

B| SECONDARY SECURITIES MARKET

Price behaviour in the secondary securities market during 1999-2000

The year 1999-2000 was marked by a smart recovery and strong spurt in equity prices. During the larger part of the year, the equity market registered upward movement. The BSE Sensex on point to point basis recorded a growth of 34 per cent from 3739 as on March 31, 1999 to 5001 as on March 31, 2000. The BSE-100 (Natex) also shot up by 76 per cent from 1651 to 2902 during the same period. On the other hand, S&PCNX Nifty increased by 42 per cent. During 1997-98 and 1998-99 BSE Sensex, BSE 100 and NSE 50 all had shown downward trend for most of the part of these two years. The rise in the equity prices did not confine only to blue chip companies but the scrips in Group B also participated in the rally on number of occasions. The industries, which were the top performer included information technology and pharmaceuticals (Table 2.17).

Table 2.17: Movement of Various Share Indices

Index	31-Mar-99	31-Mar-00	1998-99*	1999-2000*
BSE Sensex	3739.96	5001.28	-3.92	33.7
BSE 100	1651.37	2902.20	-2.69	75.7
NSE 50	1078.05	1528.45	-3.47	41.8
S&P CNX 500	758.25	1322.90	5.97	74.46
BSE Dollex	149.11	237.86	6.07	59.50
* Percentage increase/decrease over the previous year.				
Source: SEBI				

The performance of stocks prices was not linear during the year as shown by the movement of daily indices. In the beginning of year under review, the BSE Sensex was in the grip of bearish phase following the presentation of the Union Budget 1999-2000 presented at the end of February 1999. The BSE Sensex which stood at 3686 as on April 1, 1999 gradually dipped to 3272 by April 28, 1999 on account of massive selling pressure by the market operators due to the neutrality of Union Budget to stock market, followed by a pickup which continued till May 1999 and closed at 4123 on May 19, 2000. The market came under pressure, which was reflected in deceleration of the share prices and somewhat erratic movement. It was only from the middle of June 1999 the stocks market regained appreciation. The BSE Sensex moved northward from 4125 as on June 17, 1999 to 4728 on July 22, 1999 possibly due to increase in net investment by FIIs. The stock prices though reflected firming up trends thereafter but were in the high phase of bullishness only from January 2000 when the BSE Sensex touched 5375 as on January 3, 2000. The Sensex continued to push upwards and touched the highest level of the year at 5933 as on February 11, 2000 and thereafter it started sliding down slowly and reached 5000 as on March 31, 2000. The spurt in stock prices was to some extent assisted by massive inflow of funds by FIIs and mutual funds. FIIs' net investment in January and February, 2000 was of the order of US \$ 750 million. Downward movement of Sensex which ruled through the month of March was because of poor market sentiments following the Union Budget 2000-01 bearing a neutrality to market. The S&PCNX Nifty movement also reflected the same pattern during the year.



Graph 2.6 : Movement of BSE Sensex

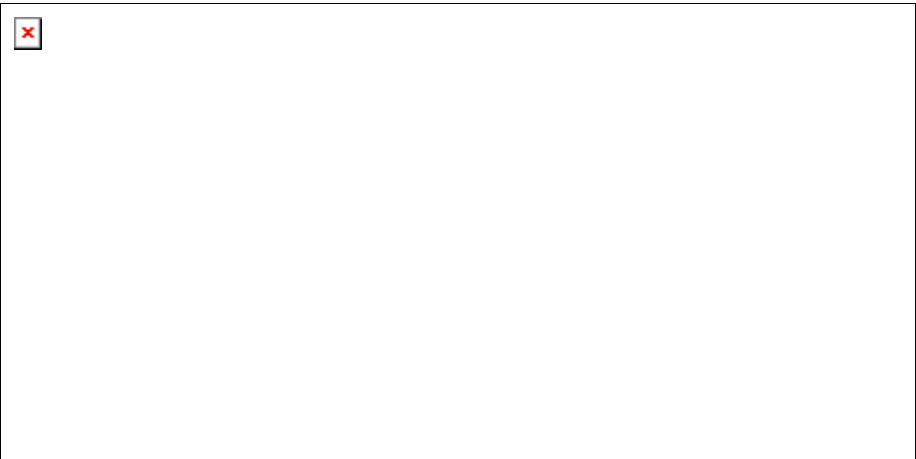
Analysis of shares indices on monthly average basis shows gains in the first seven months of the year rising from 3449 in April 1999 to 4835 in October 1999 at the rate of 40 per cent and a dip in November 2000 to 4588. The fall in November 1999 was reversed with robust growth to 4802 in December 1999. The equity market since then did not look back for the remaining part of the financial year and continued to gain new heights till it reached 5650 by February 2000 before sliding to 5261.77 in March 2000. The monthly index movement of the S&P CNX Nifty almost presented the same behaviour. During the month of November 1999, the fall in Sensex as well as S&P CNX Nifty and other indices occurred inspite of large net purchases by FIIs. The net investment of FIIs during November was US\$ 299 million as against a disinvestment of US\$ 140 million in October 1999. In March 2000, also there was a deceleration in the equity prices as Sensex fell from 5650 in February 2000 to 5261 in March 2000. Similarly S&PCNX Nifty also dipped from 1686 to 1605. The analysis of monthly averages of indices reveals that during the month of November and March inspite of bulk investment of FIIs and mutual funds, equity prices suffered decline indicating that there are other players who also influence the trend in the equity prices. It would be interesting to note that often stock prices exhibit unpredictable movement due to entry and exit of new individual investors and small institutions in the market. The population of small investors has shown marked increase during the recent past. These investors after having reversal during 1996-97 to 1998-99, are again returning to the market to invest on short-term basis most probably to book profits and avoid risk on medium term investment (Table 2.18).

Table 2.18: Stock Market Indicators During 1999-2000 : Monthly Trends

(Rs. Crore)

Month /Year	Index*			Price to Book Ratio*		Price to Earnings Ratio *		Average Daily Turnover (Rs. Crore)		Market- capitalisation **(Rs.Crore)	
	Sensex	Nifty	Natex	Sensex	Natex	Sensex	Natex	NSE	BSE	NSE	BSE+
1999											
April	3449.77	994.27	1506.84	2.55	1.79	13.77	12.99	1,797	1,421.20	4,45,380	4,88,229
May	3880.37	1109.55	1682.65	2.91	2.03	15.76	14.70	2,393	1,725.48	5,03,911	5,60,965
June	4066.84	1165.01	1755.07	3.06	2.10	16.53	15.35	1,840	1,510.88	5,29,468	5,84,788
July	4526.25	1295.3	1960.83	3.40	2.36	18.40	17.15	2,521	2,119.96	5,93,651	6,48,932
August	4662.84	1343.73	2075.59	3.47	2.57	19.87	20.88	2,441	2,272.59	6,68,187	7,10,956
September	4724.96	1384.80	2156.82	3.48	2.67	20.41	22.63	2,660	2,217.98	6,86,740	7,04,568
October	4835.47	1434.26	2272.13	3.56	2.74	21.01	24.12	3,439	2,884.94	6,70,062	6,73,462

November	4588.53	1364.81	2161.39	3.32	2.67	19.99	23.35	3,159	2,455.95	7,26,419	7,09,613
December	4802.02	1480.45	2429.71	3.45	3.05	20.91	26.80	4,481	3,565.79	8,52,985	8,03,353
2000											
January	5407.14	1607.80	2822.05	3.83	3.53	23.34	31.56	4,297	3,658.21	9,51,712	9,27,383
February	5650.66	1686.58	3394.88	3.98	4.23	24.32	38.47	5,652	4,849.62	10,69,770	10,29,257
March	5261.77	1605.66	3109.03	3.71	3.88	22.69	34.94	5,028	4,050.64	10,20,426	9,12,842
<p><i>* Monthly Averages of closing values ** As on the last trading day of the month. + Estimated(A+B1+B2)</i></p> <p><i>Source: Compiled on the basis of data from BSE and NSEIL</i></p>											



Graph 2.7 : Monthly Averages of Closing Indices

The Table below sums up the daily movement of indices for BSE Sensex and Nifty in 1999-2000. During 245 trading days for BSE Sensex it recorded increase for 132 days and decrease for 113 days. Similarly, Nifty reported increase for 135 days and decrease for 118 days out of 253 days. Thus stock price in India demonstrated resistance during 1999-2000 (Table 2.19).

