1 Securities Markets in India: An Overview

This publication reviews developments in the securities market in India during 1999-2000 and April-September 2000, which have further refined the market micro-structure, modernised the operations and broadened the investment choices for the investors. During this period, the policy makers demonstrated their seriousness to develop debt market by deciding to strengthen and modernise legislative framework through a government securities Act, abolish stamp duty on transfer of dematerialised debt securities to promote dematerialisation, set up a debt clearing corporation to undertake clearing and settlement of transactions in government securities, mandate execution of trades in debt securities on the basis of price and order mechanism of the stock exchanges to impart efficiency and transparency to trading, and entrust RBI with responsibility to regulate contracts in government securities, derivatives on government securities and ready forward contracts in debt securities. The trading in derivatives of securities was flagged off on two exchanges and the three-decade old ban on forward trading of securities was withdrawn. Trading of futures based on an Indian index, S&P CNX Nifty, commenced on an overseas exchange. The primary market as well as mutual funds showed signs of recovery. Regulations for collective investment schemes and credit rating agencies were issued in the interest of investors. The secondary market witnessed unprecedented volumes, which more than doubled in 1999-2000 as well as during April-September 2000. The trading platform reached the doors of investors through Internet. Dematerialised settlement picked up and by September 2000 it accounted for over 90% of total delivery-based settlement, reducing the percentage of bad deliveries to almost nil. Market participants are intensively using the facility of lending and borrowing of securities. Rolling settlement has been introduced in respect of select scrips. These developments in the securities market, which supports corporate initiatives, finances the exploitation of new ideas and facilitates management of financial risks, hold out necessary impetus for growth, development and strength of emerging market economy of India.

A Profile

The past decade has been a golden age for securities market in India. It is now a far more important source of finance than traditional financial intermediaries for corporate sector. It is poised to dominate the future of corporate finance in India, thanks to reforms in the securities market. The process of reforms has led to a pace of growth of markets almost unparalleled in the history of any country. Securities market in India 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, 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, thanks to the National Stock Exchange. Indian market is now comparable to many developed markets in terms of a number of parameters, as may be seen from Table 1-1. There are a very few countries which have higher turnover ratio than India. Market capitalisation as a percentage of GNP compares favourably even with

Table 1-1: International Comparison: end December 1999

Particulars	USA	UK	Japan	Germany	Singapore	Hongkong	China	India*
No. of listed Companies	7,651	1,945	2,470	933	355	695	950	9,871
Market Cap. ($ mn)	16,635,114	2,933,280	4,546,937	1,432,190	198,407	609,090	330,703	280,619
Market Cap. Ratio (%)	210	232	111	66	208	385	36	85
Turnover ($ mn)	18,574,100	1,377,859	1,849,228	1,357,841	97,985	244,886	377,099	486,360
Turnover Ratio (%)	124	52	53	108	67	51	134.2	245

* Estimated for the financial year ending March 2000
Source: S&P's Factbook, 2000

advanced countries and is much better than emerging markets. In terms of number of companies listed on stock exchanges, India is second to none. In terms of number of transactions, NSE and BSE stood fifth and seventh respectively among the stock exchanges in the world in 1999. At the end of 1999, the Standard & Poor's (S&P) ranked India as 23rd in terms of market capitalisation, and 17th in terms of total value traded in stock exchanges. 143 Indian stocks, which accounted for 63.3% market capitalisation and 84.8% of total value traded, had a 6.4% weight in IFC Global Composite Index of emerging market stocks. In the case of IFC Investable Composite Indices, which include emerging market stocks that are determined by the IFC to be legally and practically available to foreign portfolio investors, India's share was only 2.6% with 95 stocks. India, however, accounted for 0.51% of global market capitalisation at the end of 1999 and 0.39% of global turnover during 1999. These figures indicate tremendous potential for growth of Indian securities market.

Dependence of Corporate Sector

The decade of the 1990's 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. Within the external sources there appears to be growing preference for direct financing (equity and debt) to indirect financing (bank loan). According to RBI studies (RBI Bulletin, March 2000), the external sources continued to have major share with about 66% and 65% of the total funds raised by the public limited companies during 1997-98 and 1998-99, respectively. Borrowings constituted 70% and 60% of external funds raised during the said periods. According to CMIE data as reproduced in Table 1-2, external sources accounted for about 75% of funds raised during 1994-95 and this declined to about 64% during 1998-99. The share of capital market based instruments in total sources of funds increased to 41% in 1993-94, but declined thereafter to 11.3% by 1998-99. The debt-equity ratio for major corporations reduced from about 1.5 at the end of 1980s to about 1 in 1997-98, according to an estimate of RBI. This indicates that the reliance of corporate sector on securities market has gone up substantially following reforms in the financial sector, in particular, in securities market.

Savings of Household Sector

According to RBI data (Table 1-3), household sector accounted for 83% of gross domestic savings during 1998-99; 59% of their savings were in financial assets. They invested 42% of financial savings in deposits, 33% in insurance/provident funds, 11% on small savings, and 4.2% in securities, including government securities and units of mutual funds

Table 1-2: Sources of Funds for Corporate Sector

(In per cent)

Sources	1994-95	1995-96	1996-97	1997-98	1998-99
Internal Sources	**25.3**	**28.3**	**25.7**	**30.2**	**36.3**
Retained Profits	14.4	15.8	7.8	8.3	6.3
Depreciation	11.0	12.5	18.0	21.9	30.0
External Sources	**74.7**	**71.7**	**74.3**	**69.8**	**63.7**
Capital Market	34.7	15.2	15.2	20.7	11.1
Bank/Institutional Borrowing	21.8	31.7	40.1	32.3	18.4
Current Liabilities & Provisions	18.1	24.7	19.0	16.9	34.2

Source: Economic Intelligence Service – Corporate Sector, CMIE, May 2000.

during 1998-99. 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 was estimated at 89.2% in 1997-98, which declined to 85.6% in 1998-99. 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 3.9% in 1997-98, which increased marginally to 4.3% in 1998-99.

The disenchantment of household sector with securities is confirmed by the SEBI-NCAER survey, 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 households savings is channelised into the securities market. What worries further 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 lack of confidence by the existing investors in the securities market.

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 trend may be somewhat different as the data become available for 1999-2000, which witnessed increasing interest of households in mutual funds and secondary market.

Investor Population

According to a study by the Society for Capital Market Research and Development (Investor Disenchantment with Equities by L. C. Gupta, Indian Financial Markets & Institutions, October 1999), estimated investor population in India is stagnating at 20 million since 1995.

According to the SEBI- NCAER survey of Indian

Table 1-3: Savings of Household Sector in Financial Assets

(In per cent)

Financial Assets	1994-95	1995-96	1996-97	1997-98	1998-99
Currency	**10.9**	**13.4**	**8.6**	**7.0**	**10.1**
Fixed income investments	**77.0**	**78.9**	**84.4**	**89.2**	**85.6**
Deposits	45.5	42.1	48.2	47.5	41.8
Insurance/Provident/Pension Funds	22.5	29.4	29.2	31.1	33.2
Small Savings	9.0	7.4	7.0	10.6	10.6
Securities Market	**12.1**	**7.8**	**6.9**	**3.9**	**4.3**
Mutual Funds	3.8	0.5	2.7	0.6	1.0
Government Securities	0.1	0.4	0.4	1.5	1.7
Other Securities	8.2	6.9	3.8	1.8	1.6
Total	100.0	100.1	99.9	100.0	100.0

Source: RBI.

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. 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 investor households increased at a compound growth rate of 22%, between 1985-86 and 1998-99. The rural investor households have increased at a compound growth rate of 30% compared to 19% for urban investor households. There was a sharper rise in investor households between 1991-92 and 1998-99 than between 1985-86 and 1991-92. 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. The number of households owning units of mutual funds is more than the number of households having investments in equities and debentures. 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.

Investor Behaviour

According to the same SEBI-NCAER 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 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

Table 1-4: 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.

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 1-4 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 1-5 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.

Table 1-5: 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	46.30
Small Savings	27.46	35.98	24.07
Preference Share	2.63	6.59	1.06
Others	8.75	11.85	7.52

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

About 35% of investor households became investors in equity shares prior to 1991, while 47% of the investors entered the market between 1991-95 and 17% after 1995. 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 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.

Primary Market

A total of Rs.1,85,786 crore were raised by the government and corporate sector during 1999-2000 as against Rs.1,66,259 crore during the preceding year. Government raised about 61% of the total resources, with central government alone raising nearly Rs.1,00,000 crore.

