondents)

Investment Category	Household Income (Rs. per month)					All classes
	Upto 10,000	10,001-15000	15,001-20000	20,001-25000	Over 25000	
Too much volatility	31.39	32.80	24.75	30.38	26.67	30.00
Too much price manipulation	23.36	30.40	31.68	31.65	38.89	31.70
Fraudulent promoters/managements	19.71	20.00	18.81	13.92	11.11	17.40
Too much insider trading	10.22	8.00	11.88	16.46	8.89	10.80
Lack of broker's reliability	10.22	6.40	10.89	7.59	5.56	8.70
Any other (unclassified)	5.10	2.40	1.99	0.00	8.88	1.51
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
No. of respondents analysed	**137.00**	**125.00**	**101.00**	**79.00**	**90.00**	**542***

* This includes 10 respondents who had not mentioned their income-class and who are, therefore, not included under any of the income classes.

one or the other of these two concerns. These concerns are inter-related because price manipulation increases the market volatility.

Primary Market

A total of Rs. 226,911 crore were raised by the government and corporate sector during 2001-02 as against Rs. 206,879 crore during the preceding year. Government raised about two third of the total resources, with central government alone raising nearly Rs.133,801 crore.

Corporate Securities

Average annual capital mobilisation from the primary market, which used to be about Rs.70 crore in the 1960s and about Rs.90 crore in the 1970s, increased manifold during the 1980s, with the amount raised in 1990-91 being Rs. 4,312 crore. It received a further boost during the 1990s with the capital raised by non-government public companies rising sharply to Rs. 26,417 crore in 1994-95. The capital raised which used to be less than 1% of gross domestic saving (GDS) in the 1970s increased to about 13% in 1992-93. In real terms, the capital raised increased 4 times between 1990-91 and 1994-95. During 1994-95, the amount raised through new issues of securities from the securities market accounted for about four-fifth of the disbursements by FIs. The trend in the public issues market is presented in Table 1-11.

Table 1-11: Resources Mobilised through Public Issues

(Amount in Rs. crore)

Year	Resources Raised by non-government companies	% of GDS	% of disbursements by FIs	Index in Real Terms	Mobilisation by Mutual Funds
1990-91	4,312	3.32	33.66	100.00	7,508
1991-92	6,193	4.38	38.08	126.27	11,253
1992-93	19,803	12.76	85.54	366.88	13,021
1993-94	19,330	9.98	74.85	330.51	11,243
1994-95	26,417	10.48	78.69	401.14	11,275
1995-96	16,075	5.34	41.59	226.04	–5,833
1996-97	10,410	3.28	24.40	139.93	–2,037
1997-98	3,138	0.84	5.85	40.40	4,064
1998-99	5,013	1.27	8.59	60.92	3,611
1999-00	5,153	1.11	7.51	60.64	19,953
2000-01	4,949	1.01	6.89	54.34	11,135
2001-02	5,692	1.17	10.18	60.34	8,024

The market, however, appears to have dried up since 1995-96 due to interplay of demand and supply side forces. In real terms, the amount raised by non-government public companies during 2001-02 is about 60% of the amount raised a decade back in 1990-91. Many investors who were lured into the market during 1992-94 seem to be adopting a very cautious approach because of their frustration with some of the issuers and intermediaries associated with the securities market. They have not completely withdrawn from the market, but are looking for quality issues, the availability of which has declined due to stricter eligibility criteria for public issues imposed by SEBI and the general slowdown in the economic activity. Simultaneously, issuers have shifted focus to other avenues for raising resources like private placement where compliance is much less. Available data (Table 1-12), although scanty, indicate that private placement has become a preferred means of raising resources by the corporate sector.

Table 1-12: Resource Mobilisation from the Primary Market

(Rs. crore)

Issues	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
Corporate Securities	**14,219**	**16,366**	**23,537**	**44,498**	**48,084**	**36,689**	**37,147**	**42,125**	**60,192**	**72,450**	**78,396**	**74,403**
Domestic Issues	14,219	16,366	23,286	37,044	41,974	36,193	33,872	37,738	59,044	68,963	74,199	72,061
Non-Govt. Public Companies	4,312	6,193	19,803	19,330	26,417	16,075	10,410	3,138	5,013	5,153	4,890	5,692
PSU Bonds	5,663	5,710	1,062	5,586	3,070	2,292	3,394	2,982	-	-	-	—
Govt. Companies	-	-	430	819	888	1,000	650	43	-	-	-	350
Banks & FIs	-	-	356	3,843	425	3,465	4,352	1,476	4,352	2,551	1,472	1,070
Private Placement	4,244	4,463	1,635	7,466	11,174	13,361	15,066	30,099	49,679	61,259	67,836	64,950
Euro Issues	-	-	702	7,898	6,743	1,297	5,594	4,009	1,148	3,487	4,197	2,342
Government Securities	**11,558**	**12,284**	**17,690**	**54,533**	**43,231**	**46,783**	**42,688**	**67,386**	**106,067**	**113,336**	**128,483**	**152,508**
Central Government	8,989	8,919	13,885	50,388	38,108	40,509	36,152	59,637	93,953	99,630	115,183	133,801
State Governments	2,569	3,364	3,805	4,145	5,123	6,274	6,536	7,749	12,114	13,706	13,300	18,707
Total	**25,777**	**28,650**	**41,227**	**99,031**	**91,315**	**83,472**	**79,835**	**109,511**	**166,259**	**185,786**	**206,879**	**226,911**

Source: RBI.

There is a preference for raising resources in the primary market through private placement of debt instruments. Private placements accounted for about 89% of total resources mobilised through domestic issues by the corporate sector during 2001-02. Rapid dismantling of shackles on institutional investments and deregulation of the economy are driving growth of this segment. There are several inherent advantages of relying on private placement route for raising resources. While it is cost and time effective method of raising funds and can be structured to meet the needs of the entrepreneurs, it does not require detailed compliance with formalities as required in public or rights issues. It is believed in some circles that private placement has crowded out public issues. However, to prevent public issues from being passed on as private placement, the Companies (Amendment) Act, 2001 considers offer of securities to more than 50 persons as made to public.

As may be seen from Table 1- 12, Indian market is getting integrated with the global market though in a limited way through euro issues. Since 1992, when they were permitted access, Indian companies have raised about Rs. 37,000 crore through ADRs/GDRs. By the end of March 2002, 490 FIIs were registered with SEBI. They had net cumulative investments over of US $ 15.2 billion by the end of March 2002. Their operations influence the market as they do delivery-based business and their knowledge of market is considered superior.

The market is getting institutionalised as people prefer mutual funds as their investment vehicle, thanks to evolution of a regulatory framework for mutual funds, tax concessions offered by government and preference of investors for passive investing. The net collections by mutual funds picked up during this decade and increased to Rs. 19,953 crore during 1999-00. This declined to Rs. 11, 135 crore during 2000-01 which may be attributed to increase in rate of tax on income distributed by debt oriented mutual funds and lacklustre secondary market. The total collection of mutual funds for 2001-02 has been Rs. 8,024 crore, thanks to the US-64 debacle which caused a net outflow of Rs. 7,284 crore from UTI. Starting with an asset base of Rs. 25 crore in 1964, the total assets under management at the end of March 2002 was Rs. 100,594 crore. The investible resources of MFs accounted for about 13% of market capitalization at the end of March 2002. The number of households owning units of MFs exceeds the number of households owning equity and debentures. At the end of financial year 1998-99, according to the SEBI-NCAER survey of Indian Investors (2000), 23 million unit holders had invested in units of MFs, while 19 million individual investors invested in equity and or debentures.

Government Securities

The primary issues of the Central Government have increased many-fold during the decade of 1990s from Rs. 8,989 crore in 1990-91 to Rs. 133,801 crore in 2001-02 (Table 1-12). The issues by state governments increased by about five times from Rs. 2,569 crore to Rs. 18,707 crore during the same period. The Central Government mobilised Rs. 114,213 crore through issue of dated securities and Rs. 19,588 crore through issue of T-bills. After meeting repayment liabilities of Rs. 26,499 crore for dated securities, and redemption of T-bills of Rs. 15,000 crore, net market borrowing of Central Government amounted to Rs. 92,302 crore for the year 2001-02. Net borrowings financed 69.4% of gross fiscal deficit of central government in 2001-02 as against 61.4% in the preceding year. The state governments collectively raised Rs. 18,707 crore during 2001-02 as against Rs. 13,300 crore in the preceding year. The net borrowings of State Governments in 2001-02 amounted to Rs. 17,261 crore, which financed 15.2% of gross fiscal deficit of state governments as against 14.4% in the preceding year.