Table 2.19: Distribution of Trading Days During 1999-2000

% change	Sensex		Nifty	
	Increase	Decrease	Increase	Decrease
≤ 2.5	110	95	112	100
> 2.5 ≤ 5	16	16	20	16
> 5 ≤ 7.5	6	2	2	2
> 7.5 ≤ 10.0			1	00
Total	132	113	135	118
<i>Source : SEBI</i>				

Relative strength index

The analysis of movement of share index can also be made on the basis of Relative Strength Index (RSI) which studies the relative strength of stocks prices in relation to their previous positions. RSI of Sensex for the period 1999-2000 (April-March) mostly hovered within the equilibrium territory of 30 to 70. The standard parameters in RSI analysis are:

overbought territory = above 70

equilibrium territory = 30 to 70 and

oversold territory = below 30

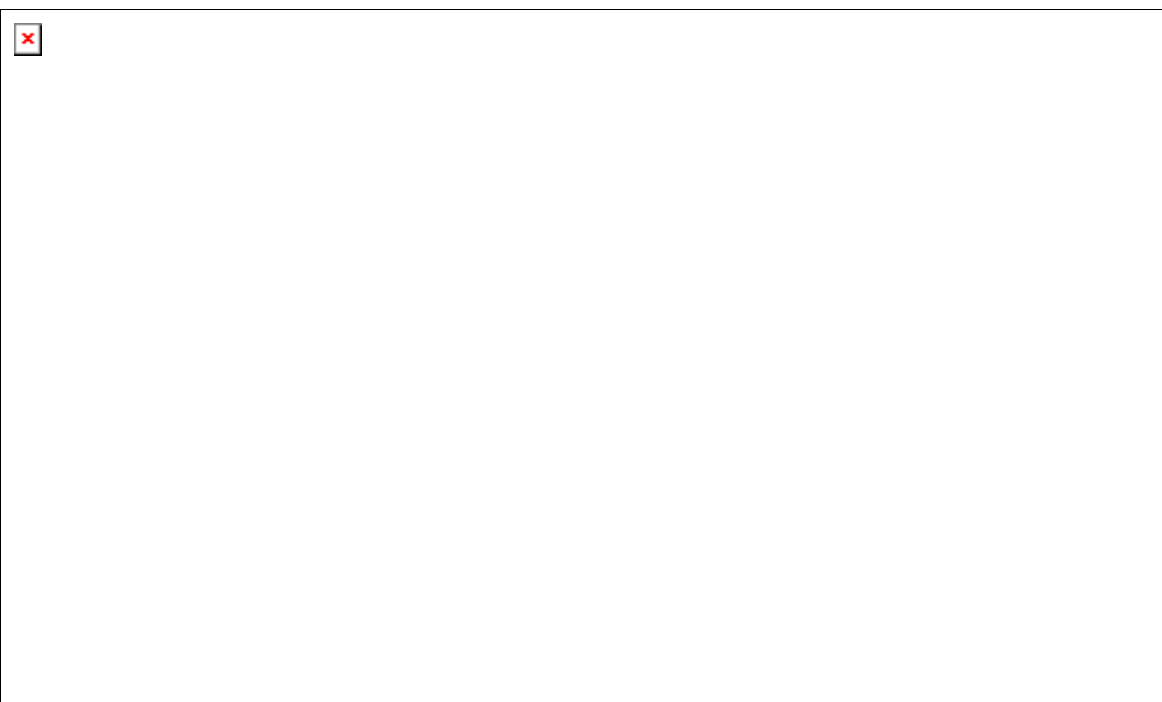
Over the financial year 1999-2000, the RSI of both the Sensex and S&P CNX Nifty witnessed sharp upturns as well as downward movements but remained largely inside the equilibrium territory (range 30 – 70). A case in point is the movement of RSI during March 2000 for Sensex and Nifty as well. During this month RSI for both the indices continuously manifested to and fro movements mostly forming new tops and bottoms. Despite such swings the RSI remained contained within the equilibrium territory. Extreme movements during the period into overbought /oversold territories have been few and far between. This portends well for the Indian markets as it possibly indicates more of secular trends ruling the market in the long run allaying fears of any persisting excessive volatility. (Annexures 3 & 4)

A number of factors have influenced the stock prices. The robust trend in stock prices during 1999-2000 interalia includes various incentives given in the Union Budget 1999-2000, large investment by FIIs of the order of US\$ 2.34 billion and heavy net purchases by mutual funds following their massive resource mobilisation. The downward movement of interest rate structure on bank deposits and low returns on short-term government securities also shifted investment resources towards equity market. In other countries also fall in deposit rates has diverted funds towards equity investment. As a result, the proportion of household savings invested in equities particularly has risen to around 2.4 percent in 1998-99 from 2.0 percent in 1997-98. The sentiments of the investors and traders were also boosted by information technology industry. The boom on NASDAQ also, has been on a number of occasion instrumental through the Indian companies listed on it, to boost the sentiments of Indian domestic players in the market. As regards macro economic fundamentals, exchange rate stability, high level of foreign exchange reserves and increase in growth of exports have strengthened the confidence of FIIs in the Indian domestic market. On top of all factors, increased in liquidity (M3 or Broad Money Supply) in 1998-99 might have also contributed to overall firming up trend in stocks prices through time lag. It has been established in various studies that broad money (M3) has impact on economic variables up-to 1 year (Table 2.20).

Table 2.20: Interest Rate Structure

Year (April- March)	Call Money Rates Mumbai (i)	Commercial Bank Deposit Rates Above 5 yrs	UTI Yield Rate (July-June)	Long term securities
1990-91	11.49	11.00	14.03	10.86-12.04
1991-92	19.57	13.00	16.40	9.91-12.38
1992-93	14.42	11.00	19.06	8.82-12.47
1993-94	6.99	10.00	17.68	12.85-13.43
1994-95	9.40	11.00	16.33	11.77-13.47
1995-96	17.73	13.00	12.66	11.84-13.02
1996-97	7.84	12.00-13.00*	13.95	9.00-14.20

1997-98	8.69	11.50-12.00*	13.85	9.00-13.17
1998-99	7.83	10.50-11.50*	9.46	10.00-13.46
* Refers to deposit rates of five major public sector banks as at end March.				
Source : RBI				



Graph 2.8: Movement in Interest Rates on Savings

Trends in turnover and market capitalisation

Equity market turnover which includes not only price variation but also the volume traded, is an important component in the measurement of the stock market size and liquidity. The liquidity allows investors to alter their portfolios quickly and cheaply and make investment less risky. The secondary market continued to grow vigorously as the average daily turnover at BSE and NSE rose from Rs.2,071 crore and Rs.2,606 crore in March 1999 to Rs.4,050 crore and Rs.5,028 crore in March 2000. In terms of percentage, the rise was 195 per cent and 193 per cent, respectively. On the BSE percentage of turnover to market capitalisation was 7.2 per cent at end-March 1999 which, increased to 9.3 per cent at end-March 2000. However, the turnover as a percentage of market capitalisation at NSE declined from 11.7 per cent at end-March 1999 to 10.3 per cent at end-March 2000.

