Secondary Market - Trading*

Introduction

Secondary market is the place for sale and purchase of existing securities. It enables an investor to adjust his holdings of securities in response to changes in his assessment about risk and return. It also enables him to sell securities for cash to meet his liquidity needs. It essentially comprises of the stock exchanges which provide platform for trading of securities and a host of intermediaries who assist in trading of securities and clearing and settlement of trades. The securities are traded, cleared and settled as per prescribed regulatory framework under the supervision of the Exchanges and oversight of SEBI.

These exchanges are the exclusive centres for trading of securities. The regulatory framework protects them by virtually banning trading of securities outside the exchanges. Until recently, the area of operation/jurisdiction of an exchange was specified at the time of its recognition, which in effect precluded competition among the exchanges. These are called regional exchanges. In order to provide an opportunity to investors to invest/trade in the securities of local companies, it is mandatory for the companies, wishing to list their securities, to list on the regional stock exchange nearest to their registered office. If they wish, they can seek listing on other exchanges as well. Monopoly of the exchanges within their allocated area, regional aspirations of the people and mandatory listing on the regional stock exchange resulted in multiplicity of exchanges in the country. As a result, we have 24 exchanges (The Capital Stock Exchange, the latest in the list, is yet to commence trading) today recognised over a period of time to enable investors across the length and breadth of the country to access the market.

The three newly set up exchanges (OTCEI, NSE and ICSE) were permitted since their inception to have nation wide trading facility. Listing on these exchanges was considered adequate compliance with the requirement of listing on the regional exchange. SEBI recently allowed all exchanges to set up trading terminals anywhere in the country. Many of them have already expanded trading operations to different parts of the country. The trading platforms of a few exchanges are now accessible from hundreds of locations. Further, with extensive use of information technology, the trading platforms of a few exchanges are also accessible from anywhere through the Internet and mobile devices. This made a significant difference in a geographically vast country like India. It significantly expanded the reach of the exchange to the homes of ordinary investors and assuaged the aspirations of people to have exchanges in their vicinity. The issuers/investors now prefer to list/trade on exchanges providing nation-wide network rather than on regional exchanges. Consequently, territorial jurisdiction of an exchange, opportunity to invest in securities of local companies through listing on regional exchanges and convenience of trading from a nearby exchange lost relevance.

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

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The broad structure of the secondary market as on March 31, 2002 is presented below:

Stock Exchanges	23	With Settlement Guarantee Fund	16
Exchanges		Registered Members (brokers)	9,687
With Screen Based Trading System	23	Registered Corporate Members	3,862
With Internet Trading	2	Registered Sub-Brokers	12,208
With WAP Facility	1	Registered FIIs	490
With Equity Trading	23	Listed Companies	9,644
With Debt Market Segment	2	Market Capitalisation (Estimated)*	Rs. 796,076 crore
With Derivative Trading	2	Turnover during 2001-02*	Rs. 895,826 crore
With Clearing Corporation	1		

* These relate to only equity segments of exchanges.

Policy Developments

Government and market regulators have taken several policy measures over last one decade or so to improve efficiency in the working of the stock exchanges and market intermediaries. The measures aimed at improving market infrastructure, and upgradation of risk containment measures so as to protect the integrity of the market and interest of investors. The policy developments pertaining to trading of securities during 2001-02 and April-June 2002 are discussed below:

Initiatives from Government

I. *Joint Parliamentary Committee*

A Joint Committee of both the Houses of Parliament consisting of 30 members, 20 from the Lok Sabha and 10 from the Rajya Sabha, was constituted in April 2001:

i. to go into the irregularities and manipulations in all their ramifications in all transactions, including insider trading, relating to shares and other financial instruments and the role of banks, brokers and promoters, stock exchanges, financial institutions, corporate entities and regulatory authorities,

ii. to fix the responsibility of the persons, institutions or authorities in respect of such transactions,

iii. to identify the misuse, if any of and failures/inadequacies in the control and the supervisory mechanisms,

iv. to make recommendations for safeguards and improvements in the system to prevent recurrence of such failures,

v. to suggest measures to protect small investors, and

vi. to suggest deterrent measures against those found guilty of violating the regulations.