Along with growth of the market, the investor base has become very wide. In addition to banks and insurance companies, corporates and individual investors are investing in government securities. With dismantling of control regime, and gradual lowering of the SLR and CRR, Government is borrowing at near–market rates. The coupons across maturities went down recently signifying lower interest rates. The weighted average cost of its borrowing at one stage increased to 13.75% in 1995-96, which declined to 9.44% in 2001-02. The maturity structure of government debt is also changing. In view of bunching of redemption liabilities in the medium term, securities with higher maturities were issued during 2001-02. About 84% of primary issues were raised through securities with maturities above 10 years. As a result the weighted average maturity of dated securities increased to 14.26 years from 6.6 years in 1997-98.

Secondary Market

Corporate Securities

Selected indicators in the secondary market are presented in Table 1-13. The number of stock exchanges increased from 11 in 1990 to 23 now. All the exchanges are fully computerised and offer 100% on-line trading. 9,644 companies were available for trading on stock exchanges at the end of March 2002. The trading platform of the stock exchanges was accessible to 9,687 members from over 400 cities on the same date.

The market capitalisation grew ten fold between 1990-91 and 1999-00. It increased by 221% during 1991-92 and by 107% during 1999-00. All India market capitalisation is estimated at Rs.749,248 crore at the end of March 2002. The market capitalisation ratio, which indicates the size of the market, increased sharply to 57.4% in 1991-92 following spurt in share prices. The ratio increased to 85% by March 2000. It, however, declined to 55% at the end of March 2001 and to 36% by end March 2002.

The trading volumes on exchanges have been witnessing phenomenal growth during the 1990s. The average daily turnover grew from about Rs.150 crore in 1990 to Rs. 12,000 crore in 2000, peaking at over Rs. 20, 000 crore. The turnover increased by 184% during 1996-97, 102% during 1999-00 and by 39% during 2000-01. One-sided turnover on all stock exchanges exceeded Rs. 10,00,000 crore during 1998-99, Rs. 20,00,000 crore during 1999-00 and approached Rs. 30,00,000 crore during 2000-01. However, the trading volume substantially depleted to Rs. 895,826 crore in 2001-02. The turnover ratio, which reflects the volume of trading in relation to the size of the market, has been increasing by leaps and bounds after the advent of screen based trading system by the NSE. The turnover ratio for the year 2000-01 increased to 375 but fell substantially due to bad market conditions to 119 during 2001-02. The year 2001-02 started in the backdrop of a market turbulence, which broke out in early 2001 involving some brokers and the banking system. The year also witnessed several structural changes such as rolling settlement and withdrawal of deferral products, which are usually accompanied by fall in volumes initially. The massive sale by FIIs and the terrorist attack on September 11, 2001 seem to have precipitated the fall of volumes further.

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 large big exchanges and it was partly at the cost of small exchanges that failed to keep pace with the changes. NSE is the market leader with over 80% of total turnover (volumes on all segments) in 2001-02. Top 6 stock exchanges accounted for 99.88% of turnover, while the rest 17 exchange for less than 0.12% during 2001-02 (Table 1-14). About a dozen exchanges reported nil turnover during the year.

Table 1-13: Secondary Market - Selected Indicators

(Amount in Rs. crore)

At the End of Financial Year	Capital Market Segment of Stock Exchanges								Turnover of Govt. Securities		Turnover of Derivatives Segment of Exchanges
	No. of Brokers	No. of Listed Companies	S&P CNX Nifty	Sensex	Market Capitalisation	Market Capitalisation Ratio (%)	Turnover	Turnover Ratio (%)	On WDM Segment of NSE	On SGL	
1990-91	—	6,229	366.45	1167.97	110,279	20.6	—	—	—	—	—
1991-92	—	6,480	1261.65	4285.00	354,106	57.4	—	—	—	—	—
1992-93	—	6,925	660.51	2280.52	228,780	32.4	—	—	—	—	—
1993-94	—	7,811	1177.11	3778.99	400,077	45.6	203,703	50.9	—	—	—
1994-95	6,711	9,077	990.24	3260.96	473,349	45.6	162,905	34.4	5,660	50,569	—
1995-96	8,476	9,100	985.30	3366.61	572,257	47.0	227,368	39.7	9,988	127,179	—
1996-97	8,867	9,890	968.85	3360.89	488,332	34.6	646,116	132.3	38,308	122,941	—
1997-98	9,005	9,833	1116.65	3892.75	589,816	37.7	908,681	154.1	103,585	185,708	—
1998-99	9,069	9,877	1078.05	3739.96	574,064	34.1	1,023,382	178.3	95,280	227,228	—
1999-00	9,192	9,871	1528.45	5001.28	1,192,630	84.7	2,067,031	173.3	293,887	539,232	—
2000-01	9,782	9,954	1148.20	3604.38	768,863	54.5	2,880,990	374.7	414,096	698,121	4,018
2001-02	9,687	9,644	1129.55	3469.35	749,248	36.4	895,826	119.6	927,604	1,573,893	103,848

Note: Turnover figures for the respective year.
— Not Available.
Source: Report on Currency and Finance, 1998-99 for data in respect of Capital Market Segment of Stock Exchanges upto 1998-99.

The movement of the S&P CNX NIFTY, the most widely used indicator of the market, is presented in Chart 1-1. In the very first year of liberalisation, i.e. 1991-92, it recorded a growth of 267%, followed by sharp decline of 47% in the next year as certain irregularities in securities transactions were noticed. The market picked up next year thanks to increased inflow of foreign funds, and increased investor interest. Thereafter the market remained subdued. The index recorded a decline of 3.47% during 1998-99 under the pressure of economic sanctions following detonation of nuclear device, continuing woes of east Asian financial markets, volatility of Indian currency and worries about financial health of UTI's US-64 scheme. The Union Budget of 1999 brought cheers to the market. The market moved on a roller coaster ride, but a distinct rising trend emerged due to all-round positive perception about strength of the Government and also its commitment towards second generation reforms, improved macro-economic parameters and better corporate results. The S&P CNX Nifty firmed up during 1999-2000 by 42% which was nearly four times the average return offered on bank deposits. The trend got reversed during 2000-01, which witnessed large sell-offs in new economy stocks in global markets and deceleration in the growth of the domestic economy. This brought down Nifty from a high of 1636.95 in April 2000 to a low of 1108.20 in October 2000. The market looked up in November-January in anticipation of a good budget. However it did not last long as the market received shocking news about imminent

Table 1-14: Growth and Distribution of Turnover on Stock Exchanges

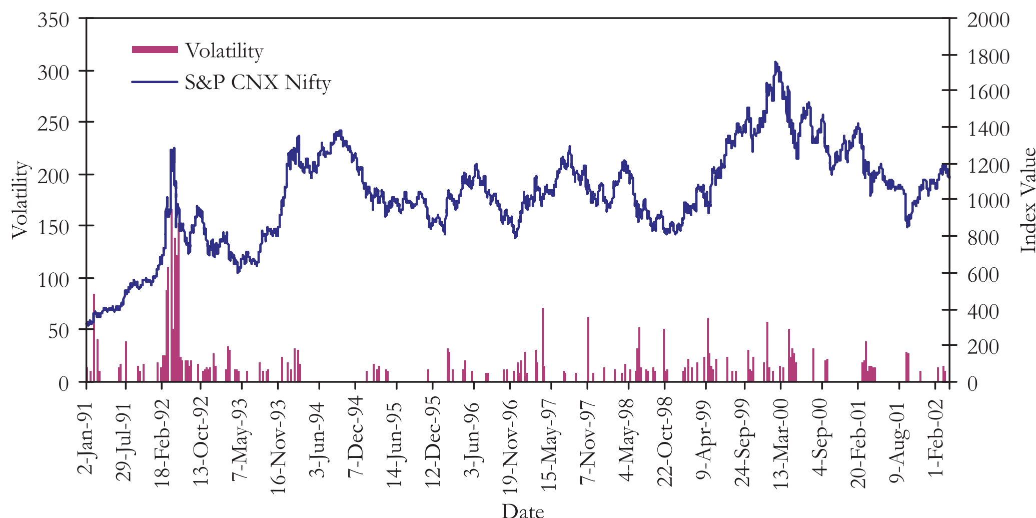
(Rs. crore)