Trends in market capitalisation

The market capitalisation which is an indicator of generation of wealth of the investors, sharply increased at both the major stock exchanges namely NSE and BSE from Rs. 4,45,380 crore and Rs. 4,88,229 crore in April 1999 to Rs.10,20,426 crore and Rs.9,12,842 crore in March 2000 respectively showing a growth of more than 100 per cent. The market capitalisation as a ratio of GDP worked out to 73 per cent for NSE and 65 per cent for BSE. However it would be seen that market capitalisation shows high concentration. For instance market capitalisation of Sensex scrips was about 49 per cent of total market capitalisation at BSE whereas for S&P CNX Nifty scrips the ratio was about 38 per cent. The high concentration of the turnover as well as market capitalisation shows that there are large number of companies which are traded or not traded for less than 10 days in a year.

Market capitalisation and turnover of new economy stocks

The new economy stocks have shown rapid increase in their market capitalisation and turnover during the recent past. The contribution of new economy sector to market capitalisation of Sensex increased from 8 per cent in January 1998 (through

one stock-MTNL) to 29 per cent in March 2000 (through 3 stocks-MTNL, Infosys Technologies, NIIT).

Infosys and NIIT some of the actively traded new economy stocks were included in the Sensex in November 1998. The increase in relative importance of these stocks in market capitalisation has been seen from October 1999 when technology and media / entertainment sectors were on a bullish trend.

Similarly in the BSE 500 which is more broadbased, new economy stocks contributed to as high as 49 percentage share of the market capitalisation of BSE 500 in March 2000 as compared to 18 – 21 per cent during the first few months after construction of the BSE 500 in February 1999.

The effect of the recent bullish trend for the technology sector stocks is more pronounced on BSE 500 than the Sensex. On an average this sector contributes 50 per cent of the average daily turnover of the BSE 500; as its peak this had reached 75 per cent in March 2000. For the Sensex the contribution of turnover of this sector to total Sensex turnover meandered from 2 per cent with only one stock MTNL to 18 in October 1999 and then to a high of 27 per cent in January 2000.

Trading pattern of listed companies

Though, market capitalisation of listed companies in India has shown exponential growth during the current year under review, very few companies are traded on the stock exchanges. Alternatively, trading in stocks in India concentrate on a limited number of companies. Trading pattern of companies listed at BSE provides interesting reading (Table 2.21).

Table 2.21 : Listed Companies Traded/ Not traded at Mumbai

Stock Exchange (April 1999 to March 2000)

Month & Year	Listed	Traded	Not-Traded	Percent of Traded to Listed Cos.
1999				
Apr	7,383	2,719	4,664	36.83
May	7,438	2,631	4,807	35.37
Jun	7,472	2,642	4,830	35.36
Jul	7,506	2,855	4,651	38.04
Aug	7,549	2,964	4,585	39.26
Sep	7,584	2,992	4,592	39.45
Oct	7,650	3,171	4,479	41.45
Nov	7,725	3,030	4,695	39.22
Dec	7,845	3,347	4,498	42.66
2000				
Jan	7,845	3,376	4,469	43.03
Feb	7,966	3,285	4,681	41.24
Mar	8,027	3,318	4709	41.34
<i>Source : BSE,</i>				

The percentage of companies traded on the stock exchange, Mumbai was very low at 37 per cent in April 1999. It is observed that of 7383 listed companies only 2719 companies were traded. Though the number of traded companies increased to 3318 but it amounted to only 41 per cent of the total listed companies in March 2000. The detailed analysis is more still revealing. Trading is only on nominal basis in quite a large number of companies which is reflected from the

fact that companies in which trading took place for 1 to 10 trade days during 1999-2000, constituted nearly 56 per cent of 8020 companies or nearly 65 per cent of companies were traded for 1 to 40 days. Only 23 per cent were traded for 100 days and above. Thus, it would be seen that during the year under review a major portion of the companies was hardly traded. The SEBI had appointed a Committee on Market Making with the objective to revive the less traded companies. The recommendation of the Committee have been accepted and the guidelines have been issued to that effect (Table 2.22).

Table 2.22: Frequency Distribution of Listed Companies

According to Number of Trading Days

<i>No. of Days Traded</i>	<i>No. of Companies Traded*</i>	
	1999-2000	%age to Total
Above 100 days	2,210	27.56
91 to 100 days	110	1.37
81 - 90 days	95	1.18
71 - 80 days	110	1.37
61 - 70 days	121	1.51
51 - 60 days	108	1.35
41 - 50 days	167	2.08
31 - 40 days	160	2.00
21- 30 days	214	2.67
11 - 20 days	262	3.27
1 -10 days	4463	55.65
Total	8020	100.00
Companies listed at Mumbai Stock Exchange		
Source : BSE		

Movement in volatility

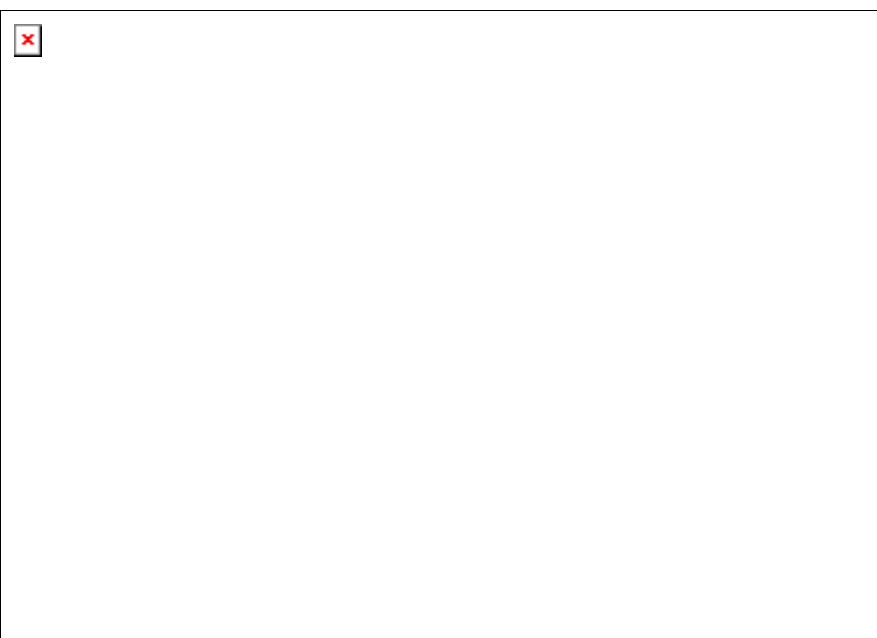
SEBI continued to minimise and contain the volatility in the prices of equity shares during the year under review. It took number of measures by imposing volatility margins and applying circuit filters to keep the market in orderly movement. These measures had salutary impact on the volatile behaviour of the shares prices. The BSE Sensex which exhibited a volatile movement in April 1999 with a volatility of 3 per cent improved its performance as its volatility declined over the year to 1.72 per cent in March 2000. Natex more or less reflected the downward trend as the volatility in this case slid down from 3.09 per cent in April 1999 to 2.23 per cent in March 2000. It is interesting to note that Sensex volatility during 1999-2000 was lower than that observed during 1998-99. Whereas, Natex volatility showed rising trend during February 2000 but declined in March 2000. Table 2.24 also presents volatility movement of S&P CNX Nifty and CNX Junior Nifty indices which though exhibited falling trend in their volatility from 3.35 per cent in April 1999 to 1.8 per cent in March 2000 their level was much lower in the current year than that in the past year. CNX Junior Nifty also depicted the same behaviour (Table 2.23 and 2.24).