The committee has been granted time up to end of Winter session of 2002 of Parliament for submission of its report.

II. *Definition of Securities*

Government promulgated the Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Ordinance in June 2002 which amended the definition of the "securities" in the Securities Contracts (Regulation) Act, 1956 to include 'security receipt' within its ambit. The "security receipt" means a receipt or other security, issued by a securitisation or reconstruction company to any qualified institutional buyer pursuant to a scheme, evidencing the purchase or acquisition by the holder thereof, of an undivided right, title or interest in the financial asset involved in securitisation.

III. *Listing Requirement*

Government amended in June 2001 the Securities Contracts (Regulation) Rules, 1957 to relax the listing requirement on a stock exchange. A public company seeking listing of its securities on a stock exchange is required to satisfy the exchange that at least 10% of each class or kind of securities issued by it was offered to the public for subscription through advertisement in newspapers for a period not less than 2 days and that applications received in pursuance of such offer were allotted. However, this requirement is subject to the following conditions:

a. Minimum 20 lakh securities (excluding reservations, firm allotment and promoters' contribution) was offered to the public;

b. The size of the offer to the public, i.e. the offer price multiplied by the number of securities offered to the public was minimum Rs. 100 crore; and

c. The issue was made only through book building method with allocation of 60% of the issue size to the qualified institutional buyers as specified by SEBI.

If, however, a company does not fulfill the above conditions, it has to satisfy the exchange that at least 25% of each class or kind of securities was offered to the public for subscription through advertisement in newspapers for a period not less than two days and that applications received in pursuance of such offer were allotted.

IV. *Union Budgets*

The Union Budget, 2001-02 proposed the following measures, which impact the secondary market:

a. In order to liberalise capital account,

   - ADRs/GDRs will be provided two-way fungibility. Converted local shares may be reconverted to ADRs/GDRs while being subject to sectoral caps, wherever applicable.

   - Indian companies will be permitted to list in foreign stock exchanges by sponsoring ADR/GDR issues against block shareholding. This facility would be offered to all categories of shareholders.

b. Foreign Institutional Investors (FIIs) can invest in a company under the portfolio investment route up to 24% of the paid up capital of the company. This can be increased to 49% with the approval of the general body of the shareholders by a special resolution.

The Union Budget for 2002-03 proposed the following measures that have bearing on the functioning of the secondary market:

i. The process of demutualisation and corporatisation of stock exchanges is expected to be completed during the course of the year, to implement the decision to separate ownership, management and operation of stock exchanges.

ii. Legislative changes would be proposed, during the Budget Session, in the SEBI Act, 1992 for investor protection, and to enhance the effectiveness of SEBI as the capital market regulator.

iii. Following certain developments overseas, and within the country, regarding accounting standards and effectiveness of auditors, regulation in this area would be strengthened.

iv. Presently foreign institutional investors (FIIs) can invest in a company under the portfolio investment route beyond 24% of the paid up capital of the company with the approval of the general body of the shareholders by a special resolution. These investments would not be subject to the sectoral limits for foreign direct investment except in specified sectors.

v. Indian mutual funds can invest in rated securities in countries with fully convertible currencies, within the existing limits. Earlier such investment was only permitted in ADR/GDRs issued by Indian companies in overseas markets.

In order to promote demutualization of stock exchanges, the Finance Act, 2001 amended the Income Tax Act, 1961 to provide that any transfer of capital asset from an association of persons or body of individuals to a company in the course of corporatisation of a recognised stock exchange shall not be regarded as transfer for the purposes of capital gains tax. This one time exemption from capital gains is available only if all the assets and liabilities of the stock exchange immediately before the succession become assets and liabilities of the corporatised stock exchange, and the corporatisation is carried out in accordance with the scheme of corporatisation approved by SEBI.