Corporate Securities

Average annual capital mobilisation from the primary market, which used to be about Rs.70 crore in the 1960's and about Rs.90 crore in the 1970's, increased manifold during the 1980's, with the amount raised in 1990-91 being Rs. 4,312 crore. It received a further boost during the 1990's 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 1970's increased to about 13% in 1992-93. In real terms, the capital

Table 1-6: Resouces 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	36	100.00	7,508
1991-92	6,193	4.38	39	126.27	11,253
1992-93	19,803	12.76	86	366.88	13,021
1993-94	19,330	9.98	73	330.51	11,243
1994-95	26,417	10.48	79	407.46	11,274
1995-96	16,075	5.34	42	230.26	–5,832
1996-97	10,410	3.28	24	140.20	–2,037
1997-98	3,138	0.84	6	40.31	4,002
1998-99	5,013	1.27	9	60.24	3,610
1999-2000	5,153	0.83	8	60.18	21,971

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 1-6.

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 1999-2000 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 1-7), although scanty, indicate that private placement has become so preferred a means of raising resources by the corporate sector that it is believed in certain circles that private placements have crowded out public issues.

The public issues market, however, seems to be looking up in the recent past. The buoyancy in the stock market, particularly info-tech scrips, in 1999-2000 has helped in the revival of primary market. April-September 2000 witnessed considerable activity. Book building is gaining acceptance. The revival of primary market, though distinct, is confined mostly to IT sector, where retail and institutional interest continues to be high.

There is a preference for raising resources in the primary market through private placement of debt instruments. Private placements accounted for about 88% of total resources mobilised by the corporate sector during 1999-2000. About Rs. 1,70,000 crore has been raised through private placement of debt during last five years. Rapid dismantling of shackles on institutional investments and deregulation of the economy are driving

Table 1-7: 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
Corporate Securities	**14,219**	**16,366**	**23,537**	**44,498**	**48,084**	**36,689**	**37,147**	**42,125**	**60,192**	**72,450**
Domestic Issues	14,219	16,366	23,286	37,044	41,974	36,193	33,872	37,738	59,044	68,963
Non-Govt. Public Companies	4,312	6,193	19,803	19,330	26,417	16,075	10,410	3,138	5,013	5,153
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	-	-
Banks & FIs	-	-	356	3,843	425	3,465	4,352	1,476	4,352	2,551
Private Placement	4,244	4,463	1,635	7,466	11,174	13,361	15,066	30,099	49,679	61,259
Euro Issues	-	-	251	7,454	6,110	496	3,275	4,387	1,148	3,487
Government Securities	**11,558**	**12,284**	**17,690**	**54,533**	**43,231**	**46,783**	**42,688**	**67,386**	**106,067**	**113,336**
Central Government	8,989	8,919	13,885	50,388	38,108	40,509	36,152	59,637	93,953	99,630
State Governments	2,569	3,364	3,805	4,145	5,123	6,274	6,536	7,749	12,114	13,706
Total	**25,777**	**28,650**	**41,227**	**99,031**	**91,315**	**83,472**	**79,835**	**109,511**	**166,259**	**185,786**

Source: Annual Reports & Reports on Currency & Finance, RBI.

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.

As may be seen from Table 1- 7, 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. 27,000 crore through ADRs/GDRs. The investments by FIIs enjoy full capital account convertibility. By the end of September 2000, 541 FIIs were registered with SEBI. They had net cumulative investments of US $ 12 billion by the end of September 2000. 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. The net collections by mutual funds picked up during this decade and increased to Rs. 21,971 crore during 1999-2000. According to AMFI data, total investible resources of the mutual funds grew to Rs 1,13,005 crore at the end of March 2000 following a plethora of incentives offered in the Union Budget for 1999-2000 and declined to Rs. 97,462 crore at the end of September 2000, following a set of disincentives introduced through the Union Budget for 2000-01. The investible resources of the mutual funds accounted for 9.5% and 11.4% of market capitalisation as at the end of March 2000 and September 2000 respectively.

Government Securities

The primary issues of the Central Government have increased ten-fold during the decade of 1990's from Rs. 8,989 crore in 1990-91 to Rs. 99,630 crore in 1999-2000. The issues by state governments increased by about five times from Rs. 2,569 crore to Rs. 13,706 crore during the same period. The gross market borrowings amounted to Rs. 99,630 crore, including 364-day treasury bills of Rs. 13,000 crore. After meeting repayment liabilities of Rs. 16,353 crore, and redemption of 364-day treasury bills of Rs. 10,200 crore, net market borrowing was Rs. 73,077 crore for the year 1999-2000. During April-September 2000, Central Government has made gross and net borrowings of Rs. 77,183 crore and Rs. 47,026 crore respectively against estimate of Rs. 1,17,704 crore and Rs. 78,383 crore for the full year. The state governments collectively raised Rs. 13,706 crore during 1999-2000 as against Rs. 12,114 crore in the preceding year. The net borrowings amounted Rs. 12,405 crore after meeting repayment liabilities of Rs. 1,301 crore.

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 11.77% in 1999-2000. The maturity structure of government debt is also changing. In view of bunching of redemption liabilities in the medium term, no securities with maturities of less than 5 years were issued during 1999-2000. About 65% of primary issue was raised through securities with maturities above 10 years. As a result the weighted average maturity of dated securities increased to 11.77 years from 7.71 years in 1998-99 and 6.6 years in 1997-98. In view of increasing tenor of securities, the structure of

outstanding debt has undergone change. The weighted average maturity of outstanding marketable debt increased to 7.75 years from 7.30 years in 1998-99.

Secondary Market

Corporate Securities

Selected indicators in the secondary market for corporate securities are presented in Table 1-8. The number of listed companies has been rising steadily from 2,265 in 1980 to 9,890 at the end of March 1997. However, the growth in the number has been lower during 1990's and it even declined during 1999-2000. It stood at 9,871 at the end of March 2000.

The 1990s has been a period of rapid growth of market capitalisation. The market capitalisation grew at an average annual rate of 46% during 1990's, despite negative growth rates during three years in between. Market capitalisation increased sharply by 221% during 1991-92 and by 107% during 1999-2000. All India market capitalisation is estimated at Rs.11,92,630 crore at the end of March 2000. 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, while the market capitalisation of world's stock markets exceeded the global GDP by the end of 1999. Another dramatic development has been improvement in the volume of trading. 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 increased by 46% during 1995-96, 184% during 1996-97, 40% during 1997-98, 13% during 1998-99, 102% during 1999-2000 and by 105% during April-September 2000. One-sided turnover on all stock exchanges exceeded Rs. 10,00,000 crore

Table 1-8: Secondary Market - Selected Indicators

At the End of Financial Year	No. of Listed Companies	S&P CNX Nifty	Sensex	Market Capitalisation (Rs. crore)	Market Capitalisation Ratio (%)	Turnover (Rs. crore)*	Turnover Ratio (%)
1985-86	4,344	—	574.11	24,302	9.3	—	—
1986-87	4,744	—	510.36	27,572	9.4	—	—
1987-88	5,560	—	398.37	35,521	10.7	—	—
1988-89	5,841	—	713.60	51,379	13.0	—	—
1989-90	5,968	—	781.05	70,521	15.4	—	—
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	9,077	990.24	3260.96	473,349	45.6	162,905	34.4
1995-96	9,100	985.30	3366.61	572,257	47.0	227,368	39.7
1996-97	9,890	968.85	3360.89	488,332	34.6	646,116	132.3
1997-98	9,833	1116.65	3892.75	589,816	37.7	908,681	154.1
1998-99	9,877	1078.05	3739.96	574,064	34.1	1,023,382	178.3
1999-00	9,871	1528.45	5001.28	1,192,630**	84.7 **	2,067,031	245.3**

* During the year

** Estimated

Source: Report on Currency and Finance, 1998-99.