Table 2.23: Sensex and Natex Volatility During 1999-2000 (*in per cent*)

Month	Sensex Volatility				Natex Volatility			
	1996-97	1997-98	1998-99	1999-2000	1996-97	1997-98	1998-99	1999-2000

April	4.54	3.57	2.17	3.17	4.12	3.06	2.36	3.09
May	1.58	0.85	3.24	2.17	1.43	0.81	2.93	2.14
June	2.35	3.24	5.26	1.43	2.19	3.29	5.92	1.27
July	2.62	1.74	3.45	1.60	2.32	1.46	3.25	1.61
August	2.02	4.72	2.66	1.33	1.82	4.56	2.26	1.40
September	2.67	2.15	3.21	1.16	2.88	2.21	2.91	1.20
October	2.75	2.51	1.93	2.11	2.56	2.30	1.89	2.30
November	3.08	3.49	2.60	1.52	3.08	3.37	2.48	1.45
December	4.01	3.27	2.85	1.45	3.77	3.10	2.93	1.30
January	3.50	4.83	2.87	1.90	3.18	4.74	2.84	1.92
February	2.45	2.62	1.70	2.51	2.22	2.70	1.87	2.78
March	3.24	2.30	1.83	1.72	3.25	2.60	1.67	2.23
Note : Volatility is calculated as standard deviation of daily returns of the indices for the respective months								
Source: SEBI								

Graph 2.9 : Sensex Volatility





Graph 2.10 : Natex Volatility

Table 2.24 : S&P CNX Nifty and CNX Jr. Volatility

During 1999-2000 (Per cent)

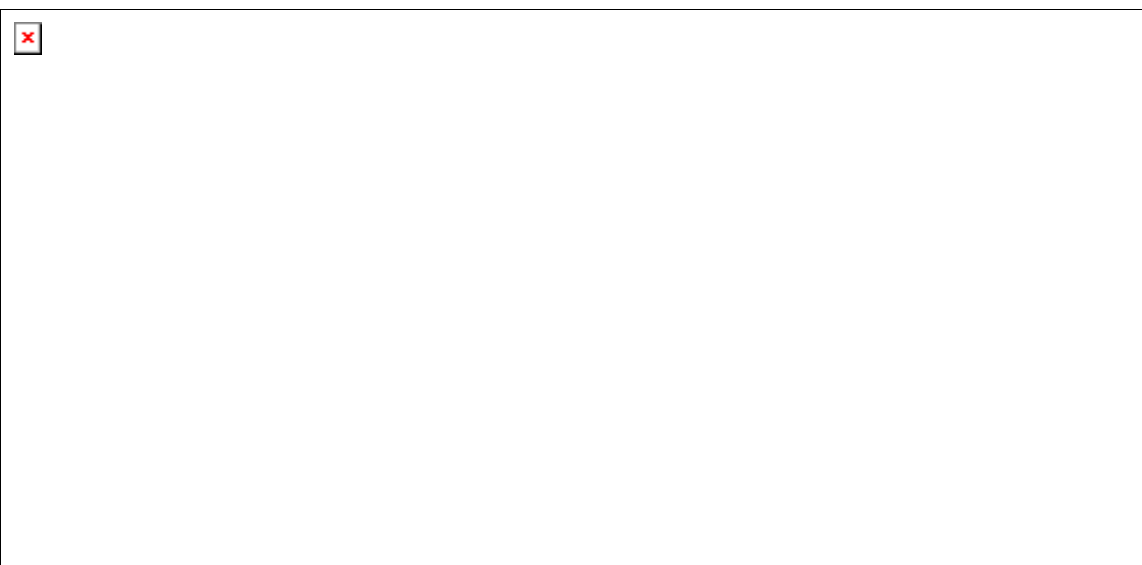
Month	S&P CNX Nifty	CNX Junior Nifty
1999		
April	3.35	3.58
May	2.19	2.08
June	1.36	1.25
July	1.60	1.85
August	1.35	1.61
September	1.33	1.60
October	2.09	3.31
November	1.73	2.42
December	1.45	2.07
2000		
January	1.95	2.97
February	1.89	2.62
March	1.82	3.06
<i>Source : SEBI</i>		



Graph 2.11 : S&P CNX Nifty and CNX Jr. Volatility

Primary listing of companies on stock exchanges

A total of 9871 companies were listed on various stock exchanges in India as on March 31, 2000 compared to 9877 companies listed at the end of 1998-99. Of this Calcutta Stock Exchange accounted for more than 19 per cent of companies primarily listed on it followed by Mumbai Stock Exchange sharing more than 18.3 per cent. Delhi Stock Exchange shared 17.2 per cent of the listed companies followed by Madras and Hyderabad Stock Exchange by 6.5 per cent each. The number of companies listed at Magadh Stock Exchange was only 33 (Table 2.25).



Graph 2.12: Distribution of Companies According to Primary Listing on Stock Exchanges

Table 2.25 : Distribution of Companies According to

Primary Listing on Stock Exchanges

No.	Stock Exchanges	No. of Companies		
		1997-98	1998-99	1999-2000
1	Mumbai	1,811	1,808	1,810
2	Calcutta	1,892	1,907	1,903
3	Delhi	1,669	1,672	1,698

4	Madras	649	665	643
5	Hyderabad	624	629	632
6	Bangalore	255	253	256
7	Pune	176	181	187
8	Ludhiana	296	295	296
9	Vadodara	329	330	335
10	Ahmedabad	692	693	687
11	Cochin	94	95	95
12	NSEIL	11	11	16
13	Uttar Pradesh	346	352	352
14	Mangalore	23	23	26
15	Madhya Pradesh	248	249	251
16	Jaipur	186	181	188
17	Saurashtra Kutch	46	46	46
18	Bhubaneshwar	46	46	46
19	Gauhati	196	196	161
20	Coimbatore	95	95	95
21	OTCEI	115	116	115
22	Magadh	34	34	33
	Total	9,833	9,877	9,871
Note : The primary listing of company represents the company in the region of stock exchange where it is listed				
Source: SEBI				