V. *PAN for Securities Trading*

The Income Tax (Eighth Amendment) Rules, 2002 made it mandatory for a person to quote permanent account numbers issued by the Income Tax Department for securities transactions of over Rs.1 lakh. This reduced threshold for quoting PAN for the sale and purchase of securities from Rs. 10 lakh.

VI. *The Companies (Amendment) Ordinance*

The Companies (Amendment) Ordinance was promulgated on October 23, 2001 to provide that Section 77 A of the act shall not apply in any case where the buyback is less than 10% of total paid up equity capital and free reserves of the Company. Such buy back has to be authorised by the Board of the Company by means of resolution passed at its meeting. No offer of buyback shall be made within a period of 365 days from the date of preceding offer of buyback.

VII. *Permission for Listing*

The Securities Appellate Tribunal (SAT) upheld the order of The Stock Exchange, Mumbai which had rejected the application of the appellant seeking permission for listing of 210 lakh shares issued on a preferential basis to eight associate companies. While doing so, it reiterated that before granting listing permission, the concerned Stock Exchange has to satisfy that in the given set of facts, listing would not be detrimental to the interest of the market and the investors. Exchange's role is not confined to that of a passive infrastructure provider for trading in securities, it is required to provide some thing more to protect the interests of the investors in securities. It observed that the standard of scrutiny in the case of a public issue through prospectus is rather rigorous and done at different levels. But when it comes to preferential allotment, it is not so. The requirement is self-compliance of the SEBI guidelines. This puts, all the more, added responsibility on the stock exchanges in deciding the request for listing. If there is sufficient justification to hold that listing of the securities of a company, whether made by way of public issue through prospectus or on preferential basis, is not in the interest of the securities market and or in the interests of the investors at large, the exchange is at liberty to deny listing permission. (M/s. Parekh Platinum Ltd. Vs. The Stock Exchange, Mumbai).

While disposing off another appeal (Ask me Info Hubs Ltd. *vs.* The Stock Exchange, Mumbai), the SAT raised a policy issue for the consideration of the Ministry of Finance and the SEBI. As per the current practice, further issue of securities (same class) requires fresh listing approval for trading on exchanges. It is not clear why fresh approval is required for listing of the same class of securities, especially a preferential issue which is made with the approval of the shareholders and the pricing of the issue is done as per SEBI guidelines. The authorities concerned should examine the matter and decide as to whether such 'fresh listing requirement of same type securities' by exchanges can be dispensed with subject to compliance of certain guidelines, which SEBI should be in a position to provide taking into consideration the interests of shareholders.

Initiatives from SEBI

I. *Corporatisation/Demutualisation of Stock Exchanges*

SEBI directed all the recognised stock exchanges in January 2002 to suitably amend their Rules, Articles etc. within a period of two months from the date of the order to provide that no broker member of the stock exchanges shall be an office bearer of an exchange, i.e. hold the position of President, Vice President, Treasurer etc. This would give effect to the decision taken by SEBI and the policy decision of Government in regard to demutualisation/corporatisation of exchanges by which ownership, management and trading membership would be segregated from each other.

Corporatisation and demutualisation of stock exchanges are complex subjects and involve a number of legal, accounting, Companies Act related and tax issues. Therefore, SEBI set up in March 2002 a Group under the Chairmanship of Justice M. H. Kania, former Chief Justice of India, to recommend the steps that need to be taken to implement the decision regarding demutualisation and corporatisation of the exchanges. The terms of references of this Group were: (i) to review and examine the present structure of stock exchanges including stock exchanges which are set up as company and those set up as un-incorporated bodies and in this regard examine the legal, financial and fiscal issues involved to corporatise and demutualise the stock exchanges, (ii) to recommend the specific steps that need to be taken for implementation and (iii) to advise on the consolidation and merger of the stock exchanges.