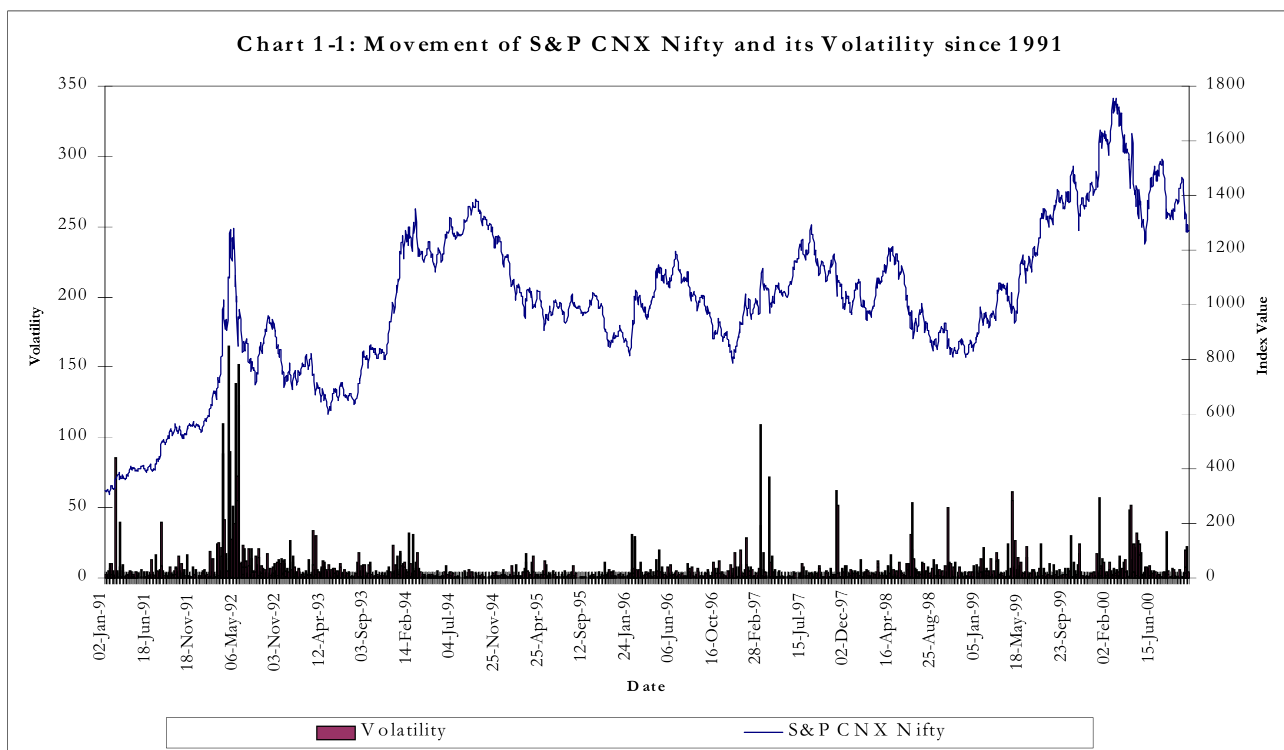
during 1998-99 and Rs. 20,00,000 crore during 1999-2000. The turnover ratio for the year 1999-2000 increased to 245, which is one of the highest in the world and is likely to exceed 300 during 1999-2000.

The relative importance of various stock exchanges in the market has undergone dramatic change during this decade. Century old BSE gave way to NSE in the very first year of latter's operation. NSE is the market leader with over 40% of total turnover in 1999-2000. Top 6 stock exchanges accounted for 99% of turnover, while the rest 17 exchange for only about 1% during 1999-2000.

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. Since then, the market has been on a roller coaster ride, but a distinct rising trend has 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 is nearly four times the average return offered on bank deposits.

The market, remained plagued by high volatility and price manipulations. Of the 56 cases taken up by SEBI for investigation during 1999-2000, 47 related to price manipulation and price rigging. A High-to-Low ratio of 2-3 during a year is observed in a large

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



number of securities, including index scrips, indicating that the share prices rise to more than double or fall to less than half during a year. Such high fluctuations point at divergence of prices from its fundamentals. However, a recent SEBI study has revealed that India exhibits lowest variation in stock prices among the emerging markets.

The secondary market for debentures is not active and the market for preference shares is virtually non-existent. Market did not provide any mechanism to hedge risk. Trading in derivatives of securities commenced in June 2000 with the enactment of enabling legislation in early 2000.

Government Securities

The aggregate turnover in central and state government dated securities, including treasury bills, through SGL transactions during 1999-2000 reached a level of Rs.5,39,232 crore, recording 137% growth over Rs.2,27,228 crore in the previous year. Such growing turnover reflects further deepening of the market. The bulk of transactions was on outright basis amounting to Rs. 4,56,491 crore (85%) in 1999-2000 and the balance was by way of repos. The share of outright transactions in government securities increased from 23% in 1995-96 to 76.4% in 1996-97 and to 86.8% in 1997-98 and it reduced marginally to 83% in 1998-99 to increase to 84.66% in 1999-2000.

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. It was 76% during 1997-98, which increased to 80% in 1998-99 and further to 89.88% in 1999-2000. 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.

Only trading mechanism available in the debt market was the telephone market before June 1994, when NSE launched Wholesale Debt Market (WDM) segment. This provides the only formal platform for trading of a wide range of debt securities. The trading system, known as NEAT (National Exchange for Automated Trading), is a fully automated screen based trading system that enables members across the country to trade simultaneously with enormous ease and efficiency. The trading system is an order driven system which matches best buy and sell orders on a price-time priority. The identity of the buyer and seller are completely protected on the system.

The turnover on the WDM segment has been increasing rapidly. The average daily turnover increased from Rs. 35 crore during 1994-95 to Rs.1,035 crore during 1999-2000. The average number of trades per day increased from 56 in 1998-99 to 160 in 1999-2000. Similarly average daily turnover increased sharply from Rs.365 crore to Rs.1,035 crore. The turnover nearly trebled to Rs.3,04,216 crore in 1999-2000 from Rs.1,05,469 crore in 1998-99. The share of WDM segment of the NSE in the turnover for government securities and treasury bills increased from 42% in 1998-99 to 54.5% in 1999-2000 and further to 57.7% during April-September 2000.

Market Participants

The securities market disintermediates by establishing a direct relationship between the savers and the users of funds. This disintermediation, however, requires the services of a variety of intermediaries and the reassurance that it is safe to participate in the securities market. All the intermediaries in the market, such as brokers and sub-brokers, underwriters, merchant bankers, bankers to the issue, share transfer agents and registrars to the issue are required to register with SEBI and are governed by its regulations. A code

Table 1-9: Market Participants in Securities Market

Market Participants	Number as on 31st March, 2000
Securities Appellate Tribunal	1
Regulators	4*
Depositories	2
Stock Exchanges	
With Equities Trading	23
With Internet Trading	1
With Clearing Corporation	1
With MCFS	7
With ALBM	1
With Debt Market	1
With Derivative Trading	2
Brokers	9,192
Corporate Brokers	3,316
Sub-brokers	5,675
Portfolio Manager	23
FIIs	506
Custodians	14
Share Transfer Agents	242
Primary Dealers	15
Merchant Bankers	186
Venture Capital Funds	27
Mutual Funds	37
Collective Investment Schemes	37**
Underwriters	42
Bankers to an Issue	68

* DCA, DEA, RBI & SEBI.

** Filed application for registration with SEBI.

of conduct for each intermediary has been prescribed in the regulations; capital adequacy and other norms have been specified; a system of monitoring and inspecting their operations has been instituted to enforce compliance; and disciplinary actions are being taken against the intermediaries violating any regulation. The number of market participants serving investors and issuers of securities is presented in Table 1-9.

Regulatory Framework

Before 1992, the three principal Acts governing the securities market were: (a) the Capital Issues (Control) Act, 1947, which restricted issuer's access to the securities market and controlled the pricing of issues; (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; and (c) the Securities Contracts (Regulation) Act, 1956, which provides for regulation of transactions in securities through control over stock exchanges. In addition, a number of other Acts, e.g. the Public Debt Act, 1942, the Income Tax Act, 1961, the Banking Regulation Act, 1949, have substantial bearing on the working of the securities market.

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. The Act was retained with some modifications as a means of controlling the raising of capital by companies and to ensure that national resources were channelled 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.

Securities Contracts (Regulation) Act, 1956

The previously self-regulated stock exchanges were brought under statutory regulation through the passage of the SC(R)A, which provides for direct and indirect control of virtually all aspects of securities trading and the running of stock exchanges. This 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 in an area takes place on a specified recognised stock exchange. The stock exchanges determine their own listing regulations which have to conform with the minimum listing criteria set out in the Rules.

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, substantial acquisitions of shares, payment of interest and dividends, supply of annual report and other information.