Stock exchange-wise trends in volume of business

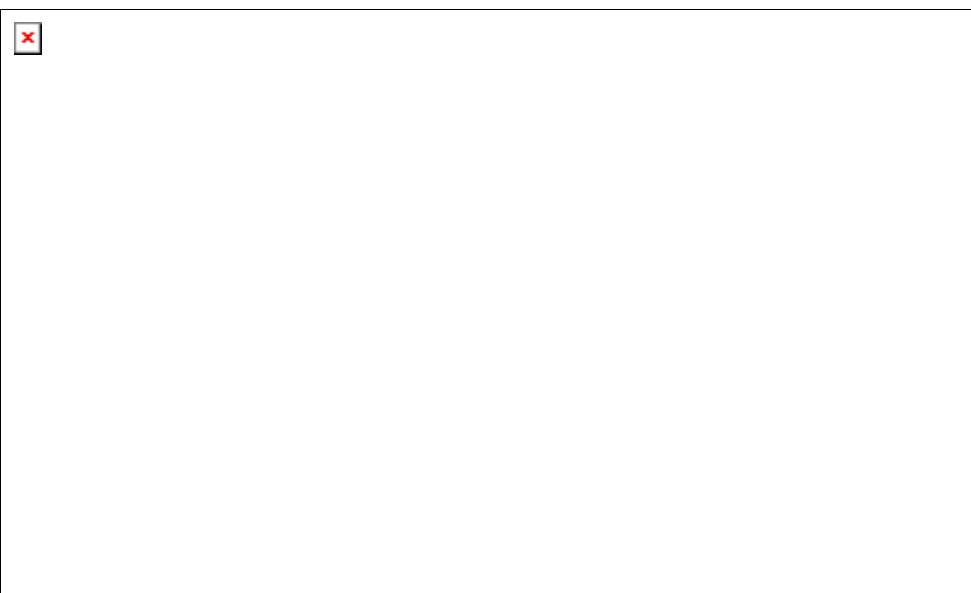
During 1999-2000, total turnover of all the 23 exchanges was Rs 20,67,031 crore as compared to Rs 10,23,382 crore in 1998-99. In percentage term the combined turnover of all the stock exchanges increased significantly by more than double (102 per cent) in 1999-2000 over the previous year. Meanwhile, the performance of the stock exchanges varied widely during the year with the NSEI recording the highest share of 40 per cent of the combined turnover of all stock exchanges followed by BSE at 33 per cent.

Table 2.26: Turnover on Stock Exchanges in India

(Rs. Crore)

	Stock Exchanges	Turnover		Percentage Share in Total Turnover	
		1998-99	1999-2000	1998-99	1999-2000
1	NSEIL	4,14,383.00	8,39,052.00	40.49	40.59
2	Mumbai	3,11,999.03	6,85,028.21	30.49	33.14
3	Calcutta	1,71,780.42	3,57,165.51	16.79	17.28

4	Delhi	51,759.27	93,288.89	5.06	4.51
5	Ahmedabad	29,734.20	37,565.61	2.91	1.82
6	Uttar Pradesh	18,626.65	24,047.75	1.82	1.16
7	Pune	7,452.84	6,086.81	0.73	0.29
9	Bangalore	6,778.95	11,147.35	0.66	0.54
8	Ludhiana	5,977.86	7,740.50	0.58	0.37
10	Vadodara	1,749.10	159.25	0.17	0.01
11	Hyderabad	1,275.89	1,236.51	0.12	0.06
12	Cochin	773.03	0.00	0.08	0.00
13	Coimbatore	394.71	38.84	0.04	0.00
14	Madras	369.64	250.24	0.04	0.01
15	OTCEI	142.21	3,587.91	0.01	0.17
16	Bhubaneshwar	77.04	70.05	0.01	0.00
17	Jaipur	64.78	2.11	0.01	0.00
18	Gauhati	30.16	0.02	0.00	0.00
19	Mangalore	11.22	0.10	0.00	0.00
20	Madhya Pradesh	0.902	9.73	0.00	0.00
21	ICSEIL	0.676	545.16	0.00	0.03
22	Magadh	0.04	8.01	0.00	0.00
23	SKSE	0	0.00	0.00	0.00
	Total	10,23,381.62	20,67,030.56	100.00	100.00
<i>Source: SEBI</i>					



Graph 2.13 : Percentage Share in Total All India Turnover in Re. Terms

Delivery pattern in stock exchanges

Stock exchange wise data on delivery ratio and turnover in physical form as well as in value terms are provided in the Table No. 2.27. At aggregate level, the delivery ratio in terms of value of shares declined to 11.0per cent in 1999-2000 from 13.0 per cent in 1998-99. However, the delivery ratio in terms of number of shares also increased to 19.0 per cent from 21.0 per cent during the same period. Stock exchange-wise delivery ratio showed a divergent trend and it declined

considerably both in terms of value and number of shares during the year as compared to 1998-99. In case of both the major stock exchanges, BSE and NSEIL, the delivery ratio in value terms declined to 16 per cent and 10 per cent in 1999-2000 from 20 per cent and 15 per cent respectively, in 1998-99. The small stock exchanges fared well in terms of delivery ratio both in respect of value as well as in physical terms during the year 1999-2000 as compared to the previous year. Specifically, the stock exchanges like Ahmedabad, Calcutta, Delhi, and Madras showed remarkable improvement in achieving higher delivery ratio during the year. Madras Stock Exchange reported a higher delivery ratio of 42 per cent in 1999-2000 in physical terms than 21 per cent in 1998-99. Similarly, the Calcutta Stock Exchange and Delhi Stock Exchange improved delivery ratio to 7.0 per cent and 17.0 per cent, respectively, in 1999-2000 from a level of 4.0 per cent and 7.0 per cent in 1998-99. The delivery ratio remained at a low level for Vadodara, Bhubaneswar, Coimbatore and Uttar Pradesh Stock Exchanges (Table 2.27).

Table 2.27: Delivery Pattern in Stock Exchanges

Sr. No.	Exchange	Turnover (Rs. Crore)	Value of Shares Delivered (Rs. Crore)	Delivery Ratio *	Delivery Ratio *	Turnover (No. of Shares-Lakh)	Number of Shares Delivered (Lakh)	Delivery Ratio *	Delivery Ratio *
		1999-2000	1999-2000	1999-2000	1998-99	1999-2000	1999-2000	1999-2000	1998-99
1	NSEI	8,39,052	84,492	10	15	2,42,551	48,200	20	16
2	Mumbai	6,85,028	1,10,022	16	20	2,07,297	49,809	24	39
3	Calcutta	3,57,165	16,400	5	2	67,955	5,094	7	4
4	Delhi	93,288	8,771	9	3	25,549	4,359	17	7
5	Ahmedabad	37,565	1,738	5	1	16,925	903	5	1
6	Uttar Pradesh	24,047	552	2	2	8,710	208	2	25
7	Bangalore	11,147	696	6	3	2,509	329	13	4
8	Ludhiana	7,740	237	3	3	3,719	192	5	5
9	Pune	6,086	212	3	2	2,782	109	4	3
10	OTCEI	3,587	51	1	12	678	37	5	15
11	Hyderabad	1,236	405	33	9	1,448	658	45	28
12	ICSE	545	10	2	1	153	5	3	3
13	Madras	250	76	30	10	310	131	42	21
14	Vadodara	159	5	3	1	91	5	6	2
15	Bhubaneswar	70	0	0	0	72	0	0	0
16	Coimbatore	38	1	3	2	35	0	0	2
17	MPSE	9	0	0	6	0	0	0	52
18	Magadh	8	0	0	0	0	0	0	2
19	Jaipur	2	1	50	2	1	0	4	3
20	Mangalore	0	0	0	48	0	0	0	65
21	Gauhati	0	0	0	0	0	0	0	0
22	SKSE	0	0	0	0	0	0	0	0
23	Cochin	0	0	0	5	0	0	0	7
	Total	20,67,022	2,32,669	11	13	5,80,785	1,10,039	19	21

* *Delivery Ratio represents percentage of delivery to turnover of a stock exchange.*
Source : SEBI

Bad Deliveries on Indian Stock Exchanges

The percentage of bad deliveries to net deliveries in case of BSE and NSE fluctuated widely during the year of 1999-2000 as shown in the Table 2.28. The bad delivery ratio declined from a level of 0.57 per cent in May 1999 to 0.11 per cent in March 2000 in case of BSE, whereas, the same remained quite stable for NSE from April 1999 to January 2000 thereafter declining to 0.15 per cent in March 2000. This was the result of increase in the share of dematerialised stock in the delivery of the stock exchanges (Table 2.28).