	Stock Exchanges	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
1	NSE	8,509	80,009	336,782	481,197	519,852	1,143,268	1,770,458	1,562,283
2	Mumbai	67,748	50,064	124,284	207,383	311,999	685,028	1,001,619	309,316
3	Calcutta	52,872	62,128	105,664	178,778	171,780	357,166	355,035	27,075
4	Delhi	9,083	10,076	48,631	67,840	51,759	93,289	83,871	5,828
5	Ahmedabad	5,651	8,786	20,533	30,771	29,734	37,566	54,035	14,844
6	Uttar Pradesh	7,823	2,373	16,070	15,390	18,627	24,048	24,747	25,237
7	Ludhiana	2,488	4,849	5,274	8,315	5,978	7,741	9,732	857
8	Pune	3,672	7,071	9,903	8,624	7,453	6,087	6,171	1,171
9	Bangalore	712	890	4,398	8,636	6,779	11,147	6,033	70
10	Hyderabad	1,375	1,285	480	1,860	1,276	1,237	978	41
11	ICSE	-	-	-	-	1	545	233	55
12	Cochin	597	1,803	1,401	1,783	773	0	187	0
13	OCTEI	365	218	221	125	142	3,588	126	4
14	Madras	3,033		2,315	1,228	370	250	109	24
15	Madhya Pradesh	118	204	12	1	1	10	2	24
16	Magadh	797	1,629	2,755	323	0	8	2	0
17	Vadodara	1,621	1,259	4,268	4,576	1,749	159	1	10
18	Gauhati	285	619	484	20	30	0	0	0
19	Bhubaneshwar	143	226	231	202	77	70	0	0
20	Coimbatore	1,310	2,503	2,398	2,136	395	39	0	27
21	Jaipur	879	1,047	1,519	431	65	2	0	0
22	Mangalore	62	39	373	308	11	0	0	0
23	SKSE	545	564	398	17	0	0	0	0
	Total	**169,686**	**239,236**	**688,394**	**1,019,944**	**1,128,851**	**2,371,247**	**3,313,338**	**1,946,865**

Note: Turnover means total value of transactions of securities in all market segments of an Exchange.

payment crisis on certain exchanges, large scale manipulations in stock prices and revelation of large scale corruption in the procurement of defence equipments. The Nifty closed at 1148.20 at the end of March 2001 recording a fall of about 25% during 2000-01.

Chart 1-1: Movement of S&P CNX Nifty and its Volatility since 1991



The trend precipitated further with introduction of rolling settlement and withdrawal of deferral products in July 2002, suspension of repurchase facility under UTI's US-64 scheme, terrorist attack on world Trade Centre in September 2002, etc. which caused a further decline in S&P CNX Nifty by 1.6% during 2001-02.

Government Securities

The trading volumes in government securities for the first time exceeded the combined trading volumes in equity segments of all the exchanges in the country during 2001-02. The aggregate turnover in central and state government dated securities, including treasury bills, through SGL transactions increased 31 times between 1994-95 and 2001-02. During 2001-2002 it reached a level of Rs. 1,573,893 crore, recording about 125% growth over Rs. 698,121crore in the previous year. Such growing turnover reflects further deepening of the market (Table 1-13). The bulk of transactions during 2000-02 were on outright basis. The share of outright transactions in government securities increased from 23.2% in 1995-96 to 77% in 2001-02. The share of repo transactions declined correspondingly from 76.8% in 1995-96 to 23% in 2001-02.

The share of WDM segment of NSE in total turnover for government securities decreased marginally from 59.3% in 2000-01 to 58.9% in 2001-02. As compared to the increase in overall turnover of government securities by 125%, the same on WDM grew by 124% during 2001-02. Share of WDM in transactions of dated securities decreased from 63% in 2000-01 to 61.1% in 2001-02. Its share in transactions of T-bills decreased from 30% in 2000-01 to 27.4% in 2001-02. The Shares of WDM in outright and repo transactions were 76.5% and 0.17% respectively during 2001-02.

Government debt, which constitutes about three-fourth of the total outstanding debt, has the highest level of liquidity amongst the fixed income instruments in the secondary market. The share of dated securities in total turnover of government securities has been increasing over the years. Two-way quotes are available for the active gilt securities from the primary dealers. Though many trades in the gilts take place through telephone, a larger chunk of trades get routed through NSE brokers.

Derivatives Market

Trading in derivatives of securities commenced in June 2000 with the enactment of enabling legislation in early 2000. Derivatives are 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. Derivatives are legal and valid only if such contracts are traded on a recognised stock exchange, thus precluding OTC derivatives.

Derivatives trading commenced in India in June 2000 after SEBI granted the approval to this effect in May 2000. SEBI permitted the derivative segment of two stock exchanges, i.e. NSE and BSE, and their clearing house/corporation to commence trading and settlement in approved derivative contracts. To begin with, SEBI 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. The trading in index options commenced in June 2001 and trading in options on individual securities would commence in July 2001 while trading in futures of individual stocks started from November 2001.

The total exchange traded derivatives witnessed a volume of Rs. 103, 848 crore during 2001-02 as against Rs. 4, 018 crore during the preceding year. While NSE accounted for about 98% of total turnover, BSE accounted for less than 2% in 2001-02. The market witnessed higher volumes from June 2001 with introduction of index options, and still higher volumes with the introduction of stock options in July 2001. There was a spurt in volumes in November 2001 when stock futures were introduced. It is believed that India is the second largest market in the world for stock futures.

Regulatory Framework

The four main legislations governing the securities market are: (a) the SEBI Act, 1992 which establishes SEBI to protect investors and develop and regulate securities market; (b) the Companies Act, 1956, which sets out the code of conduct for the corporate sector in relation to issue, allotment and transfer of securities, and disclosures to be made in public issues; (c) the Securities Contracts (Regulation) Act, 1956, which provides for regulation of transactions in securities through control over stock exchanges; and (d) the Depositories Act, 1996 which provides for electronic maintenance and transfer of ownership of demat securities.

Legislations

Capital Issues (Control) Act, 1947: The Act had its origin during the war in 1943 when the objective was to channel resources to support the war effort. It was retained with some modifications as a means of controlling the raising of capital by companies and to ensure that national resources were channeled into proper lines, i.e., for desirable purposes to serve goals and priorities of the government, and to protect the interests of investors. Under the Act, any firm wishing to issue securities had to obtain approval from the Central Government, which also determined the amount, type and price of the issue. As a part of the liberalisation process, the Act was repealed in 1992 paving way for market determined allocation of resources.

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 issuance of capital and transfer of securities, in addition to all intermediaries and persons associated with securities market. It can conduct enquiries, audits and inspection of all concerned and adjudicate offences under the Act. It has powers to register and regulate all market intermediaries and also to penalise 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 securities trading and the running of stock exchanges and aims to prevent undesirable transactions in securities. It gives 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 conditions prescribed by Central Government. Organised trading activity in securities takes place on a specified recognised stock exchange. The stock exchanges determine their own listing regulations which have to conform to the minimum listing criteria set out in the Rules.

Depositories Act, 1996: The Depositories Act, 1996 provides for the establishment of depositories in securities with the objective of ensuring free transferability of securities with speed, accuracy and security by (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 making the securities move from person to person. 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 standard of disclosure in public issues of capital, 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 and Regulations

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

Regulators

The absence of conditions of perfect competition in the securities market makes the role of regulator extremely important. The regulator ensures that the market participants behave in a desired manner so that securities market continue to be a major source of finance for corporate and government and the interest of investors are protected.

The responsibility for regulating the securities market is shared by Department of Economic Affairs (DEA), Department of Company Affairs (DCA), Reserve Bank of India (RBI) and SEBI. The activities of these agencies are coordinated by a High Level Committee on Capital Markets. The orders of SEBI under the securities laws are appellable before a Securities Appellate Tribunal.

Most of the powers under the SCRA are exercisable by DEA while a few others by SEBI. The powers of the DEA under the SCRA are also con-currently exercised by SEBI. The powers in respect 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 by 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 SEBI. All these 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 1990s

Corporate Securities Market

With the objectives of improving market efficiency, enhancing transparency, preventing unfair trade practices and bringing the Indian market up to international standards, a package of reforms consisting of measures to liberalise, regulate and develop the securities market was introduced. The practice of allocation of resources among different competing entities as well as its terms by a central authority was discontinued. The issuers complying with the eligibility criteria were allowed freedom to issue the securities at market determined rates. The secondary market overcame the geographical barriers by moving to screen based trading. Trades enjoyed counter-party guarantee. The trading cycle shortened to a day and trades are settled within 3 working days, while all deferral products were banned. Physical security certificates almost disappeared. A variety of derivatives were permitted. The following paragraphs discuss the principal reform measures undertaken since 1992.

SEBI Act, 1992: It created a regulator (SEBI), empowered it adequately and assigned it with the 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 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 SEBI Act is 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 SC(R)A. Many provisions in the Companies Act having a bearing on securities market are administered by SEBI. The Depositories Act, 1996 is also administered by SEBI. A high level committee on capital markets has been set up to ensure co-ordination among the regulatory agencies in capital markets.