This legal and regulatory framework contained many weaknesses. Jurisdiction over the securities market was split among various agencies and the relevant law was scattered in a number of statutes. This created confusion, not only in the minds of the regulated but also among regulators, and created inefficiency in the enforcement of the regulations. It was the Central Government rather than the market that allocated resources from the securities market to competing issuers and determined the terms of allocation. The allocation was not necessarily based on economic criteria, and as a result the market was not allocating the resources to the best possible investments, leading to a sub-optimal use of resources and low allocational efficiency. Informational efficiency was also low because the provisions of the Companies Act regarding prospectus did not ensure the supply of necessary, adequate and accurate information, sufficient to enable investors to make an informed decision. The many formalities associated with the issue process under various regulations kept the cost of issue quite high. Under the SC(R)A, the secondary market was fragmented regionally, with each stock exchange a self-regulating organisation following its own policy of listing, trading and settlement. The listing agreement did not have the force of law, so that issuers could get away with violations. The interests of the brokers, who were market players and dominated the governing boards of stock exchanges, took priority over the interest of investors. The market was narrow and investors did not have an opportunity to build balanced portfolios. The settlement of trades took a long time, because it required physical movement of securities, and the transfer of securities was very cumbersome under the Companies Act and SC(R)A, thus depriving the investor of liquidity. Options and futures were expressly forbidden by law.

Reforms

Corporate Securities Market

With the objectives of improving market efficiency, enhancing transparency, checking 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. This has changed corporate securities market beyond recognition in this decade. The practice of allocation of resources among different competing entities as well as its terms by a central authority was discontinued. The secondary market overcame the geographical barriers by moving to screen based trading. Trades enjoy counter-party guarantee. Physical security certificates have almost disappeared. The settlement period has shortened to one week and is approaching to one day. The following paragraphs discuss the principal reform measures undertaken since 1992:

I. 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. The office which administered the Act was abolished and the market was allowed to allocate resources to competing uses. Indian companies were allowed access to international capital market through issue of ADRs and GDRs. However to ensure effective regulation of the market, 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. SEBI can specify the matters to be disclosed and the standards of disclosure required for the protection of investors in respect of issues; can issue 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; and can conduct enquiries, audits and inspection of all concerned and adjudicate offences under the Act. In short, it has been given necessary autonomy and authority to regulate and develop an orderly securities market.

As noted above, there were several statutes regulating different aspects of the securities market and jurisdiction over the securities market was split among various agencies, whose roles overlapped and which at times worked at cross-purposes. As a result, there was no coherent policy direction for market participants to follow and no single supervisory agency had an overview of the securities business. Enactment of SEBI Act was the first such 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. 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 financial markets.

II. In the interest of investors, SEBI issued Disclosure and Investor Protection (DIP) guidelines. Issuers are now required to comply with guidelines and then access the market. 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 investor can take an informed decision. For example, issuers are required to disclose any material 'risk factors' in their prospectus and the justification for the pricing of the securities is to be given. SEBI placed a responsibility on the lead managers to give 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. Though the requirement of vetting has now been dispensed with, SEBI has raised standards of

disclosures in public issues to enhance the level of investor protection.

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.

III. Before NSE was set up, 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. The practice of physical trading imposed limits on trading volumes and hence the speed with which new information was incorporated into prices. To obviate this, the NSE introduced screen based trading system (SBTS) where a member can punch into the computer quantities of shares and the prices at which he wants to transact. The transaction is executed as soon as the quote punched by a trading member finds a matching sale or buy quote from a counter party. SBTS electronically matches the buyer and seller in an order-driven system or finds the customer the best price available in a quote-driven system, and hence cuts down on time, cost and risk of error, as well as on fraud. SBTS enables distant participants to trade with each other, improving the liquidity of the markets, and the high speed with which trades are executed and the large number of participants who can trade simultaneously allows faster incorporation of price sensitive information into prevailing prices, thus increasing the informational efficiency of markets. With SBTS, it becomes possible for market participants to see the full market, which helps to make the market more transparent, leading to increased investor confidence. The NSE started nation-wide SBTS, which provided completely transparent trading mechanism. Regional exchanges lost a lot of business to NSE, forcing them to introduce SBTS. Today India can boast that almost 100 % trading takes place through electronic order matching.

Technology was used to carry trading platform to the premises of brokers. The spread of trading terminals reached every nook and corner of the country. NSE has trading terminals in 370 cities while BSE has in about 300 cities. NSE carried trading platform further to the residences of investors through the Internet and is working towards a mobile trading platform through WAP.

IV. Settlement system on Indian stock exchanges gives rise to settlement risk, due to the time that elapses before trades are settled. Trades are settled by physical movement of paper. This has 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 aggregates 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 takes time with the risk of delay somewhere along the chain. The second aspect relates to transfer of shares in favour of the purchaser by the company. The system of transfer of ownership is grossly inefficient as every

transfer involves 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 takes much longer than the two months stipulated in the Companies Act, and a significant proportion of transactions end up as bad delivery due to faulty compliance of paper work. Theft, forgery, mutilation of certificates and other irregularities are rampant, and in addition the issuer has the right to refuse the transfer of a security. All this adds to costs, and delays in settlement, restrict liquidity and make 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 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. Two depositories, viz. NSDL and CDSL, have come up to provide instantaneous electronic transfer of securities. At the end of September 2000, 22,620 million securities worth Rs. 3,561 billion have been dematerialised with NSDL. The market capitalisation of the companies that have joined NSDL has reached Rs. 5,443 billion at the end of September 2000. 151 depository participants are rendering depository services at 330 locations all over the country serving 3.15 million investors who have opened beneficial accounts with NSDL. The securities of 1637 companies are available for demat trading. Demat settlement accounts for about 90% of turnover settled by delivery. This has almost eliminated the bad deliveries and associated problems.

V. The trades accumulate over a trading cycle and at the end of the cycle, these are clubbed together, and positions are netted out and payment of cash and delivery of securities settle the balance. These carry the risks and difficulties of future market without corresponding gains in price discovery and hedging services. Many things can happen between entering into a contract and its performance providing incentives for either of the parties to go back on its promise. This has on several occasions led to defaults and risks in settlement. In order to enforce the trades and prevent market failures, a number of systemic measures have been taken. These include capital adequacy of members, various margin requirements, limits on exposure and turnover, indemnity insurance, position monitoring, etc. Fund settlement takes place through the clearing banks. The exchanges have set up trade/settlement guarantee funds to complete settlements. The NSE has set up a clearing corporation which provides legal counter party guarantee to each trade and thereby eliminates counter party risk.

Attempts are being made to reduce the time gap between execution of trade and its settlement through rolling 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 clearing corporation, and set up the first such 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 systems and an innovative method of on-line position monitoring and automatic disablement. A large Settlement Guarantee Fund, which stood at Rs. 2,329 crore as on 30th September 2000, provides the cushion for any residual risk. As a consequence, despite the fact that daily traded volume is hovering around Rs. 8,000 crore on the NSE, credit risk no longer poses any problems in the market place. 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 proprietory 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, an increasing number of brokerage firms are reorganising themselves into corporate entities. At the end of March 2000, 3,316 brokers out of 9,192 were corporate bodies.

VI. 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.

VII. The governing bodies of stock exchanges used to be dominated by brokers, leading inevitably to conflicts of interest. To discipline brokers and cure typical stock market ills such as price rigging, it was considered necessary for stock exchanges to have a professionally managed

environment. NSE started with the concept of an independent governing body without any broker representation. It was specified in 1993 that the governing boards of stock exchanges must have 50% non-broker members, and that on committees handling matters of discipline, default etc., brokers would be in the minority. All stock exchanges were mandated to appoint a non-broker executive director who would be accountable to SEBI for implementing the policy directions of the Central Government/ SEBI. In course of time, the position of executive director in the management of stock exchange has been strengthened.

VIII. Indian securities market is getting increasingly integrated with the rest of the world. FIIs have been permitted to invest in all types of securities, including government securities. Indian companies have been permitted to raise resources from abroad through issue of ADRs, GDRs, FCCBs and ECBs. Indian Stock Exchanges have been permitted to set up trading terminals abroad. The trading platform of Indian exchanges are now accessed through the Internet from anywhere in the world.

Government Securities Market

A host of measures have been undertaken during 1990's to develop government securities market. 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 for primary issuance of T-bills and central government dated securities, a system of primary and satellite dealers 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 and index linked bonds, availability of full range (14-day, 91-day, 182-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, 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 and OTCEI, 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. The major reforms planned include strengthening and modernising legislative framework through a government securities Act, setting up a debt clearing corporation to undertake clearing and settlement of transactions in government securities, 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 understanding and the knowledge of the Indian capital market and to assist in policy making, the regulator (SEBI) has been promoting high quality research in capital market, both internally and externally, through collaboration with

reputed national and international academic and research institutions. The leading stock exchange (NSE) has also launched NSE Research Initiative with a view to producing significant knowledge and insight in to the working of securities market in India. The objective of the NSE Research Initiative is to foster research which can support and facilitate (a) stock exchanges to 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) to expand the horizon of knowledge about the securities market.