II. *Listing Agreement*

The stock exchanges were advised by SEBI to desist from the practice of granting conditional listing to the companies as it does not comply with section 73 of the Companies Act, 1956. The section 73 envisages a final decision of granting or refusing listing permission to the companies.

The listing agreement was amended in the following manner:

Non-promoter Holding on a Continuous Basis: SEBI directed the stock exchanges in May 2001 to amend their listing agreement to incorporate the requirement of quantitative continuous listing conditions to ensure availability of floating stock on a continuous basis. The listing agreement would provide the following:

i. The company agrees that in the event of the application for listing being granted by the Exchange, the company shall maintain on a continuous basis, the minimum level of non-promoter holding at the level of public shareholding as required at the time of listing.

ii. Where the non-promoter holding of an existing listed company as on April 01, 2001 is less than the limit of public shareholding as required at the time of initial listing, the company shall within one year raise the level of non-promoter holding to at least 10%. In case the company fails to do so, it shall buy back the public shareholding in the manner provided in the Takeover Regulations, 1997.

iii. The company agrees that it shall not make preferential allotment or an offer to buy back its securities, if such allotment or offer would result in reducing the non-promoter holding below the limit of public shareholding specified under the DIP Guidelines, as applicable at the time of initial listing or the limit specified in sub-clause (ii) above for the existing listed company, as the case may be.

These conditions shall not apply to the companies referred to BIFR. The stock exchanges were advised by SEBI to monitor the level of non-promoter holding on a half yearly basis from the returns submitted by the companies. The non-promoter holding would be a part of half-yearly disclosures by the companies.

The following shall also be the condition for continued listing:

a. When any person acquires or agrees to acquire 5% or more of the voting rights of any securities, the acquirer and the company shall comply with the relevant provisions of the Takeover Regulations, 1997.

b. When any person acquires or agrees to acquire any securities exceeding 15% of the voting rights in any company or if any person who holds securities which in aggregate carries less than 15% of the voting rights of the company and seeks to acquire the securities exceeding 15% of the voting rights, such person shall not acquire any securities exceeding 15% of the voting rights of the company without complying with the relevant provisions of the Takeover Regulations, 1997.

The requirement of at least 5 public shareholders for every Rs. 1 lakh capital issued was withdrawn.

Level of Disclosure: In order to enhance the level of disclosure by the listed companies, SEBI decided to amend the Listing Agreement in August 2001 to incorporate the following recommendations of the Accounting Standards Committee of SEBI:

Amendment to Clause 41

a. Segment Reporting: Companies shall be required to furnish segment wise revenue, results and capital employed along with the quarterly un-audited financial results with effect from the quarters ending on or after September 30, 2001.

b. Accounting for Taxes on Income: Companies shall be required to comply with the accounting standards on "Accounting for Taxes on Income" in respect of the quarterly un-audited financial results with effect from the quarters ending on or after September 30, 2001.

c. Consolidated Financial Results: Companies shall have the option to publish consolidated quarterly financial results in addition to the un-audited quarterly financial results of the parent company.

Amendment to Clause 32

a. Consolidated Financial Statements: Companies shall be mandatorily required to publish Consolidated Financial Statements in the annual report in addition to the individual financial statements. Audit of Consolidated Financial Statements by the statutory auditors of the company and the filing of Consolidated Financial Statements audited by the statutory auditors of the company with the stock exchanges shall be mandatory.

b. Related Party Disclosures: Companies shall be required to make disclosures in compliance with the Accounting Standard on "Related Party Disclosures" in the annual reports.

Insertion of new clause 50

A new Clause shall be added to the Listing Agreement as Clause 50 to provide that companies shall mandatorily comply with all the Accounting Standards issued by ICAI from time to time.