DIP Guidelines: Major part of the liberalisation process was the repeal of the Capital Issues (Control) Act, 1947 in May 1992. With this, Government's control over issue of capital, pricing of the issues, fixing of premia and rates of interest on debentures etc. ceased and the market was allowed to allocate resources to competing uses. In the interest of investors, SEBI issued Disclosure and Investor Protection (DIP) guidelines. The guidelines contain a substantial body of requirements for issuers/intermediaries, the broad intention being to ensure that all concerned observe high standards of integrity and fair dealing, comply with all the requirements with due skill, diligence and care, and disclose the truth, whole truth and nothing but truth. The guidelines 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, they find it in order 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 such as track record of distributable profits and net worth. In case they do not do so, they can access the market only through book building with minimum offer of 60% to qualified institutional buyers. The norms for continued disclosure by listed companies also improved availability of information. The information technology helped in easy dissemination of information about listed companies and market intermediaries. Equity research and analysis and credit rating improved the quality of information about issues.

Screen Based Trading: The trading on stock exchanges in India used to take place through open outcry without use of information technology for immediate matching or recording of trades. This was time consuming and inefficient. This imposed limits on trading volumes and efficiency. In order to provide efficiency, liquidity and transparency, NSE introduced a nation-wide on-line fully-automated screen based trading system (SBTS) where a member can punch into the computer quantities of securities and the prices at which he likes 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 a strict price/time priority and hence cuts down on time, cost and risk of error, as well as on fraud resulting in improved operational efficiency. It allows faster incorporation of price sensitive information into prevailing prices, thus increasing the informational efficiency of markets. 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. It provides full anonymity by accepting orders, big or small, from members without revealing their identity, thus providing equal access to everybody. It also provides a perfect audit trail, which helps to resolve disputes by logging in the trade execution process in entirety. In the very first year of its operation, NSE became the leading stock exchange in the country, impacting the fortunes of other exchanges and forcing them to adopt SBTS also. As a result, manual trading disappeared from India.

Technology was used to carry the trading platform to the premises of brokers. NSE carried the trading platform further to the PCs in the residences of investors through the Internet and to hand-held devices through WAP for convenience of mobile investors. This made a huge difference in terms of equal access to investors in a geographically vast country like India.

Trading Cycle: The trades accumulated over a trading cycle and at the end of the cycle, these were clubbed together, and positions were netted out and payment of cash and

delivery of securities settled the balance. This 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. Many things could happen between entering into a trade and its performance providing incentives for either of the parties to go back on its promise. This had 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. T+5 gave way to T+3 from April 2002. The market also had a variety of deferral products like modified carry forward system, which encouraged leveraged trading by enabling postponement of settlement. The deferral products have been banned. The market has moved close to spot/cash market.

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 did not take off, as there was no suitable legal and regulatory framework to govern these trades. Besides, it needed a lot of preparatory work- the underlying cash markets strengthened with the assistance of the automation of trading and of the settlement system; the exchanges developed adequate infrastructure and the information systems required to implement trading discipline in derivative instruments. The SC(R)A was amended further in December 1999 to expand the definition of securities to include derivatives so that the whole regulatory framework governing trading of securities could apply to trading of derivatives also. A three-decade old ban on forward trading, which had lost its relevance and was hindering introduction of derivatives trading, was withdrawn. Derivative trading took off in June 2000 on two exchanges. The market presently offers index futures and index options on two indices and stock options and stock futures on 31 stocks.

Demutualisation: Historically, brokers owned, controlled and managed stock exchanges. In case of disputes, the self often got precedence over regulations leading inevitably to conflict of interest. The regulators, therefore, focused on reducing dominance of members in the management of stock exchanges and advised them to reconstitute their governing councils to provide for at least 50% non-broker representation. This did not materially alter the situation. In face of extreme volatility in the securities market, Government proposed in March 2001 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. Government has offered a variety of tax incentives to facilitate corporatisation and demutualisation of stock exchanges.

NSE, however, adopted a pure demutualised governance structure where ownership, management and trading are with three different sets of people. This completely eliminated any conflict of interest and helped NSE to aggressively pursue policies and practices within a public interest (market efficiency and investor interest) framework.

Depositories Act: Settlement system on Indian stock exchanges gave rise to settlement risk due to the time that elapsed before trades are settled. Trades were settled by physical movement of paper. This had two aspects. First, the settlement of trade in stock exchanges by delivery of shares by the seller and payment by the purchaser. The stock exchange aggregated trades over a period of time to carry out net settlement through the physical delivery of securities. The process of physically moving the securities from the seller to the

ultimate buyer through the seller's broker and buyer's broker took time with the risk of delay somewhere along the chain. The second aspect related to transfer of shares in favour of the purchaser by the company. The system of transfer of ownership was grossly inefficient as every transfer involved physical movement of paper securities to the issuer for registration, with the change of ownership being evidenced by an endorsement on the security certificate. In many cases the process of transfer took much longer, and a significant proportion of transactions ended up as bad delivery due to faulty compliance of paper work. Theft, forgery, mutilation of certificates and other irregularities were rampant, and in addition the issuer had the right to refuse the transfer of a security. All this added to costs, and delays in settlement, restricted liquidity and made investor grievance redressal time consuming and at times intractable.

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, accuracy and security by (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 both the stages of 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 mandated trading and settlement in demat form in an ever-increasing number of securities in a phased manner. The stamp duty on transfer of demat securities was waived. Two depositories, *viz.* NSDL and CDSL, have come up to provide instantaneous electronic transfer of securities. At the end of March 2002, 4,172 and 4,284 companies were connected to NSDL and CDSL respectively. The number of dematerialised securities increased to 56.5 billion at the end of March 2002. As on the same date, the value of dematerialsied securities was Rs. 4,669 billion and the number of investor accounts was 4,605,588. All actively traded scrips are held, traded and settled in demat form. Demat settlement accounts for over 99% of turnover settled by delivery. This has almost eliminated the bad deliveries and associated problems.

To prevent physical certificates from sneaking into circulation, it has been mandatory for all new IPOs to be compulsorily traded in dematerialised form. The admission to a depository for dematerialisation of securities has been made a pre-requisite 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 to do the same only in dematerialised form.

Risk Management: Market integrity is the essence of any financial market. To pre-empt market failures and protect investors, the regulator/exchanges have developed a comprehensive risk management system, which is constantly monitored and upgraded. It encompasses capital adequacy of members, adequate margin requirements, limits on exposure and turnover, indemnity insurance, on-line position monitoring and automatic disablement, etc. They also administer an efficient market surveillance system to curb excessive volatility, detect and prevent price manipulations. 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.

The fact that an anonymous electronic order book ushered in by the NSE does not allow members to assess credit risk of the counter-party necessitated some innovation in this area. To effectively address this issue, NSE introduced the concept of a novation, and set up the first clearing corporation, *viz.* National Securities Clearing Corporation Ltd.

(NSCCL), which commenced operations in April 1996. The NSCCL assures the counterparty risk of each member and guarantees financial settlement. Counterparty risk is guaranteed through a fine tuned risk management system and an innovative method of on-line position monitoring and automatic disablement. A large Settlement Guarantee Fund, which stood at Rs. 1,781 crore at NSCCL as on March 31 2002, provides the cushion for any residual risk. The market has now full confidence that settlements will take place in time and will be completed irrespective of default by isolated trading members. In fact such confidence is driving volumes on exchanges.

Traditionally, brokerage firms in India have been proprietary or partnership concerns with unlimited liabilities. This restricted the amount of capital that such firms can raise. The growing volume of transactions made it imperative for such firms to be well capitalised and professional. The necessary legal changes were effected to open up the membership of stock exchanges to corporates with limited liability, so that brokerage firms may be able to raise capital and retain earnings. In order to boost the process of corporatisation, capital gains tax payable on the difference between the cost of the individual's initial acquisition of membership and the market value of that membership on the date of transfer to the corporate entity was waived. In response, many brokerage firms reorganised themselves into corporate entities. At the end of March 2001, 3,862 brokers out of 9,687 were corporate bodies.

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 the matters to be disclosed and the standards of disclosure required for the protection of investors in respect of issues and issues directions to all intermediaries and other persons associated with the securities market in the interest of investors or of orderly development of the securities market.

DEA, DCA, SEBI and exchanges have set up investor grievance cells for redressal of investor grievance. The exchanges maintain investor protection funds to take care of investor claims, which may arise out of non-settlement of obligations by a trading member for trades executed on the exchange. 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. Government is considering the report of N. L. Mitra committee, which has, among others, recommended that there should be a specific Act for protecting investors' interest (Please see chapter 8 for recommendations).

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. ADRs/GDRs have two-way fungibility. 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, provided this has the approval of the Indian company's board of directors and also its general body. 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. Mutual Funds have been permitted to set up off-shore funds to invest in equities of other countries. They can also invest in ADRs/GDRs of Indian companies.