Table 2.28 Bad Deliveries*

1999-2000

Month	BSE	NSE
April	0.17	0.24
May	0.57	0.20
June	0.48	0.29
July	0.21	0.24
August	0.36	0.24
September	0.22	0.29
October	0.10	0.27
November	0.24	0.26
December	0.11	0.22
January	0.25	0.24
February	0.19	0.11
March	0.11	0.15
* Per centage share of bad deliveries in net deliveries		
Source: BSE & NSEIL		

Performance of dematerialisation

Dematerialisation of shares has been becoming popular with the investors as well as the companies as technological progress has become a part of stocks market in India. Based on the recommendation of SEBI's Working Group on dematerialisation, the number of scrips for compulsory settlement of trades in dematerialised form for institutional investors has been increased in phases to 462 as at the end of the financial year under review. This number would be increased to 985 by June 26, 2000. These scrips comprise of all shares forming the part of A Group scrips of BSE sensitive index, CNX S&P Nifty, BSE 500 and CNX S&P 500 and most of the highly traded B1 Group scrips of BSE.

The number of scrips for compulsory settlement of trades in dematerialised form for all investors was also increased in phases to 260 as at end of the financial year under review. This number would be increased to 579 by June 26, 2000.

Number of dematerialised shares increased from 1,763 million as on end March 1998 to 6,970 million as on end March 1999 and further to 15,500 million shares as at end March 2000. The increase in number of dematerialised scrips reflects fast pace in institutionalisation of paperless trading in equities. Total market capitalisation of companies at NSDL amounted to Rs.4,006 billion at end March 1999 as compared to Rs.2,883 billion as at end March 1998. It increased further to Rs.7,658 billion as at end March 2000. Depository participants also increased from 49 to 124 and a total of 621 companies were trading in dematerialised form as on end March 2000.

According to the data furnished by National Securities Depository Ltd. and Central Depository Services (I) Limited, dematerialised securities and volume substantially increased during the year 1999-2000. As on March 31, 2000, 1013 companies with a market capitalisation of over Rs. 7,00,000 crore had signed agreement with the depositories. The number of depository participant offering depository services have grown from 84 as on March 31, 1999 to 150 as on March 31, 2000. The depository services were available in 1000 centres covering 200 cities across the country as on March 31, 2000. The value of dematerialised shares increased from Rs. 1,10,600 crore as on March 31, 1999 to Rs. 4,00,000 crore as at end March 2000. The number of shares dematerialised also increased from 697 crore to 1500 crore. There has been a steep increase in the beneficiary accounts opened with the depository participants from 4,35,960 as on March 31, 1999 to 25,00,000 as on March 31, 2000.

The volume of dematerialised securities constitute around 80 to 90 percent of the total delivery of securities at the NSE and BSE together. 10 Stock Exchanges viz. NSE, BSE, CSE, DSE, MSE, OTCEI, BgSE, LSE, ASE and ICSEIL have established connectivity with NSDL for settlement and clearing of dematerialised trading.

International comparison of developments in stock markets

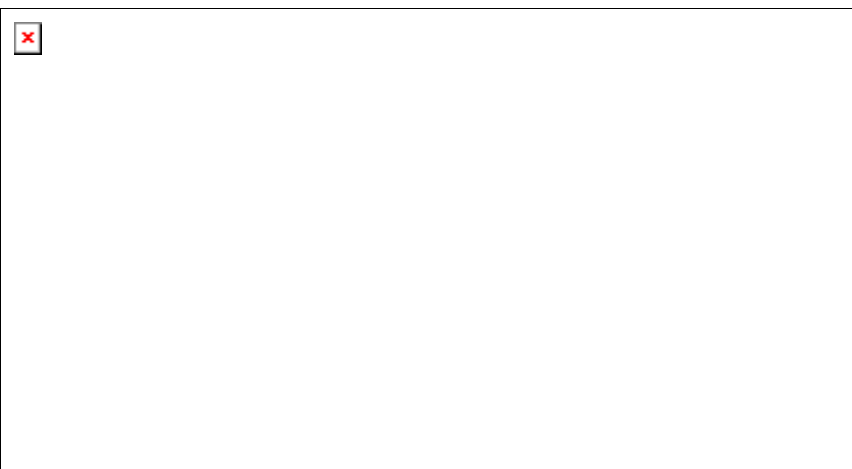
Globalisation of stocks markets has its own merits and demerits. There appears to be a relationship between the movements of NASDAQ and the Indian share price indices although only a few of information technology companies are listed at NASDAQ as well as at National Stock Exchange and Mumbai Stock Exchange.

Stocks prices in different countries have demonstrated varying pattern. On point to point basis, during 1999-2000 Malaysia, KLSE Index had the highest increase of 93.7 per cent followed by NASDAQ Composite Index during 1999-2000 at 83.4 per cent, Hang Sang with an increase of 59.7 per cent, China with an increase of 55.45 per cent. India ranked next to Taiwan as S&P CNX Nifty rose by 41.7 per cent and Sensex by 33.7 per cent (Table 2.29).

Table 2.29: Month-end Closing Prices of Different Indices

Indices	Mar-99	Mar-00	Percentage Change
Nikkei	15836.59	20337.32	28.41
Dowjones	9786.16	10921.92	11.60
Hang Seng	10942.20	17406.54	59.07
NASDAQ	2493.00	4572.83	83.42
South Korea	618.98	860.94	39.09
Taiwan	6881.72	9854.95	43.20
Malaysia	502.82	974.38	93.78
Singapore	1518.31	2132.59	40.45
Thailand	352.01	400.32	13.72
China	1158.05	1800.22	55.45
Sensex	3739.96	5001.28	33.72

S&P CNX Nifty	1078.05	1528.45	41.77
<i>Source : SEBI</i>			



Graph 2.14 : Percentage increases in Indices of various countries

P/E ratio analysis : an international comparison

As regards P/E Ratio in other countries, China Se Sang(42.20 per cent), Korea Composite Index (27.30 per cent), Kuala Lumpur Composite Index(38.03 per cent), Taiwan Weighted Index (36.70 per cent) recorded higher P/E Ratios than that of India(BSE Sensex) whereas Hang Seng Stock Index(12.67 per cent), Jakarta Composite Index (7.60 per cent), Philippines Composite Index (17.70 per cent) and Thai Stock(13.50 per cent) showed a lower P/E Ratio (Table 2.30).