Amendment to clauses 19 and 20

SEBI advised stock exchanges in January 2002 to amend the Listing Agreement with immediate effect to ensure transparency and disclosures to the investors on buy back of securities. It advised amendment to clause 19 to require the Companies to give prior notice of at least 7 days to the stock exchanges about the board meetings at which the proposal for buy back of securities is to be considered. It advised amendment to Clause 20 requiring the Companies to intimate the stock exchanges within 15 minutes of the closure of the board meeting about the decision on buy back of securities

Compensation to Aggrieved Party

The Exchanges were advised in May 2002 to amend the listing agreement to provide that the company would compensate the aggrieved party/parties for the opportunity losses caused during the period of delay in cases where there is a delay on the part of the company in either transferring the shares or communicating the objection to the transfer of shares, within the stipulated time period of one month. In addition, the company would provide all benefits which accrued to the investor during the intervening period on account of such delay.

III. *Takeover Regulations*

SEBI amended the SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 1997 in October 2001 to increase the creeping acquisition limit provided under Regulation 11(1) from 5% to 10%. This relaxation would be for the period up to September 30, 2002, subject to review, as and when required depending upon the experience. The Regulation 7 of the Regulations has also been amended to provide for disclosure of acquisition under the Regulation 11(1) as well as the pre and post acquisition shareholding and voting rights of the acquirer, in the target company when such acquisition aggregates to 5% and 10% of the voting rights.

SEBI Committee under the Chairmanship of Shri P. N. Bhagwati to review the provisions of SEBI (Substantial Acquisition of Shares and Takeovers) Regulation, 1997 submitted its report in May 2002. The major recommendations made by the Committee are:

- Change in control would be brought only pursuant to a special resolution passed by the shareholders in a General Meeting and postal ballot should be allowed in respect of such meetings.

- An offer should always be for 20% or above, but the offer may be subject to an acceptance level of less than 20%.
- The provisions relating to public announcement shall not apply to acquisitions (i) by a person in pursuance to an open offer for exchange of shares, (ii) in excess of creeping acquisition limit pursuant to offer of safety net made my promoters/ merchant bankers, and (iii) by international development organizations such as IBRD, ADB, CDC, IFC.
- The acquirers/persons acting in concert would be jointly and severally responsible for fulfillment of obligations under the Regulations.
- The offer document would also include an undertaking from the acquirer not to strip substantial assets except with the prior approval of the shareholders of the target company.
- Disclosures would be made at every stage when the acquirer crosses the limits of 5%, 10% and 14%.For acquirers holding 15% and above, purchases or sales at every 2% level should be disclosed.
- Transfer amongst different promoters or groups of promoters made at a price not exceeding 25% price as determined in terms of Regulation 20 would merit automatic exemption.
- Any acquisition of shares in breach of Regulations 10, 11 or 12 of the takeover regulation would be null and void. In case where SEBI feels that as a result of acquisition of any shares, breach of regulations 10, 11 or 12 is likely to take place, it may direct the target company or the depository not to give effect to transfer of any such shares and also not to permit exercise of any voting or other rights attached to such shares.
- Where it is not possible to restore status quo ante for any reason, SEBI can appoint a merchant banker for the purpose of causing disinvestment of shares acquired in breach of regulations either through public auction or market mechanism, in its entirety or in small lots, or through offer for sale. In case of non-compliance with the disclosure requirements, SEBI may have the power to direct disinvestment of such shares as well as impose monetary penalty.

IV. *Insider Trading Regulations*

SEBI amended the SEBI (Insider Trading) Regulations, 1992 in February 2002 to provide for the following:

i. The amended regulation would be called SEBI (Prohibition of Insider Trading) Regulations, 1992.

ii. The regulation would now cover subscription in the primary issue based on inside information.

iii. A person, who is an intermediary, investment company, trust company, asset management company or an employee or director thereof or an official of a stock exchange or of a clearing house or corporation, would be deemed to be a connected person.

iv. Price sensitive information would mean any information, which relates directly or indirectly to a company and which if published is likely to materially affect the price of securities of a company. Periodical financial results of the company, intended declaration of dividends (both interim and final), issue of securities or buy-back of securities, any major expansion plans or execution of new projects, amalgamation, mergers or takeovers, disposal of the whole or substantial part of the undertaking, and any significant changes in policies, plans or operations of the company would be deemed to be price sensitive information.