Government Securities Market

The government securities market has witnessed significant transformation in the 1990s. With giving up of the responsibility of allocating resources from securities market, government stopped expropriating seigniorage and started borrowing at near - market rates. Government securities are now sold at market related coupon rates through a system of auctions instead of earlier practice of issue of securities at very low rates just to reduce the cost of borrowing of the government. Major reforms initiated in the primary market for government securities include auction system (uniform price and multiple price method) for primary issuance of T-bills and central government dated securities, a system of primary dealers and non-competitive bids to widen investor base and promote retail participation, issuance of securities across maturities to develop a yield curve from short to long end and provide benchmarks for rest of the debt market, innovative instruments like, zero coupon bonds, floating rate bonds, bonds with embedded derivatives, availability of full range (91-day and 382-day) of T-bills, etc. The reforms in the secondary market include Delivery versus Payment system for settling scripless SGL transactions to reduce settlement risks, SGL Account II with RBI to enable financial intermediaries to open custody (Constituent SGL) accounts and facilitate retail transactions in scripless mode, enforcement of a trade-for-trade regime, settlement period of T+0 or T+1 for all transactions undertaken directly between SGL participants and up to T+5 days for transactions routed through NSE brokers, routing transactions through brokers of NSE, OTCEI and BSE, repos in all government securities with settlement through SGL, liquidity support to PDs to enable them to support primary market and undertake market making, special fund facility for security settlement, etc. 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, the Negotiated Dealing System (NDS) and the Clearing Corporation of India Limited (CCIL) commenced operations on February 15, 2002. NDS, interalia, facilitates screen based negotiated dealing for secondary market transactions in government securities and money market instruments, online reporting of transactions in the instruments available on the NDS 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. The CCIL facilitates settlement of transactions in government securities (both outright and repo) on Delivery versus Payment (D*v*P-II) basis which provides for settlement of securities on gross basis and settlement of funds on net basis simultaneously. It acts as a central counterparty for clearing and settlement of government securities transactions done on NDS. 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 to impart efficiency and transparency.

Research in Securities Market

In order to deepen 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. In collaboration with NCAER, SEBI brought out a 'Survey of Indian Investors', which estimates investor population in India and their investment preferences. SEBI has also tied up with reputed national and international academic and research institutions for conducting research studies/projects on various issues related to the capital market. In order to improve market efficiency further and to set international benchmarks in the securities industry, NSE supports a scheme called the NSE Research

Initiative with a view to develop an information base and a better insight into the working of securities market in India. The objective of this initiative is to foster research, which can support and facilitate (a) stock exchanges to better design market micro-structure, (b) participants to frame their strategies in the market place, (c) regulators to frame regulations, (d) policy makers to formulate policies, and (e) expand the horizon of knowledge. The Initiative has received tremendous response.

Testing and Certification

The intermediaries, of all shapes and sizes, who package and sell securities, compete with one another for the chance to handle investors/issuers' money. The quality of their services determines the shape and health of the securities market. In developed markets and in some of the developing markets, this is ensured through a system of testing and certification of persons joining market intermediaries in the securities market. This sort of arrangement ensures that a person dealing with financial products has a minimum standard of knowledge about them, market and regulations so as to assist the customers in their dealings. This allows market participants and intermediaries to build their own tailored staff development strategies and improves career prospectus of certified professionals, while maintaining and enhancing the confidence of the investors in the market.

A testing and certification mechanism that has become extremely popular and is sought after by the candidates as well as employers is an unique on-line testing and certification programme called 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 - there is absolutely no scope for human intervention. It allows tremendous flexibility in terms of testing centres, dates and timing and provides easy accessibility and convenience to candidates as he can be tested at any time and from any location. It tests practical knowledge and skills, that are required to operate in financial markets, in a very secure and unbiased manner, and certifies personnel who have a proper understanding of the market and business and skills to service different constituents of the market. It offers eight securities market related modules.

The above reforms have come in stages. As some deficiency is noted or some malpractice surfaces in the working of the market, the authorities initiate further reforms and corrective steps. As such, the process of reform in the securities market is far from complete. At the same time the reforms undertaken so far have aimed to improve 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 built up to protect investors, enhance their confidence and avoid systemic failure of the market. Stability of the system as a whole has been protected by allowing for contestability of the market and imposing entry criteria for issuers and intermediaries. Financial integrity of the market is ensured by prudential controls on intermediaries. As a result of these reforms, the market design has changed drastically for better as may be seen from Annexure 1-1.

Agenda for Future

Reforms in the securities market, particularly establishment and empowerment of SEBI, allocation of resources by market, screen based nation-wide trading, dematerialisation

and electronic transfer of securities, availability of derivatives of securities, etc. have greatly improved the regulatory framework and efficiency and safety of issue, trading clearing and settlement of securities. However, efforts are on to improve working of the securities market further. This section discusses international initiatives in the form of standards/guidelines/recommendations as well as domestic policy debates.

International Initiatives

Principles of Securities Regulation

In February 2002, IOSCO released a new version of the *Objectives and Principles of Securities Regulation*, which supersedes the one released in September 1998. It aims to provide advice and a yardstick against which progress towards effective regulation can be measured. IOSCO members, including SEBI, through their endorsement to these principles, intend to use their best endeavors within their jurisdiction to ensure adherence to these principles. These principles are discussed 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; and adequate legal protection of regulators and their staff acting in bonafide 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. Accountability implies: a regulator that operates independently of sectoral interests; a system of public accountability of the regulator; and a system of permitting judicial review of decisions of the regulator.

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 including the regulated, publicly disclose its policies, 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 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 for the respective areas of competence to the extent appropriate to the size and complexity of the markets.

SROs should undertake those regulatory responsibilities which they incentive to perform efficiently.

7. SROs should be subject to the oversight of the regulator and should observe standards of fairness and confidentiality when exercising powers and delegated 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. Where powers of a SRO are inadequate to address a particular misconduct or conflict of interest necessitates it, 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 power to require the provision of 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 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 an effective and credible use of inspection, investigation, surveillance and enforcement powers and implementation of an effective compliance program. The powers of regulator should be sufficient to ensure its effectiveness in cases of cross border misconduct. The regulator should require market intermediaries 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. Domestic laws need to remove impediments to international cooperation.

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 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 is material to 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 and the regulation of 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 and structure of collective investment schemes and the segregation and protection of client assets.

19. Regulation should require disclosure, as set forth under the principles for issuers, 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 and 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 of loss 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 power to withdraw or suspend the license. The regulator should ensure that the public have access to relevant information concerning the licensee.

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

23. Market intermediaries should be required to comply with standards for internal organisations and operational conduct that aim to protect the interest of clients, ensure proper management risk, and under which management of the intermediary accepts primary responsibility of these matters.

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 including securities exchanges should be subject to regulatory authorisation and oversight. The relevant factors for authorisation could be operator competence, operator oversight, 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 manipulation and other unfair trading practices. The regulation should prohibit market manipulation, misleading conduct, insider trading and other fraudulent or deceptive conduct which may distort price discovery system, distort prices and unfairly disadvantage investors. Such conduct 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 transactions should be subject to regulatory oversight, and designed to ensure that they are fair, effective and efficient and that they reduce systemic risk.

Recommendations for Securities Settlement Systems

BIS-IOSCO made a set of 19 recommendations in November 2001 covering legal risk, pre-settlement risk, settlement risk, operational risk and other issues relating to securities settlement system. These 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). Where confirmation of trades by indirect market participants (such as institutional investors) is required, 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 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. Barriers that inhibit the practice of lending securities for this purpose should be removed.

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 no later than the end of the settlement day. Intraday or real-time finality should be provided where necessary to reduce risks.

9. *CSD risk controls to address participants' failures to settle:* CSDs that extend intraday credit to participants, including CSDs that operate net settlement systems, should institute risk controls that, at a minimum, ensure timely settlement in the event that 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. If central bank money is not used, steps must be taken to protect CSD members from potential losses and liquidity pressures arising from the failure of the cash settlement agent whose assets are used for that purpose.

Operational risk

11. *Operational reliability:* Sources of operational risk arising in the clearing and settlement process should be identified and minimised through the development of appropriate systems, controls and procedures. Systems should be reliable and secure, and have adequate, scalable capacity. 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 the CSD or CCP services.

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

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

World Federation of Exchanges' Vision

At the end of General Assembly of FIBV (now known as World Federation of Exchanges) held in 2001 at Madrid, the leaders in the securities market shared their vision about the future of the securities market. An overwhelming majority (74%) felt that despite globalisation of the market place, national/domestic exchanges would still have a role to play. It was felt by majority (64%) that the potential impact of straight through processing (STP) on central counterparties, clearing and settlement firms, and depositories represents an opportunity for exchanges to expand business. However, 59% of the members felt that STP will take longer to implement. The majority of the members (84%) considered clearing, settlement and depository services to be part of their value chain. About 77% of members felt that in next two years exchanges will put greater emphasis on developing e-business beyond using the Internet as a means of communication. About 67% of the members felt to promote the work of exchanges, international policy organizations should concentrate on business standards and principles. About 84% of the members felt that market conditions in 2002 would lead to more involvement by regulators in the market and more regulation. These likely developments have profound lessons for Indian securities market.