Testing and Certification

A critical element of financial sector reforms is the development of a pool of human resources having right skills and expertise to provide quality intermediation services in each segment of the industry. In order to dispense quality intermediation, personnel working in the industry need to (a) follow certain code of conduct usually achieved through regulations and (b) possess requisite skills and knowledge generally acquired through a system of testing and certification. It is necessary that they have a proper understanding of the business and skills to help it remain competitive. Such testing and certification has assumed added significance in India as there is no formal education/training on financial markets, especially in the area of market operations while at the same time the market has undergone complete transformation in the recent years. Taking into account international experience and needs of the financial markets, NSE launched NCFM (NSE's Certification in Financial Markets) to test practical knowledge and skills, that are required to operate in financial markets, in a very secure and unbiased manner, and to certify personnel with a view to improve quality of intermediation. This has gained market acceptability as there is a realisation that the financial markets are soon going to be the turf of certified professionals due to regulatory compulsions and/or initiatives of the industry. About 10,000 candidates have been tested so far. By imparting comprehensive knowledge and skill in the chosen field, NCFM enhances career opportunities for NCFM certified persons and allows market participants and intermediaries to build their own tailored staff development strategies.

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.

Assessment of Reforms

The securities market is growing exponentially. The number of investors and issuers has increased many times. A wide range of instruments are available. The market structure and design has undergone a sea change. The extensive reforms introduced over the last few years have enhanced the integrity, transparency and efficiency of the operations of the securities market. The spreads have dropped by a factor of 10 and volumes have risen hundred fold in respect of many shares. The improvements in

regulatory framework market micro-structure and competitive environment reduced costs of transactions as may be seen from Table 1-10.

Table 1-10: Reduction of Transaction Costs

Transaction Cost	1994	1999	Global Best
Trading (%)			
Fees	2.50	0.25	0.25
Impact Cost	0.75	0.25	0.20
Clearing			
Counter Party Risk	Present	Nil	Nil
Settlement (%)			
Paper work	0.75	0.10	0
Bad Delivery	0.50	0	0
Stamp Duty	0.25	0	0
Total (%)	>4.75	0.60	0.45

Source: SEBI.

The reforms have transformed market practices, sharply lowered transaction costs and improved market efficiency in equity market. The advances in institutional arrangements in equity market since 1994, as analysed by Prof. Ajay Shah in an international journal, is presented in Table 1-11. The reforms have, however, not yet yielded a liquid and efficient debt market.

IOSCO Principles

Reforms in the securities market, particularly establishment and empowerment of SEBI, screen based nation-wide trading, dematerialisation and electronic transfer of securities have greatly improved the regulatory framework and efficiency of trading and settlement. However, our markets fall short of IOSCO standards, which are international benchmarks for soundness of securities regulations, as may be seen from Table 1-12. Further, there is a wide disparity in the level of compliance by different market segments as well as different market participants. While some are fully compliant, others are in various stages of compliance.

Table 1-11: Changes in India's Equity Market

	Criticism as of 1994	Status as of 2000
1.	The markets are illiquid.	From the late 1995 onward, market liquidity has been quite strong. Transactions for Rs.4 million ($95,000) of the NSE-50 index take place at a one-way market impact cost of 0.2%. The major, most liquid stocks allow transactions on NSE of Rs.100 million ($2.4 million) with market impact cost under 1%.
2.	There are fragile clearing systems, which collapse into payments crises every now and then.	Trades through NSCCL, a modern futures clearing corporation, are free of credit risk. NSCCL has not failed on pay-outs from inception, i.e. June 1996 onwards. However, systemic breakdowns on other exchanges do take place (e.g. BSE in June 1998).
3,4.	The settlement procedures have major problems including delays and back office costs involved in dealing with physical paper, and a thriving business in counterfeiting share certificates.	NSDL, a modern depository based on dematerialisation, commenced operations in December 1996. For stocks accounting for 80% of the market capitalisation of India, over 75% of settlements are now completed electronically.

5. The markets suffer from the rampant insider trading and market manipulation, with little effective regulation.	Little has been done on insider trading. There are now certain checks on market manipulation, such as price limits and capital adequacy requirements. Major stocks are highly liquid, which has greatly increased the cost of manipulative activities, but the enforcement and punishment of manipulative activities (e.g. those seen in BSE crisis of June 1998) is weak.
6. The equity market suffers from bizarre forms of leveraged trading (badla) on the cash market.	Badla is absent on the largest market, the NSE, but persists on the BSE, although NSE continues to use futures-style settlement instead of rolling settlement. A conversion to rolling settlement may take place soon (since commenced).
7. The brokerage industry is a cartel with high brokerage fees.	The rise of NSE has led to 1,000 new brokerage firms coming into the business. This has led to a sharp fall in brokerage rates. NSE has an open entry policy. Any firm that puts up adequate collateral can become a brokerage firm.
8. Securities lending is absent.	A stock lending facility began in early 1999 at NSCCL.
9. India lacks formal derivatives markets that can be used for hedging and speculation.	The dollar rupee forward market can be used by foreign investors for currency hedging. An index futures market could commence operations soon (since commenced).

Source: Changing Liquidity in the Indian Equity Market, Emerging Markets Quarterly, Summer 2000.

Table 1-12: Status of Implementation of IOSCO Standards

Principles	Status of Implementation
A. Principles relating to the Regulator	
1. The responsibilities of the regulator should be clear and objectively stated.	This has been achieved to a large extent through the SEBI Act 1992, which established SEBI and clothed it with responsibilities to protect the interest of investors and to promote the development of and to regulate the securities market. SEBI administers the Depositories Act, 1996. SEBI also exercises powers relating to securities market under the SC(R)A and the Companies Act con-currently with central government. The regulator and its staff enjoy legal protection for their bonafide acts in discharge of their functions and powers. The High Level Committee on Capital Markets co-ordinates securities market regulations. However, greater clarity in SEBI's regulatory authority and responsibilities is desirable.

	Fragmentation of the regulatory authority and responsibilities among Registrar of Companies (ROC), Department of Economic Affairs, RBI and SEBI create confusion among the regulated.
2. The regulator should be operationally independent and accountable in the exercise of its functions and powers.	SEBI is an autonomous body established under the SEBI Act, 1992. It has been vested with authority to discipline market participants and develop markets without any recourse to government. In the matters of policy only, government can issue directions to SEBI. In cases of grave emergencies or in public interest, SEBI can be superceded by the Central Government. The regulations framed by SEBI are laid before Parliament. SEBI is accountable to Parliament through Central Government. There is a system of judicial review of the decisions of SEBI.
3. The regulator should have adequate powers, proper resources and the capacity to perform its function and exercise its powers.	SEBI has powers of licensing, supervision, inspection, investigation and enforcement and to issue directions, impose monetary penalty, suspend/cancel certificates of registration, etc. There is a need to suitably improve its authority and powers, and augment its resources and capacity in order to enable it to fulfil its mandate of "investor protection". The stock exchanges may be authorised to bring in the listed companies into the purview of arbitration through listing agreement.
4. The regulator should adopt clear and consistent regulatory processes.	In the formulation of policy, SEBI consults public and the regulated. The regulations framed by SEBI are published in the Gazette of India and also laid before each House of the Parliament.
5. The staff of the regulator should observe the highest professional standards, including appropriate standards of confidentiality.	A code of conduct has been specified in the service regulations of SEBI. The staff members are required to undertake and declare fidelity and secrecy in terms of the regulations.

B. Principles of 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.	Under the SEBI Act, there is a provision for promotion and regulation of SROs. The law permits plurality of structures, models, styles, etc. of SROs. However, these have not developed appreciably. There are a few associations of market intermediaries like, AMFI, AMBI, who exactly do not regulate, though promote the activities of their members. The stock exchanges are empowered to make bye-laws, rules and regulations for their members and for regulating the conduct of respective members. The current ownership and governance structure of many stock exchanges does not seem adequate to deal with conflict of interest objectively. A few exchanges, on line with international trend, are working on to demutualise to avoid conflict of interest. The regulator needs to ensure that no conflict of interest arises in stock exchange because of access to valuable information about market participants.
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 SROs are under the direct oversight of SEBI which issues guidelines and directions periodically to ensure safety, integrity and improvement of the market. SEBI also approves and amends the rules of SROs and inspects them to ensure that the rules are adhered to.
C. Principles for the Enforcement of Securities Regulation	
8. The regulator should have comprehensive inspection, investigation and surveillance powers.	SEBI has powers to require the provision of information, or to carry out inspections to ensure compliance with prescribed standards.
9. The regulator should have comprehensive enforcement powers.	SEBI has power of inspection, investigation and enforcement and to issue directions, impose monetary penalty, suspend/cancel certificates of registration etc. It also has powers to obtain data, information, documents, statements and record from persons involved or having access to information relevant to enquiry. Action is taken on the basis of the report of the investigation and/or of the enquiry of adjudication officer.