Table 2.30 : P/E Ratio of SEA Countries, Dow Jones and

India- March 2000

Country Indices	End Aug-98 (in per cent)	End Mar-2000 (in per cent)
China Se Sang	28.6	42.2
Kuala Lumpur Comp. Index	10.1	38.0
Taiwan: Weighted Index	18.3	36.7
Korea Composite Index	-	27.3
Dow Jones Indus. Avg.	-	25.4
India BSE Sensex	11.3	21.9
Sing Straits Times Indx.	-	21.4
Philippines Composite Ix.	-	17.7
Thai Stock Of Exchg. Of Thai	47.3	13.5

Hang Seng Stock Index	9.7	12.7
Jakarta Composite Index	10.7	7.6
<i>Source: Bloomberg</i>		

Graph 2.15 : P/E Ratio of SEA Countries

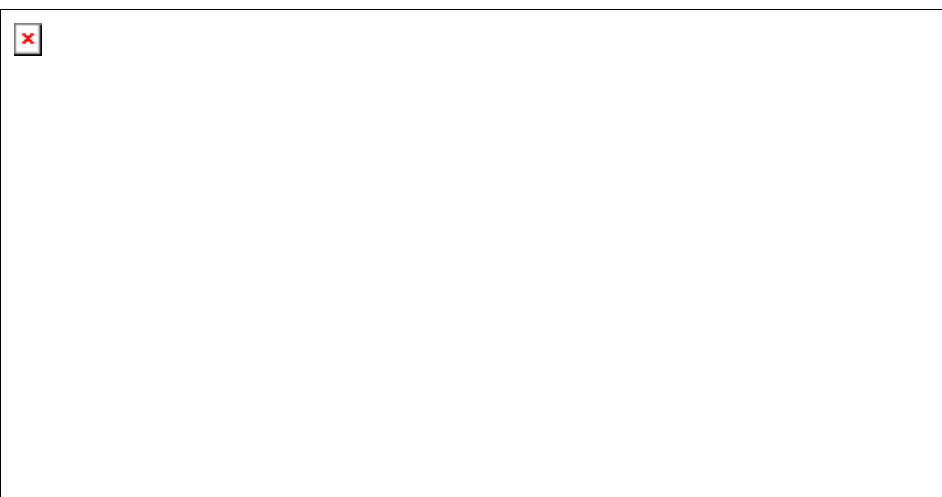


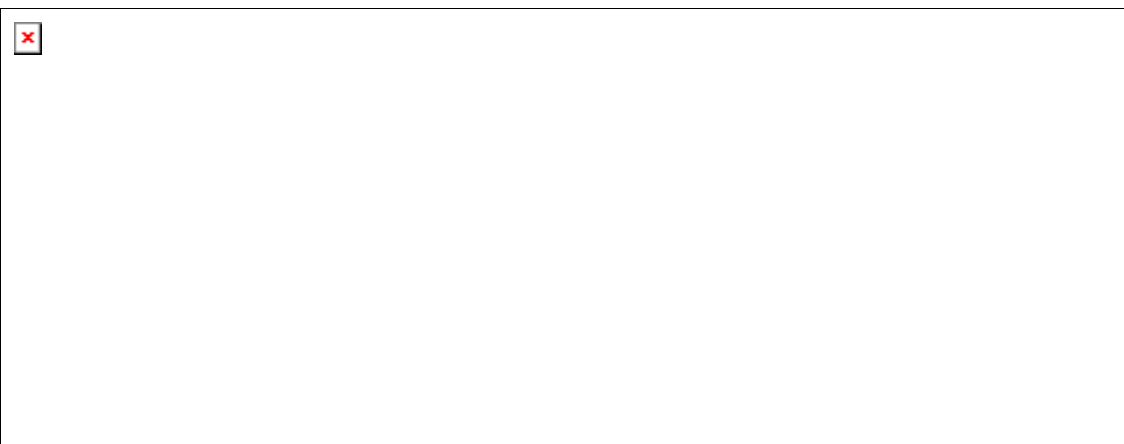
Table below presents data on correlation co-efficient between NASDAQ and BSE Sensex, Dowjones and BSE Sensex, on the one side and Nifty of NSE and NASDAQ and Nifty and Dowjones on the other side. The analysis provides interesting results. The correlation between Sensex and NASDAQ has shown positive relationship for the months of June, July, September, November and December 1999 and negative relationship for the remaining six months. As regards Nifty, there has been a correlation of larger magnitude for nearly seven months namely for May, June, October, November and December 1999, February and March 2000. The negative correlation, at times, between NASDAQ and Indian indices suggests that stocks prices in India have taken independent movement and were not influenced by the movement in NASDAQ. Moreover, the magnitude of the coefficient of correlation except in March has been very low (Table 2.31).

Table 2.31 : Correlation Matrix Between Indian and Foreign Stocks Prices *

	Sensex --- Dow Jones	Sensex --- NASDAQ	S&P CNX Nifty --- Dow Jones	S&P CNX Nifty --- NASDAQ
Apr-99	-0.09	-0.23	-0.12	-0.23
May-99	0.09	-0.28	0.31	0.28
Jun-99	0.31	0.24	0.26	0.41
Jul-99	0.26	0.13	-0.27	-0.40
Aug-99	-0.19	-0.27	-0.23	-0.07
Sep-99	-0.06	0.01	-0.22	-0.43
Oct-99	-0.04	-0.11	-0.02	0.06
Nov-99	0.13	0.30	0.04	0.34
Dec-99	-0.06	0.43	0.21	0.15
Jan-00	-0.14	0.01	-0.34	-0.02
Feb-00	0.06	-0.03	-0.02	0.01
Mar-00	-0.44	-0.15	0.21	0.52
<i>* The correlation is the covariance of two variables divided by the product</i>				

of their standard deviations Correlation is calculated between the two concerned daily indices during the respective months.

Source: SEBI



Graph 2.16 : Correlation

between Indian and Foreign Countries' Indices

Market volatility in major securities markets in the Asian countries and USA

During 1999-2000 the securities market across the world witnessed a high volatile situation. The month-wise volatility ratios of major indices in percentage term are given in the table below for the period 1999-2000.

During the month of April 1999, the volatility was on a higher side for NASDAQ, South Korea, Thailand and India. Thereafter it continued on a declining phase from May 1999 onwards till December 1999, with an exception to some indices which witnessed the highest volatility like 3.04 per cent in case of China and 3.51 per cent in South Korea in the month of July 1999. Since January 2000 upto March 2000, the intensity of volatility increased in all the securities markets and especially the technology indices experienced more volatility than the indices of economy stocks, e.g. Dow Jones index. The securities market of Asian countries moved in tandem with the market in the European countries and specially the trading activities on NASDAQ and New York stock exchange. Similarly, the volatility in share prices traded in NASDAQ and NYSE affected the trading in stocks of Asian countries, which shows integration of the stock markets across the globe (Table 2.32).

Table 2.32 : Trends in Volatility of Indices of East Asian Countries, USA and India (Per cent)