Domestic Policy Debates*

This section as well as similar sections in the following chapters summarise on-going policy debates in market circles.

Primary Market

Safety Net: It is proposed to indemnify the investor for the losses that he may suffer on account of erosion in value of his holdings upto a period of say six months from the date of issue. If the liability on account of indemnity is borne by the issuer, it would prevent him from issuing / maintaining securities at unrealistic prices and consequently post issue prices would not be less than issue price. This would give investor confidence to subscribe to public issues as his loss is insured for at least six months. However, safety net is inconsistent with the nature of equity, as it supports prices at an artificial level by removing downside of equity. Further, it is illogical to provide such support, particularly if the price is market discovered such as through book building. The basic premise that the securities have lost value after the issue in the recent years may not be adequate justification for safety net, as securities across the board have lost their value during the same period.

Fixed Price Vs. Book Building: In the fixed-price issue method, the issuer fixes the issue price well before the actual issue. For this very reason, it is cautious and conservative

* The views and approaches reflected in the policy debates are not necessarily of the NSE.

in pricing the issue so that the issue is fully subscribed. It usually also has underwriters. The underwriters do not like the issue to devolve on them and hence favour conservative pricing of the issue. For these practical reasons, the issue price in the case of traditional fixed price method generally errs on the lower side and, therefore, in the investor's favour. Because of conservative pricing, it is generally over-subscribed necessitating allotment by casting lots and refunding the application money to the non-allottees. Hence, there is some unsatisfied demand for the issue and there is high probability of the market price rising above the issue price after listing. This contrasts with charging whatever price the market can bear under the book-building method without any risk of the issue not being fully subscribed. As a result, book-building usually leads to aggressive pricing than the traditional fixed-price method. Further, under book building, since all applicants above the cut-off price are allotted shares, there is unlikely to be any pressure of unsatisfied demand in the market. The book-building method thus favours the issuer while the fixed price issue method favours the investor. It is, therefore, being argued that it may be better to stick to fixed-price method of IPOs but to insist on an appraisal system. The price may be fixed on the basis of recommendation of the appraising agency, which should have free access to all available information from the promoters/ issuing company.

Exchange Related

Exchange Governance: Reforms focused on reducing dominance of trading members in the management of stock exchanges by prescribing composition of governing council and strengthening the position of executive director. Such attempts (composition of governing council and strengthening of position of executive director) made for decades to improve the working of the exchanges while retaining the basic structure has not yielded any appreciable result. The broker-managed exchanges continue to witness different types of malaise from time to time. The post-mortem of these has generally revealed complicity of elected directors. It has now been realised that there is no alternative to demutualisation. A complete overhaul – not just corporatisation, but also demutualisation - of the exchanges has been announced. Government has offered tax incentives for corporatisation and demutualization of the exchanges. This needs to operationalised soon.

Regional Exchanges: There was a time when we needed a large number of exchanges spread across the length and breadth of the country. In the changed on-line environment, while one large exchange could possibly be adequate to meet the demand for securities transactions in India, at least two or three would be essential to ensure competition. Clearly there is not enough space for 24 of them. Others could explore mergers, alliances or other niche markets, which they can profitably serve. They could also consider providing non-exchange intermediation services.

Business Continuity Plan: NSE has established a disaster back-up site at Chennai along with its entire infrastructure including the satellite earth station and the high speed optical fibre link with its main site at Mumbai. The site at Chennai is a mirror replica of the complete production environment at Mumbai. The transaction data is backed up on near real time basis from the main site to the disaster back-up site through the 2 mbps high-speed link to keep both the sites all the time synchronised with each other. Such business continuity plans need to be replicated by all stock exchanges and depositories to provide uninterrupted service to investors.

Central Listing Agency: A security not found suitable for listing on an exchange gets listed on a different exchange, as they follow different criteria for listing securities. This creates an anomalous situation that a security, which is not found suitable for investors in one locality, is

suitable for investors in another locality. It is, therefore, desirable that there is only one central agency, which considers all requests for listing and grants listing if it finds a security suitable for investors across the country. A security granted listing by the agency is available for trading on all exchanges that do not waste resources in terms of duplication of efforts on listing and monitoring compliance. The security is monitored, and suspended and withdrawn from trading centrally by the listing agency. The investors and market participants get all the company related information, which are mandatorily required to be filed by companies with stock exchanges or any other agency, at one central location preferably a web-site. This is all the more necessary as the exchanges get demutualised and in turn seek listing on exchanges.

Trading Related

Derivatives Trading: The derivatives trading in India has so far been introduced in a fairly limited range of products. Index futures and options are available only on two indices. Stock options and futures are available only on 31 securities. In order to provide wider option to market participants, the index futures/options could be extended to some other popular indices, like Nifty Junior and Defty. The stock futures/options could be extended to all active securities. The possibility of introducing derivatives with exchange rate, interest rate and gold as the underlying could also be explored. Other possible options are derivatives on MIBID/MIBOR and on key overseas stock indices, like Nasdaq 100 and Nikkei 200. These would provide wider option to market participants.

In the absence of a specific provision in the Income Tax Act, it is apprehended that the derivative contracts, particularly the index futures/options which are essentially cash-settled, may be construed as speculative transactions. Therefore, the losses, if any, will not be eligible for set off against other incomes of the assessee. Derivative contracts are cash-settled, as many of these can not be settled otherwise. Derivative contracts are entered into by the hedgers, speculators and arbitrageurs. A derivatives contract has any of these two parties and hence some of the derivative contracts, (not all), have an element of speculation. At least one of the parties is a hedger or an arbitrageur. It would, therefore, be unfair to treat derivative transactions as speculative. Otherwise it would be a penalty on hedging which the legislature seeks to promote. It is desirable to clarify or make special provision for derivatives of securities.

In order to prevent the small investors, who may be lured by sheer speculative gain, from venturing into derivative contracts, the minimum contract size for all derivatives was fixed at Rs. 2 lakh. It has been the experience that it is the retail players who have been dominating the derivatives market. The minimum limit of Rs. 2 lakh is a discouragement for them. It is, therefore, being argued that the contract size should be reduced to, say Rs. 1 lakh, to encourage more retail participation, which will translate into higher volumes.

Trading of MF Units: The market for units of MFs have not developed appreciably. The easiest way to develop the market for units of MFs is to consider them to be securities explicitly under the SCRA so that the regulatory framework applicable to trading of securities would also apply to trading of units of MFs and SEBI which has mandate to protect the interest of investors in securities, can protect the interest of holders of units of MFs.

Margin Trading: Margin trading is purchasing securities by borrowing a portion of the transaction value and using the securities in the portfolio as collateral. It is a form leveraged trading in the sense that backed by the collateral, one can buy assets, which are far greater in value than the value of the collateral. It thus leads to an increase in

the purchasing/selling power of the participants and hence enables them to magnify their gains if the stock market moves on expected lines. In the absence of any leveraged trading, like MCFS and ALBM/BLESS, margin trading can address the liquidity concerns in the market.

Settlement Related

Clearing Corporation: The anonymous order book does not allow participants to assess the counter party risk. It is, therefore, necessary that the exchanges use a clearing corporation to provide novation and settlement guarantee. NSCCL provides such novation for all trades executed on NSE. Similar facility should be provided for trades on other exchanges. It is not necessary that each stock exchange must have its own exclusive clearing corporation. It may be better if the stock exchanges use the services of a clearing corporation or a few clearing corporations, as they share the depository services. Such an arrangement allows the clearing corporation to have an overall view of gross exposure position of traders across the stock exchanges and is much better geared to manage the risk. However, to provide for necessary competition, it is essential that there are at least two clearing corporations, just as this has been ensured in the case of depositories.

The clearing corporation ensures financial settlement of trades on the appointed day and time irrespective of default by members to bring in the required funds and/or securities, with the help of a 'Settlement Guarantee Fund'. This has revolutionised the volumes in the secondary market. It is important to keep improving the value of the Settlement Guarantee Fund by adding back all the accruals to the fund, subject to administrative expenses, to retain and build up the faith that the retail and foreign investment have reposed in the settlement mechanism. For this purpose, it is necessary to exempt the income of the Clearing Corporation from the purview of income tax.

As the clearing corporation guarantees financial settlement, it is necessary that it has first lien over the assets of insolvent clearing members.

It is meaningful for a clearing corporation to net all liabilities falling due on any given day for all types of settlement. As long as the clearing corporation is a centralised legal counter-party, risk management would dictate that it nets all obligations vis-à-vis each counter-party to itself.

Straight Through Processing: It is necessary to introduce STP to eliminate settlement risks. Under this system, the selling client's DP account is checked as soon as broker gets sale order through the Internet for securities balances and, similarly, buying client's bank account is checked for cash balances. Only if this check confirms availability of adequate balances of either stock or cash, the order is routed by the broker's trading terminal for trade execution.