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.	SEBI has established an effective and credible system of investigation, surveillance and enforcement in many areas including risk containment measures, uniform scrip specific price bands, development of stock watch system, suspension of intermediaries, prohibitive orders, etc.
D. Principles for Co-operation in Regulation	
11. The regulator should have authority to share both public and non-public information with domestic and foreign counterparts.	SEBI shares information with the Government of India, RBI and other domestic regulatory bodies on a periodic basis or as and when required. SEBI also shares information with its foreign counterparts.
12. Regulators should establish information sharing mechanisms that set out when and how they will share both public and non-public information with their domestic and foreign counterparts.	Government, RBI and SEBI have been sharing information regularly depending on need. SEBI has also arrangement to share information with stock market regulators of other countries.
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.	Powers of the regulator to assist foreign regulators or to enter into MOUs or other co-operation arrangements are not explicitly provided in the legislation. However, SEBI has arrangements for sharing of information with regulators overseas.
E. Principles for Issuers	
14. There should be full, timely and accurate disclosure of financial results and other information which is material to investors' decisions.	Disclosure extends to material having bearing on price of security, people who have significant interest in or who seek control of company, etc. Regulations try to achieve sufficiency and accuracy of information. The listing agreement with the stock exchanges requires all the listed companies to publish on an annual basis financial statements audited by an external auditor and unaudited quarterly results. However, the "timing" and "contents" of disclosure of material events that impact prices have not been very unambiguously specified and followed.

15. Holders of securities in a company should be treated in a fair and equitable manner.	They are treated equitably. SEBI Takeover Code and the Companies Act contain provisions for protection of minority shareholders.
16. Accounting and auditing standards should be of a high and internationally acceptable quality.	Financial statements are prepared and audited in accordance with the provisions of the Companies Act, 1956. There is, however, scope for improving these standards. The companies issuing securities abroad may be required to follow the same standards domestically as they do for issue of securities abroad. The regulator is trying to improve corporate governance through listing agreement.
F. Principles for 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.	Eligibility criteria in terms of networth, track record, internal management procedure have been specified in Regulations for Mutual Funds, Collective Investment Schemes and Venture Capital Funds. The regulations provide for registration and authorisation of scheme, inspection to ensure compliance, investigations and remedial action. Unit Trust of India, the biggest mutual fund, is a statutory body corporate. Its management and governance structure is different from conventional collective investment schemes.
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.	Structure of collective investment schemes have been specified in respective regulations. The roles and responsibilities of asset management companies have also been clearly specified.
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.	Disclosure standards including format of offer document have been specified in the respective regulations. These aim to provide investors with sufficient information to know if the scheme is an appropriate investment vehicle for him and provide information on a timely basis in an understandable manner.

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.	Specific provisions have been made in respective regulations for asset valuation and pricing of units.
G. Principles for Market Intermediaries	
21. Regulation should provide for minimum entry standards for market intermediaries. Regulator should ensure that the public have access to relevant information concerning the licensee.	The eligibility criteria have been prescribed for the intermediaries by the regulator as well as SROs, which need to be fulfilled before granting registration. There is a need for phased introduction of testing and certification for people working for market intermediaries. The details such as track record of authorised intermediaries need to be made easily available to investors.
22. There should be initial and on going capital and prudential requirements for market intermediaries that reflect the risks that the intermediaries undertake.	The entry norms for the intermediaries provide for the capital clause as well as the maintenance of the same on a continuing basis.
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 for these matters.	Regulations for intermediaries specify a code of conduct, which contains provisions to protect the interest of the clients and ensure proper management of risk. An intermediary is expected to observe high standards of integrity and fair dealing and act with due care and diligence in the best interests of its customers and integrity of the market. Every market intermediary may appoint a compliance officer to ensure compliance with the prescribed standards.
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. Regulator should ensure that there is proper ongoing supervision with respect to market intermediaries.	There are arrangements like Settlement/Trade Guarantee Funds and the Investor Protection Funds for dealing with the eventuality of failure by market intermediaries. The regulations provide for maintenance and inspection of records to ensure compliance with relevant requirements, investigatory and enforcement remedies, fair and expeditious process leading to discipline, etc. SEBI and SROs have developed mechanism for resolution of investor complaints.

H. Principles for the Secondary Market	
25. The establishment of trading systems including securities exchanges should be subject to regulatory authorisation and oversight.	The trading systems (stock exchanges) are regulated by a process of recognition and continued supervision by central government/SEBI under the SC(R)A. However, the trading systems like B2B, ECN, shareshop are not subject to regulating authorisation.
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.	Fair and equitable rules have been framed by stock exchanges, SEBI and central government under the SC(R)A and SEBI Act for supervision of trading system and stock exchanges. The amendments to rules of the trading system are provided or approved by the regulator. Approval of the trading system is withdrawn by the regulator when it is determined that the system is unable to comply with the conditions of approval or with laws/regulations.
27. Regulation should promote transparency of trading.	It has been mandated that all trades have to be executed only through on-line automated price and order mechanism of stock exchanges. The information relating to trading is available to public on real time basis. However, such transparency is completely absent in case of spot transactions and in transactions in debt securities.
28. Regulation should be designed to detect and deter manipulation and other unfair trading practices.	Regulations have been framed to prevent insider trading, and fraudulent and unfair trade practices. Stock exchanges have been advised to set up surveillance departments which continuously monitor trading and launch inquiry whenever unusual and potentially improper trading occurs. It needs to be strengthened further by introducing client level identity (arrangement like PAN number) to track all transactions by a party.
29. Regulation should aim to ensure the proper management of large exposures, default risk and market disruption.	Limits have been specified on turnover and exposure in relation to the base minimum capital, which a member keeps with exchange/clearing corporation. The exposure of members is monitored on real time basis. Members exceeding the limits are automatically and instantaneously disabled by the trading system. The clearing corporation assumes counter-party risk of each member. In the event of a failure of a trading member to meet settlement obligations, the settlement guarantee fund is used for successful completion of settlement. As clearing corporation guarantees financial settlement, it may have first lien over the assets of insolvent clearing members.

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.	The clearing corporation and the settlement guarantee fund guarantee settlement of net obligations of the members, reducing counterparty risk. Rolling settlement and clear separation of the spot and futures market would improve the efficiency and systemic stability of the equity markets substantially.

The key areas where substantial improvements are needed to fully comply with IOSCO principles are: greater clarity and improvement of SEBI's authority and powers (principles 1, 3 and 9); SRO's ability to regulate their members (principle 6); bringing UTI under SEBI's regulation (principles 18, 19 and 20); improved professional standards for licensing brokers and sub-brokers (principles 21 to 24); and improvement of risk management in clearance and settlement, in particular, under application of rolling settlement (principles 29 and 30).

G30 Recommendations

G30 recommendations relating to securities clearance and settlement systems have been driving the securities market all over the world. These aim at reducing risk, improving efficiency and performing greater standardisation in international settlement. These cover a series of functions including trade matching, trade settlement and central depository activity. The attached table presents status of Indian securities market in terms of G30 recommendations. As may be seen from Table 1-13, the debt market is far away from these standards.