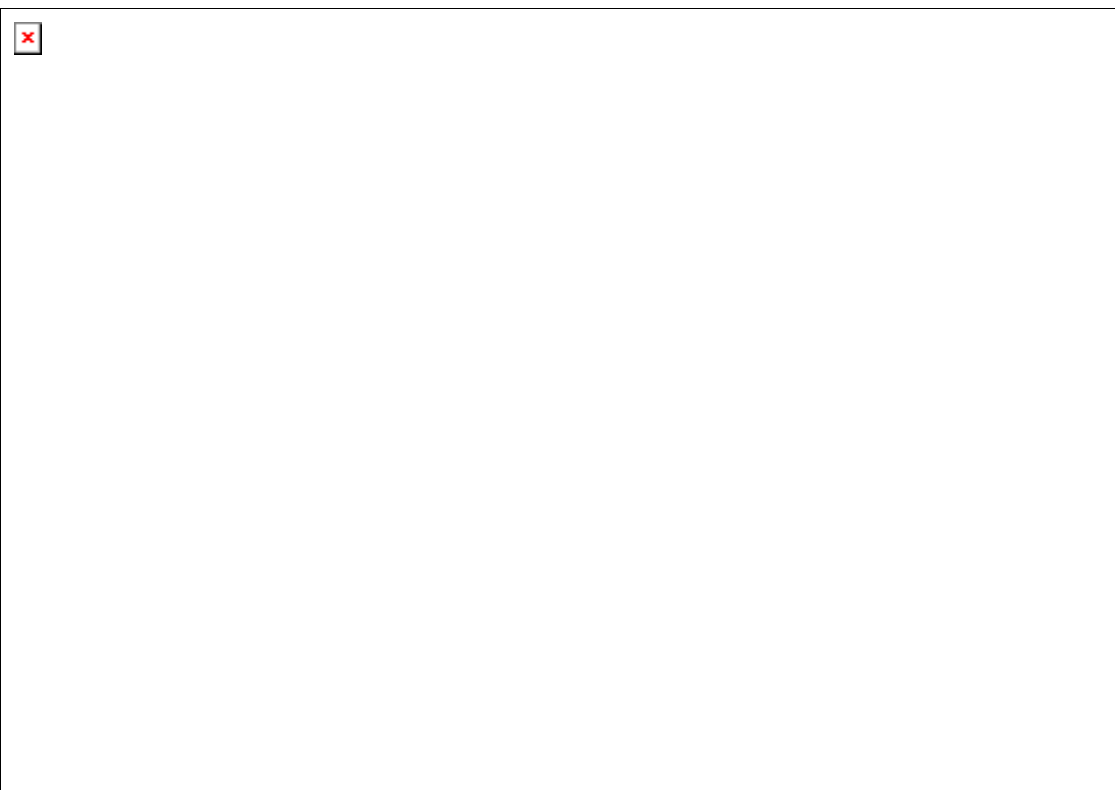
	Apr-99	May-99	Jun-99	Jul-99	Aug-99	Sep-99	Oct-99	Nov-99	Dec-99	Jan-00	Feb-00	Mar-00
Dow Jones	0.74	1.09	0.98	0.73	0.95	0.99	1.47	0.80	0.78	1.49	1.34	1.90
NASDAQ	2.24	1.71	1.84	1.59	1.57	1.68	1.72	1.22	1.19	2.97	1.89	2.51
S Korea	2.37	2.27	3.00	3.51	2.11	2.33	2.32	2.25	1.80	2.66	2.47	2.29
Taiwan	1.39	1.07	1.52	2.39	2.08	1.28	1.13	1.82	1.09	1.55	1.11	2.50
Malaysia	1.64	2.02	1.28	1.56	2.68	1.56	1.48	0.93	0.92	1.82	0.98	1.40
Singapore	1.62	1.45	1.00	1.92	1.50	1.14	1.39	0.98	1.11	2.27	1.15	1.58
Thailand	2.51	2.90	1.65	1.78	2.29	1.96	2.06	1.73	1.30	2.42	2.23	2.13
China	1.19	2.21	2.42	3.04	1.15	1.68	1.76	0.87	0.87	2.01	2.47	2.24
Sensex	2.50	1.95	1.49	1.64	1.34	1.18	2.06	1.83	1.49	2.52	2.53	1.91
S&P CNX Nifty	3.26	2.19	1.42	1.57	1.40	1.31	1.94	2.04	1.44	2.46	1.82	1.85

Source : SEBI



Graph 2.17 : Trends in

Volatility of Indices of East Asian Countries, USA and India



Graph 2.18: Annualized average volatility in Asian Countries and USA in 1999-2000

Developments in government-debt market

Activity in the wholesale debt market

There was massive increase in the trading activity of Wholesale Debt Market (WDM) during 1999-2000 as the net traded value was Rs.19,449.4 in March 2000 as compared to Rs.18,524.6 crore in April 1999. The net traded amount stood at Rs.15,206.2 in March 1999. The trend in net traded value has not been linear as the investors by and large, sell these securities during the liquidity crunch period. There was also increase in average daily value traded from Rs.661 crore in March 1999 to Rs.810 crore in March 2000. Over the year under review there have been large fluctuations. The average daily turnover was as high as Rs.1,799 crore in February 2000 (Table 2.33).

Table 2.33 : Business Growth on the WDM Segment (Rs. Crore)

	1998-99			1999-2000		
Month	Net Traded Value	Average Daily Value	Number of Trades	Net Traded Value	Average Daily Value	Number of Trades
April	13,035.89	592.54	1,935	18,524.64	882.13	2,595
May	9,131.83	397.04	1,350	21,680.80	867.23	3,356
June	6,787.81	261.07	1,081	17,025.93	654.84	2,478
July	7,287.15	280.28	1,101	25,944.37	960.90	4,072
August	8,751.64	380.51	1,371	26,957.09	1,036.81	4,188
September	5,475.36	210.59	835	16,524.11	688.50	2,545
October	5,500.77	250.04	820	19,321.23	772.85	2,985
November	8,454.16	352.26	1,315	29,285.23	1201.00	4,665
December	8,704.56	334.79	1,310	30,023.51	1,305.37	4,797
January	10,023.44	417.64	1,589	36,294.04	1,451.76	5,685
February	7,110.35	296.26	1,,167	43,185.86	1,799.41	6,661
March	15,206.16	661.14	2,218	19,449.43	810.39	2,960
<i>Source: NSEIL</i>						

The pattern of trading in government securities revealed minor changes in March 2000 over March 1999, while trading members' share in total trading increased from 18 per cent to 27 per cent as Indian banks share declined from 44 per cent to 32 per cent and that of foreign banks from 22 per cent to 17 per cent.

Table 2.34: Instrument wise distribution of Securities Traded in WDM Segment*(in per cent)*

	1998-99				1999-2000			
Month	Government Dated Securities	T-Bills	PSU	Others	Government Dated Securities	T-Bills	PSU	Others
April	88.00	9.00	1.00	2.00	90.47	5.64	0.26	3.63
May	83.00	6.00	1.00	10.00	94.06	2.59	0.41	2.94
June	84.00	11.00	1.00	4.00	88.35	5.88	0.77	4.99
July	72.65	15.58	2.19	9.58	94.08	2.09	0.55	3.28
August	82.00	6.00	2.00	10.00	92.89	4.45	0.67	1.99
September	82.00	5.00	3.00	10.00	90.28	4.55	0.78	4.39

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Instrument-wise trading has shown marked changes. The share of Government dated securities which ranged between 65 per cent and 88 per cent during 1998-99, oscillated at a high level namely 88.35 per cent and 96.67 per cent during 1999-2000. treasury bill trade also registered some lower volume in 1999-2000. The trading pattern thus reflected that the investors are more favourable to trade in dated securities which carry higher rate of return in the secondary market from 11 per cent to 20 per cent. However, in between there were fluctuation in their respective share (Table 2.34).

Table 2.35 : Participant in Trade (in percentage)

	1998-99					1999-2000				
	Trading Members	FIs/MFs	Primary Dealers	Indian Banks	Foreign Banks	Trading Members	FIs/MFs	Primary Dealers	Indian Banks	Foreign Banks
April	16	3	15	40	26	15	7	11	49	18
May	19	4	11	42	24	19	4	15	48	15
June	15	3	21	41	20	21	5	16	45	13
July	17	2	17	41	23	21	3	18	42	16
Aug	16	3	14	45	21	18	2	18	48	15
September	19	3	16	37	24	15	5	19	44	17
October	12	3	23	40	22	13	5	23	42	17
November	13	6	16	41	25	18	3	24	43	12
December	14	7	16	42	20	23	5	20	41	12
January	12	7	14	46	21	20	4	20	41	14
February	16	7	10	43	24	16	3	23	41	17
March	18	5	11	44	22	27	5	20	32	17

Source: NSEIL