According to a SEBI report, the benefits of STP are that it (i) reduces risk leading to fewer trade fails, (ii) improves operational efficiency in handling larger volumes, (iii) facilitates movement towards shorter settlement cycles, (iv) enables increased cross border trading (FII trades), (v) provides transparency with clear audit trail, (vi) enables better market surveillance with real time information to regulators, and (vii) increases competitive advantage of the market.

Selection of an appropriate STP approach for a market is a function of various factors. One of the critical factors is the level of technology used/available in the market. STP for net settlement is crucially dependent on robust, secure and advanced messaging network enabling all the participants to communicate online with the clearing/depository entities. It would also require strong software support allowing participants to know

their net position on a regular basis. In case of STP for gross settlement, post trade communication requirement of participants with clearing/depository entity is limited. In this case, such requirement is only for custodial confirmation. Consequently, the level of technology required will be lower than in case of STP for net settlement.

The inability of continuous connectivity across wide area networks (WAN) restricts the introduction of STP. The limited availability of EFT and absence of RTGS constrains progress in this regard.

Funds Clearing: Settlement of trades requires smooth, preferably instantaneous, movement of securities and funds in accordance with the prescribed schedule of pay-in and pay-out. The securities can now move instantaneously since all the participants have accounts with either of the two depositories, which are connected to each other and are connected to the Exchanges. The movement of funds is not as instantaneous as only a few banks empanelled as clearing banks have the facility to transfer funds electronically. As participants have accounts in different banks at different places, movement of funds among participants invariably requires clearance through RBI's payment system. Further, the funds coming in and the funds going out of a clearing bank for settlement purposes rarely match requiring movement of funds from one clearing bank to another by using the RBI clearing system. This constrains same day pay-in and pay-out. The funds do not reach the accounts of investors on the pay-out day from the accounts of the trading members. This can be facilitated if the clearing corporation directly participates in the RBI's clearing.

A radical, but enduring solution would be to provide for movement of funds related to securities transactions directly between clearing banks without recourse to RBI subject to prudential checks and balances. As inter-depository transfer of securities does not need to be cleared by any regulator/central depository/any other third entity, inter-bank transfer of funds related to securities transactions need not also be cleared through RBI. The movement of funds and securities would be synchronised if funds move among the clearing banks as securities move among the depositories.

VaR based Margin: Starting with July 2, 2001, the margin requirements is being determined based on a scientific model, i.e. VaR model. The regulation, stated broadly, prescribes a scrip-wise 99% VaR to be computed as equal to 3.5 times the daily volatility of each scrip. Margins for each trading member is arrived at by summing up scrip-wise margins based on scrip-wise VaRs multiplied by their positions in each stock, and this margin would be applicable for transactions to be carried out in the next day. A limitation of this approach is that it treats the risk of a portfolio as equal to the sum of risks of each scrip in the portfolio, thereby ignoring the fact a portfolio is a diverse set of correlated positions. The risk of well-diversified portfolios is expected to be less than that of the sum of the risks of individual parts, and margins based on the latter will be too high for this portfolio, possibly adversely affecting the market activity.

Debt Market

Private Placement: The convenience of structuring of issues to match the needs of issuers with those of investors coupled with savings in terms of time and cost has contributed to rapid growth of market for private placement. The issues by private placement do not require prospectus, disclosures, or a rating. This route accounted for 89% resources mobilized domestically by corporate sector during 2001-02. This development reflects regulatory arbitrage. If this route is to continue as a major source of resources, this requires to be subjected to regulatory discipline.

Debt Derivatives: In India, IRSs/FRAs were introduced in June 1999 with a view to further deepening the money market as also to enable banks, PDs and FIs to hedge interest rate risks. The market for these derivatives, however, has not developed appreciably for lack of legal clarity. It is viewed in some circles that there is no suitable regulatory framework to govern trading of these derivatives. These are not derivatives under the Securities Contracts (Regulation) Act, 1956 as these are not derived from securities. It is desirable to have express legislative provisions to provide for such contracts. Such provisions should cover the entities who can enter into such contracts, the broad parameters of such contracts, clearing corporation for settling these contracts, and a dispute resolution mechanism.

ZCYC: Fixed income instruments, both government securities and corporate paper, constitute sizeable proportion of the investment portfolios of most financial sector entities. The change in the value of these portfolios arising out of shifts in the interest rate structure is of immense concern – both for the purpose of ascertaining the mark-to-market value of the portfolio and in view of concerns related to risk management. This in turn underscores the need for sound, consistent norms for valuation of fixed income instruments. This is provided by the ZCYC, also referred to as the term structure of interest rates, which depicts the relationship between interest rates in the economy and the term to maturity.

On any particular day, the ZCYC is estimated using the PV relation. However, unlike in derivation of PVs using YTMs, the discount rate used for computing the PV of each cash flow is the interest rate associated with the time to maturity of the given cash flow. Derivation of the entire set of interest rates requires prior specification of an interest rate–maturity relation (the model) that is estimated using market prices and corresponding PVs for all traded securities. Once estimated, the ZCYC can be used to derive the underlying 'fundamental' price of any fixed income instrument, including non-traded instruments, by discounting its cash flows using the interest rate for the associated 'time to cash flow'. Further, with interest rates being a function of maturity alone, cash flows due at the same time are discounted using the same rate even if they were due from two different instruments. The regulatory authorities should recommend use of ZCYC as an alternative to the YTM in setting valuation and risk management systems for fixed income portfolios.

Asset Based Securitisation: The market for securitisation has not appreciably developed in India because of lack of legal clarity and conducive regulatory environment. A RBI Working Group has identified various impediments, *viz.*, lack of investor base, capital market infrastructure, regulatory framework, legal provisions, accounting and taxation issues and standardisation and recommended a number of measures for securitisation to take off in the country. The recommendations include rationalisation/ reduction of stamp duties, inclusion of securitised instruments in the definition of "securities" under the SC(R)A, removal of prohibition on investment in mortgage backed securities by mutual fund schemes, tax neutrality of SPV, etc. These recommendations need to be quickly translated into policy and regulations. A significant development in this regard is amendment in the SC(R)A in June 2002 to include "security receipts" within the definition of securities.

Government Securities Market

In fact, it would be ideal if the existing infrastructure of the equity market for trading, clearing and settlement is used for government securities also. This would not only avoid the wastage of resources on account of re-building the wheel, but also reduce the gestation period. Government securities can trade alongside equities, debt derivatives can trade alongside equity derivatives and the transactions in government securities can be cleared

and settled alongside equity transactions. This would enhance operational efficiency immediately to that in the equity market.

Trading: The market would gain substantially in liquidity and efficiency if the trading framework of equity market were replicated in the debt market also. That is, four key principles - anonymity, price time priority, nation wide market and settlement guarantee – apply to trading of government securities. The players share a common platform to buy or sell securities. Absence of any requirement to go through a common platform, like stock exchange, induces some of the players to enter into non-transparent deals through the telephonic market. If these participants are required to go through a screen based trading on stock exchanges where an efficient and transparent price discovery mechanism is available with complete audit trail of activities, a liquid and vibrant secondary market for debt will be a reality.

Clearing & Settlement: The clearing and settlement arrangement in equity market needs to be replicated in the debt market. A clearing corporation which would provide nation-wide clearing and settlement of debt securities with standardised procedures, practices and settlement cycles is a must. The clearing corporation should use various risk containment measures such as capital adequacy, exposure monitoring and margins to manage risk and thereby offer settlement guarantee. A significant development in this context is the establishment of a clearing corporation for clearing of money, government securities and forex markets transactions. The CCIL settles trades on gross basis and acts as a central counterparty for clearing and settlement of government securities transactions done on NDS. This needs to be extended to all trades in government securities irrespective of the trading platform and participants and trades should be settled on net basis.

STRIPS: Separate Trading of Registered Interest and Principal of Securities (STRIPS) involves stripping a conventional security into a number of zero coupon securities, which can be traded separately. As one underlying 10-year government security can be converted to 21 zero coupon securities, the breadth of the debt market would expand considerably. Increased supply of securities across maturities would provide a continuous market and consequently improve liquidity. The introduction of STRIPS in government securities would be a good bait for small investors, as these are comparable to other fixed income instruments, which are their favourites. Besides, it would allow the issuer to issue securities with long term maturity for any amount and allow stripping of these securities to meet the market appetite for short-term securities in convenient amounts. However, a few legal clarifications/relaxations are needed for issuance and trading of STRIPS. The Negotiable Instruments Act 1881 should permit the principal and the interest coupons to be uniquely identified as distinctive securities. Clarifications are required if the issuance and transfer of STRIPS, even though derived from government securities, would attract any stamp duty and at what rates. CBDT has clarified taxation issues relating to issuance of STRIPS. RBI is setting up a working group to suggest operational and prudential guidelines.