Table 1-13: Status of Implementation of G30 Recommendations

Recommendations	Corporate Securities Market	Government Securities Market
1a. All comparisons of trades between direct market participants (i.e. brokers broker/dealers and other exchange member) should be accomplished by T+0. 1b. Matched trade details should be linked to the settlement system.	It is no more relevant as trades are matched on the screen and matched trade details are linked to settlement system electronically. Hence trade comparison and confirmation are instantaneous.	Trades on stock exchanges are matched on T+0. In case of direct deals, trades are settled on T+0 or T+1. There is no comparison for OTC trades. There is no specific pre-settlement comparison.
2. Indirect market participants (such as institutional investors and other indirect trading counterparties) should achieve positive affirmation of trade details by T+1.	This has been largely achieved except for some FIIs who need T+2 as they operate in different time zones. Regulatory fiat can ensure its compliance.	There is no provision for affirmation of trades by indirect market participants.
3a. Each country should have in place an effective and fully developed central securities depository, organised and	There are in place fully developed two depositories which maintain and transfer ownership records in	Central bank acts as the central depository for all securities in demat form.

managed to encourage the broadest possible direct and indirect industry participation. 3b. The range of depository eligible instruments should be as wide as possible. 3c. Immobilisation or dematerialisation of financial instruments should be achieved to the utmost extent possible. 3d. If several CSDs exist in the same market, they should operate under compatible rules and practices, with the aim of reducing settlement risk and enabling efficient use of funds and available cross-collateral.	electronic form for the entire range of securities. The securities are held in depository in dematerialised form. The systems are in place for smooth inter-depository transfer of securities. About 99% of turnover settled by delivery is now being settled in demat form. The last budget has abolished stamp duty on transfer of debt securities. The dematerialisation of debt securities is expected to pick up.	
4a. Each market is encouraged to reduce settlement risk by introducing either Real Time Gross Settlement or 4b. a trade netting system that fully meets the "Lamfalussy-recommendations"	There is a system of netting the obligations of members. However two major innovations are required to improve settlement efficiency and efficiency of fund use. First, the regulations should permit cross margining which takes into account a dealer's/portfolio holder's combined position in the cash and derivative segments and across all exchanges to reduce capital requirement of market constituents. Second, all obligations due for settlement on a day, irrespective of the product, should be netted and settled together to avoid multiple transaction flows.	RTGS and multilateral netting are planned.
5. Delivery based payment (DvP) should be employed as the method of settling all securities transactions. DvP means simultaneous, final, irrevocable and immediately available exchange of securities and cash on a continuous basis through out the day.	In case of trades settled under account period settlement, pay-in and pay-out take place with an overnight gap. Under rolling settlement, pay-in and pay-out take place on same day for institutional trades. In order for DvP to become	There is DvP for transactions by wholesale participants. There is no DvP at the retail level.

	a reality, it is necessary that clearing corporation participates in the RBI clearing.	
6a. Payments associated with the settlement of securities transactions should be made consistent across all instruments and markets by adopting the "same day" funds convention. 6b. Payments associated with the servicing of securities portfolios should be made consistent across all instruments and markets by adopting the "same day" funds convention.	There is an overnight gap between pay-in and pay-out. The funds paid out to members in the morning are available for use by them on the same day. In the rolling environment, the pay-out is in the evening. While funds are credited to the account of the members, they may not be able to use them for other deals on the same day.	Since the settlement is on DvP basis, funds are immediately available.
7a. A rolling settlement system should be adopted by all markets. 7b. Final settlement for all trades should occur no later than T+3.	Though account period settlement is followed for most of the trades, the market is gradually moving towards rolling settlement in phases. Rolling settlement on T+5 basis has been introduced in respect of some securities.	The participants have flexibility to decide the terms of settlement. Trades are settled by T+3, if desired by participants.
8a. Securities lending and borrowing should be encouraged as a method of expediting the settlement of securities transactions.	NSCCL offers an automated nation-wide lending and borrowing of securities. This is being encouraged as a method of expediting settlement.	No such formal mechanism is available. Market participants can, however, lend and borrow securities through repos.
8b. Existing regulatory and taxation barriers that inhibit the practice of lendiMng and borrowing of securities should be removed.	These have been removed. It has been clarified that the lending of securities would not be treated as 'transfer' so as to attract the provisions relating to capital gains under the Income Tax Act.	

9a. Each country should adopt the standard for securities message developed by the International Organisation of Standardisation (ISO Standard 7775).	Not yet.	These are planned.
9b. In particular, countries should adopt the ISIN numbering system for securities issues as defined in the ISO Standard 6166.	ISINs have been issued by SEBI. ISIN numbering system is being used by exchanges and depositories for settlement of securities in demat form.	

Agenda for future

ISSA Recommendations 2000

In addition to the standards prescribed by IOSCO and G-30, markets are expected to meet the ISSA recommendations 2000 over the next five years. These recommendations have replaced G30 recommendations in the light of changes in key risks in the clearing and settlement. These recommendations are:

1. **Governance**: Securities Systems have a primary responsibility to their users and other stakeholders. They must provide effective low cost processing. Services should be priced equitably.

2. **Technology – core processing:** Securities Systems must allow the option of network access on an interactive basis. They should cope with peak capacity without any service degradation, and have sufficient standby capabilities to recover operations in a reasonably short period within each processing day.

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

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

5. **Reduction of settlement risk:** The major risks in Securities Systems should be mitigated by five key measures, namely:
   - the implementation of real delivery versus payment,
   - the adoption of a trade date plus one settlement cycle in a form that does not increase operational risk,
   - the minimisation of funding and liquidity constraints by enabling stock lending and borrowing, broad based cross collateralisation, the use of repos and netting as appropriate,

- the enforcement of scrip-less settlement,
- the establishment of mandatory trade matching and settlement performance measures.

6. **Market linkages**: Convergence of Securities Systems, both within countries and across borders, should be encouraged, where this eliminates operational risk, reduces cost and enhances market efficiency.

7. **Investor protection:** Investor compliance with the laws and regulations in the home countries of their investments should be part of their regulators' due diligence process. Investors, in turn, should be treated equitably in the home country of their investments especially in respect to their rights to shareholder benefits and concessionary arrangements under double tax agreements.

8. **Legal Infrastructure:** Local laws and regulations should ensure that there is segregation of client assets from the principal assets of their custodian; and no possible claim on client assets in the event of custodian bankruptcy or a similar event. Regulators and markets, to further improve investor protection, should work:
   - to ensure clarity on the applicable law on cross border transactions,
   - to seek international agreement on a legally enforceable definition of finality in a securities transaction,
   - to ensure that local law fully protects the rights of beneficial owners,
   - to strengthen securities laws both to secure the rights of the pledgee and the protection accorded to client assets held in Securities Systems.

FIBV Vision

At the end of General Assembly of FIBV held in early October 2000, the leaders in the securities market shared their vision about the future of the securities market. An overwhelming majority (96%) felt that despite globalisation of the market place, national/domestic exchanges would still have a role to play. It was felt by majority (65%) that the merger of exchanges will lead to a system of very few dominant players, thus marginalising small markets. ECNs and ATSs would be victims of their own success, bringing trading costs to an unsustainable level for them. 83% agreed that cross-border merger of exchanges would lead to similar cross-border mergers of clearing organisations and depositories. But majority (66%) disagreed that such merger of exchanges, clearing and settlement organisations would reduce competitive pressures leading to inefficiencies and higher costs. 81% of the leaders shared a view that straight through processing could be achieved more easily if the exchange, clearing and settlement organisation and depository all belong to the same group of companies. Services would surpass trading and listing as the most important source of revenue for exchanges in five years, 51% felt. 62% of leaders shared a vision that more exchanges will be affiliated with technology companies in future. 65% recommended that Internet trading should be regulated by the regulator in the jurisdiction where the trade was initiated. 80% felt that International Accounting Standards would over time become the global accounting standards for listed companies. These likely developments have profound lessons for Indian securities market.

Other Issues

Debt Market

Both the segments of capital market, namely debt market and equity market, need to grow hand-in-hand. The debt market, which is less developed,

does not get same level of attention from policy makers as well as borrowers of funds and is yet to harness the lessons from trading and settlement in equity market. 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 debt instruments. 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. SEBI has taken the initiative in this regard by prohibiting 'negotiated deals' in respect of listed corporate debt securities and prescribing that all such trades would be executed on the basis of price and order matching mechanism of stock exchanges as in case of equities. Similarly RBI has decided in principle to switch over to order-driven screen based trading in government securities.

Similarly, 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 will use various risk containment measures such as capital adequacy, exposure monitoring and margins to manage risk and thereby offer settlement guarantee. The authorities have evinced interest by forming up a group to work on setting up a clearing corporation for money, debt and foreign exchange markets.

Clearing and Settlement

Sharing of Clearing and Settlement services: Given its functions, a clearing and settlement agency may not necessarily be owned/managed trading members/stock exchanges. Further, it may not be necessary that each stock exchange must have its own exclusive clearing and settlement agency. It may be better if the stock exchanges use the services of a clearing corporation or a few clearing corporations, as the depository services are shared by them. The international practice seems to lend support to sharing the services of a clearing corporation by many exchanges. Even efforts are on to settle transactions in stocks, derivatives and commodities across countries through a clearing corporation. The recent merger of the London Clearing House and Clearnet is a step in this direction. Such an arrangement would allow the clearing agency to have an overall view of gross exposure position of traders across the stock exchanges and would be much better geared to manage the risk. However, to provide for necessary competition, it is necessary that there are at least two clearing corporations.