Primary Issuance: The Public Debt Office of RBI conducts auction for issue of government securities. The bidders have option to submit bids electronically and make payment for the securities by electronic fund transfer. However, the entire process of auction is carried out manually without use of information technology. As a result, the market is localised; it is not transparent; the bidders have no choice to revise their bids; and hence the price discovery is inefficient. What is required is the auction should be held electronically on an all India basis and participants should be able to see the building up of bids and revise their bids if they so feel.

The role of RBI as the manager of government debt conflicts with its role as manager of the monetary policy. In the interest of greater autonomy of monetary policy, the issuance of government securities should be managed outside RBI, that is, the decisions relating to debt management and interest rate should be taken independently to avoid perceived conflict of interest.

Regulatory Issues

Regulatory Jurisdiction: There are several statutes regulating different aspects of the securities market. These have caused a lot of confusion not only in the minds of investors, but also among the various agencies who administer these legislations. The greater the number of laws, the greater is the scope for inconsistency among them and greater is the possibility for regulatory overlaps and gaps.

There are also as many regulators as the number of laws. Many a powers are exercised concurrently by SEBI with government. A few powers under the SCRA are now concurrently exercisable by RBI also. As a result the responsibility for supervision and development of the securities market is fragmented among different agencies. As the roles of various agencies overlap, there is scope for duplicate and inconsistent regulations.

The securities market is an integral part of the economy. It has the potential to destabilise other sectors. It is therefore necessary that the penalty for offences in the securities market is deterrent. The first step in this regard is to make all the offences in the securities market cognisable, as a few offences under the SCRA are. It is desirable that an adjudicating officer tries all offences under the securities laws and awards suspension/cancellation of registration and/or monetary penalties, while SEBI concentrates on developmental and regulatory work. The maximum penalties prescribed under the securities laws appear at times too low where it should have been high and too high where it should have been low. In addition to rationalising the rates of penalty, these needs to be increased substantially, may be ten fold, as has been done recently under the Companies Act.

The protection of the interests of investors requires consolidation of all laws relating to securities market into a single piece of legislation, preferably called the Securities Act and assigning its administration to one agency. And this piece of legislation should prevail over general laws like the Companies Act, the UTI Act, the Consumer Protection Act, the Contracts Act, etc and the agency works in close coordination with regulators for other areas of financial market.

Investor Grievances: The consumer forum provides an expeditious remedy to a consumer who has suffered loss on account of deficiency in goods/services purchased by him. A similar arrangement is called for redressal of investor grievances, given the rate of disposal of our judicial system. The investor forum as well as other authorities should have power to dispose off the cases summarily and to award compensation to the investor. It is not enough if the culprit is punished. The culprit needs to be punished in an exemplary manner, while investor should have means to recover his loss caused by the culprit.

The depositors are protected up to Rs. 1 lakh in the event of liquidation/bankruptcy of a bank. This protects innocent depositors and thereby contributes to the stability of the financial system. A similar mechanism may be developed to compensate an investor up to Rs. 5 lakh if he suffers a loss on account of the failure of the system or mischief by any market participant. An organisation called Securities Investor Protection Corporation (SIPC) operates in the USA to provide similar protection to investors.

Department of Company Affairs, SEBI, Stock Exchanges, Depositories, Investor Associations and a number of NGOs are organizing investor education/awareness programmes. What is missing is co-ordination. The regulator may take initiative and co-ordinate the efforts of these agencies so that investors all over the country benefit from such programmes.

Central Information Depository: An investor normally deals in securities through an intermediary, whose acts of omission and commission can cause loss to him. In order for the investor to choose the right intermediary through whom he may transact business, it may be useful to help him in taking informed decision by making details of intermediaries available to him. The details may include the form of organization, management, capital adequacy, liabilities, defaults and penal actions taken by the regulator and self regulatory organizations against the intermediary in the past and other relevant information. Similarly the details about the issuer should be available to investors/public. If possible, the issuers/ intermediaries may be rated and their ratings are disseminated. One way to do so would be to display the details of SEBI registered intermediaries and listed companies on an easily accessible user friendly central web site. This would enable the investor to make informed decisions not only about his investments but also the intermediaries through whom he should transact.

Quality Intermediation: Quality intermediation requires personnel providing intermediation services to follow a certain code of conduct and possess requisite skills and knowledge to service different constituents in the market. Whereas the former is achieved by regulation, the latter is generally acquired through a system of testing and certification. The testing and certification ensures that a person dealing with financial products has a minimum standard of knowledge about them, market and the regulations so as to assist the customers in their dealings and thereby builds a cadre of professionals whom the investor can trust. Such testing and certification needs to be made mandatory for employees working with intermediaries.

Plea Bargaining: The SEC lets off the offenders who simply pay up without admitting to an offence. This prevents every case being locked up in a court. Given the number of cases pending in the Indian courts and intangible nature of securities market offences (it is difficult to track evidence since the securities are issued, traded, cleared, settled and transferred electronically in demat form), SEBI requires similar facilities if the offenders are to be punished on priority. This would help to bring all the co-accused to book or solve difficult cases if one accused provides lead by agreeing to plea bargain in exchange of a lenient sentence.

Annexure 1-1: Elements of Market Design in Indian Securities Market, 1992 and 2002

Feature	Corporate Securities		Government Securities	
	1992	2002	1992	2002
Regulator	No Specific Regulator, but Central Government oversight	A specialised regulator for securities market (SEBI) vested with powers to protect investors' interest and to develop and regulate securities market. SROs strengthened	RBI participates in the market as well as regulates it.	Unchanged. SROs emerged
Intermediaries	Some of the intermediaries (stock brokers, authorized clerks and remisiers) regulated by the SROs	A variety of specialized intermediaries emerged. They are registered and regulated by SEBI (also by SROs). They as well as their employees are required to follow a code of conduct and are subject to a number of compliances	Brokers/dealers with agency problems	Brokers of specified exchanges authorised to trade. Primary Dealers offer two-way quotes
Access to Market	Granted by Central Government	Eligible issuers access the market after complying with the issue requirements	Authorised by Parliament. Automatic monetisation prevalent	Unchanged. Automatic monetisation discontinued
Pricing of Securities	Determined by Central Government	Determined by market, either by the issuer through fixed price or by the investors through book building	Determined by RBI	Determined by market through a system of auctions (uniform /multiple price/yield). Small proportion available at prices determined by RBI
Integration with International market	No access	Corporates allowed to issue ADRs/ GDRs and raise ECBs. ADRs/GDRs have two way fungibilty. FIIs allowed trade in Indian market. MFs also allowed to invest overseas	No access except external borrowing by Government.	Unchanged. FIIs permitted to invest in government securities
Trading Mechanism	Open outcry, Available at the trading rings of the exchanges, Opaque, Auction/negotiated deals	Screen based trading system, Orders are matched on price-time priority, Transparent, Trading platform accessible from all over country	Negotiated deals over telephone	Negotiations over telephone and on screen, Also Screen based trading system where orders are matched on price-time priority
Aggregation order flow	Fragmented market through geographical distance. Order flow unobserved	Order flow observed. The exchanges have open electronic consolidated limit order book (OECLOB)	Fragmented market through geographical distance. Order flow unobserved	Unchanged. Limited use of OECLOB
Anonymity in Trading	Absent	Complete	Absent	Absent except for OECLOB market
Settlement System	Bilateral	Clearing House of the Exchange or the Clearing Corporation is the central counter-party	Bilateral	Clearing corporation is counterparty to most of the trades. Bilateral settlement continues
Settlement Cycle	14 day account period settlement, but not adhered to always	Rolling settlement on T+3 basis	Spot	Rolling settlement on T+0 to T+5 basis
Counterparty risk	Present	Absent	Present	Absent for trades settled through clearing corporation
Form of Settlement	Physical	Mostly Electronic	Physical	Mostly Electronic through DvP
Basis of settlement	Bilateral Netting	Multilateral Netting	Gross	Unchanged. However, net in funds in respect of settlement through clearing corporation
Transfer of securities	Cumbersome. Transfer by endorsement on security and registration by issuer	Securities are freely transferable. Transfers are recorded electronically in book entry form by depositories	Transfer by endorsement	Securities are freely transferable. Transfers are recorded electronically in book entry form in SGL
Risk Management	No focus on risk management	Comprehensive risk management system encompassing capital adequacy, limits on exposure and turnover, VaR based margining, client level gross margining, on-line position monitoring etc.	No focus on risk management	Comprehensive risk management mechanism in respect of transactions settled through clearing corporation
Derivatives Trading	Absent	Exchange traded futures and Options available on two indices and select securities	Absent	Absent. Repo transactions permitted