Income Tax Exemption: Stock exchanges supervise the buying and selling activities of the brokers, but do not guarantee financial settlement of trades. These are guaranteed by a Clearing Corporation which creates a fund called 'Settlement Guarantee Fund' to ensure settlement of trades on the appointed day and time irrespective of default by trading members to bring in the required funds and/or securities. This arrangement has revolutionised the secondary market investments in India by bringing in a large number of retailer investors to the market and has also encouraged foreign investors to invest in Indian securities market in a large way. 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.

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

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

Access to RBI Clearing: Ideally pay-in and pay-out of funds and securities should take place simultaneously. The first step in this direction is to introduce pay-in and pay-out of funds on the same day. This can happen if Clearing Corporation is allowed direct access to RBI clearing.

Same Day Obligations: All obligations due for settlement on a day from a trading member to a clearing corporation and vice versa, irrespective of the product/market should be netted and settled together to avoid multiple transaction flows.

Rolling Settlement: A migration from account period settlement to rolling settlement is inevitable, as was from floor trading to electronic screen trading. Recent experimentation of the move in UK, as documented in a World Bank document of June 2000, was a huge success particularly since it resulted in many market efficiencies, stronger risk management and without any consequent reduction in trading volumes. All major markets of the would have moved to rolling settlement and are in the process of moving to 'T+2'. Even in India, there is rolling settlement in respect of trading in government securities as well as in the demat segment. SEBI has mandated rolling settlement for select scrips. This list needs to expand by adding more liquid scrips.

Exchange Governance

Despite significant changes in composition of the governing councils of exchanges in recent years, an impression is gathering that the present governing council composition is only theoretically a 50:50 ratio between brokers and non-brokers, while in practice, it is tilted in favour of brokers. Massive price-rigging in certain scrips during May-June, 1998 and investigation findings of SEBI thereon corroborate this. The model followed by NSE, where ownership and use are divorced may be emulated by other exchanges to avoid conflict of interest.

Regional Exchanges

With fall in turnover, the financial health of regional exchanges is deteriorating. They are surviving mostly on listing fees and interest income. In the competitive environment today, it is difficult to imagine survival of all the 24 exchanges. Internationally, most small exchanges have either merged with larger ones, worked out alliances or have developed niche markets, which they can profitably serve. The subsidiary route has given a breathing time to smaller exchange in India.

Business Continuity Plan

NSE has established a disaster back-up site at Pune alongwith its entire infrastructure including

the satellite earth station and the high speed optical fibre link with its main site at Mumbai. The site at Pune 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.

Derivatives Trading

Contracts on index futures became a reality in June 2000. New derivatives products like index options and derivatives on individual securities need to be permitted to provide a wider option to market participants. Taxation and accounting issues relating to derivatives trading need to be finalised. Since derivative contracts are essentially cash settled, it is possible that these may be termed as speculative transactions and if so, any loss arising out of these trades will not be eligible for set off against any other income. This may hinder growth of derivatives market. Since derivatives are essentially hedging instruments used by the investors to hedge against the potential loss, these may not be treated as speculative transactions.

Repo Transactions

In order to impart liquidity in the market for government securities, certain designated entities have been permitted to undertake repo transactions in specified government securities. Specific entity as well as specific security need approval of RBI. Securities other than government securities do not have this facility. The mechanism does not permit players to go short. There is no standard documentation/master agreement governing repo transaction. There is no clearing house to take counterparty risk for repos. As a result, the market is neither deep nor liquid. These issues need to be addressed.

Dematerialisation

The progress of dematerialisation in India has been a success story. All the significant stocks are now held, traded and settled in demat form. SEBI has been gradually increasing the number of scrips which have to be traded and settled in the demat form. This is time consuming and expensive, because fresh physical securities are getting listed, while the listed ones are dematerialised. One effective way to prevent physical certificates from sneaking into the market is making demat compulsory at the stage of listing.

Disclosure about intermediaries

An investor normally does business 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. One way to do so would be to display details of SEBI-registered intermediaries on web site. The details may include the form of organisation, management, capital adequacy, liabilities, defaults and penal actions taken by regulator and self-regulatory organisations against the intermediary in the past.

Quality Personnel

In order to dispense quality service, personnel working with market intermediaries need to have requisite skills and knowledge. To ensure this, it has become an international practice for market intermediaries to be certified. NSE took the initiative to introduce such a facility for testing and certification, viz., NSE's Certification in Financial

Markets (NCFM), which is the only one of its kind in the country. The system is a web-based automated examination/testing system that provides for self-administration for the purpose of certification. It needs to be specified that only NCFM certified personnel can be employed in the securities market.

Private Placement

The convenience of structuring of the 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, disclosure to market, or a rating. This route accounted for 85% of resources mobilised by corporate sector during 1999-2000. 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.

Asset Based Securitisation

The market for securitisation has not developed appreciably in India because of lack of legal clarity and conducive regulatory environment. Market participants feel that a host of legislations need to be amended before securitisation can really take off. These include, Transfer of Property Act, Indian Stamps Act, Income Tax Act, Securities Contracts (Regulation) Act, Registration Act, etc. This could be one of the priority areas for government to boost infrastructure funding.

Mobile Order Book

After wiring of stock exchanges, clearing corporation, custodians, depositories and depository participants and clearing banks, the focus has now shifted to loop in the investors. Trading platform, which was shifted from trading hall to computer terminals at the broker's premises, has been linked to the homes of investors through Internet. In order to provide access to order book for mobile investors, it is necessary to create a mobile trading platform in the form of a some hand-held device.

Depreciation for Telecom Equipments

The growth of IT industry critically depends on the advances in internet and telecommunication systems. The obsolescence rate in telecommunication equipment matches that in IT industry today to keep pace with the ever-growing bandwidth requirements. Therefore, it is necessary to allow the same depreciation rate of 60% to telecommunication equipments as applicable to computer equipments.

Myriad of Margins

Regulator and stock exchanges have prescribed a myriad of margins to contain risk. These are continuously reviewed and revised. It has become difficult to keep track of the margins and their rates. It will be better if the margins in the cash market are based on a 99% VaR as has been done for derivatives market. Further, the regulations should permit cross-margining which takes into account a dealer's/portfolio holder's combined position in the cash and derivative segments and across all exchanges to reduce capital requirement of market constituents.

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. A security should either be suitable for listing on all exchanges or not suitable at all for listing on any exchange. Further, listing casts a number of obligations on issuers. Many of the exchanges are too weak organisationally to monitor compliance of obligations. In view of this, it is 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 would be available for trading on all exchanges who will not waste resources in terms of duplication of efforts on listing and monitoring compliance. This is all the more necessary as the exchanges get demutualised and seeking listing on exchanges. A recent pronouncement of the Securities Appellate Tribunal in the case of Lunkad Media & Entertainment Limited Vs. The Stock Exchange, Mumbai (Appeal No.15 of 2000) articulates, as reproduced below, the need for such a central listing mechanism.

"Before parting with this case I would suggest that the government and SEBI may consider the feasibility of providing a centralised mechanism, with adequate representation from the government, SEBI, Stock exchanges and Investor associations, etc. to grant eligibility for listing securities on the stock exchanges. It is felt that some sort of uniformity in deciding application for listing by exchanges would be in the interest of investors. It does not stand to reason that a public issue found unacceptable by one exchange for the reason that the issuer company's credibility is doubtful, is acceptable to another exchange, though both the exchanges are supposed to be concerned about the interests of the investors. Investor protection measures should not be confined to territorial jurisdiction of exchanges. It should be at national level. Decision by a centralised set up may perhaps help to provide transparency and also help to maintain consistency and uniformity in the field of listing. However, it is for thhe authorities concerned to examine the feasibility of the proposal and take appropriate decision, which they consider would serve the cause of investor protection."

Regulatory Jurisdiction

The Securities Laws (Amendment) Act, 1999 empowers Government to delegate powers to RBI, in addition to SEBI. In exercise of this power, Government has issued a notification providing that the contracts for sale and purchase of government securities, gold-related securities, money market securities and securities derived from these securities and ready forward contracts in debt securities shall be regulated by RBI. Such contracts, if executed on stock exchanges, shall, however, be regulated by SEBI in a manner that is consistent with the guidelines issued by RBI. Thus the responsibility of regulating securities market is now shared by Government (Department of Economic Affairs and Department of Company Affairs), RBI and SEBI.