v. Speculative reports in print or electronic media would not be considered as published information.

vi. Only dealing in securities based on unpublished price sensitive information is prohibited and communication of price sensitive information per se is not an offence.

vii. Corporate dealing in securities of another company based on inside information is specifically prohibited.

viii. All listed companies and organisations associated with securities market including the intermediaries, asset management company, trustees of MFs, self regulatory organisations, stock exchanges, clearing house/corporations, public financial institutions, professional firms such as auditors, accounting firms, law firms, analysts, consultants etc. assisting or advising listed companies shall frame a code on internal procedure and conduct on lines of model code specified in regulations. These entities shall abide by the Code for Corporate Disclosure Practices specified in the regulations. They shall adopt appropriate mechanisms and procedures to enforce these codes.

ix. Any person who holds more than 5% shares or voting rights in any listed company shall disclose to the company, the number of shares or voting rights held by such person, within four working days of the receipt of intimation of allotment of shares, or the acquisition of shares or voting rights, as the case may be. He shall also disclose to the company the change in shareholding or voting rights, even if such change results in shareholding falling below 5%, if there has been change in such holdings from the last disclosure and such a change exceeds 2% of total shareholding or voting rights in the company. Any person, who is the director or officer of a listed company, shall disclose to the company, the number of shares or voting rights held by such person within four working days of becoming director or officer of the company. He shall also disclose the change in shareholding or voting rights, if there has been a change in such holdings from the last disclosure made and the change exceeds Rs. 5 lakh in value or 5,000 shares or 2% of total shareholding or voting rights, whichever is lower. Every listed company within 5 days of receipts of these disclosures shall disclose to all stock exchanges on which the company is listed.

V. *Stock Brokers and Sub-Brokers Regulations*

SEBI amended the SEBI (Stock Brokers and Sub-Brokers) Regulations, 1992 in February 2002 to provide for the following:

i. The fees on jobbing transactions, i.e., deals which are squared off during the same day, which have not been undertaken by the brokers on behalf of clients, shall be computed at the rate of one two hundredth of 1% in respect of sale side of the deal.

ii. In case of Government securities, the fee payable on bonds issued by any public undertaking and the units traded in a similar manner, shall be computed at the rate of one thousandth of 1% of the turnover.

iii. In case of carry forward, renewal or badla transactions, the fees shall be charged at one hundredth of 1% of the turnover and the reverse offsetting transactions shall not be counted as part of the turnover.

iv. In case of brokers carrying out transactions in securities without reporting to the exchanges, those transactions shall be taken into account for the purpose of turnover and the fees would be computed at one hundredth of 1% of the turnover. But the trade put through on other exchanges shall be included in the turnover of that exchange if the market for that security does not exist on the exchange of which he is a member and the fees shall be computed at one hundredth of 1% of the turnover.

v. Underwriting and collection of deposits shall however, not be taken into account for computing turnover.

vi. The broker members would be required to pay a sum of Rs. 5,000 for every block of 5 financial years from the 6th financial year after initial registration.

vii. The amendments brought into effect from January 21, 1998 would deem to be in continuation of the old entity in respect of conversion of individual or partnership membership card of the exchange into corporate entity. No fee shall be collected again from the converted corporate entity for the period for which the erstwhile entity has paid the fee as per the regulation.

viii. Any financial liability by broker, which is due, and payable to SEBI under these regulations shall be a factor to be taken into consideration for grant of registration under derivative segment.

SEBI advised the Stock Exchanges to ensure that their brokers/sub-brokers do not advertise their business, including in their internet sites, subsidiaries, group companies etc. SEBI also advised Exchanges to grant trading terminals only at members' registered office, branch offices and their registered sub-brokers' registered offices to avoid misutilisation of trading terminals for unregistered sub-broking activities. They were also advised to amend their byelaws suitably to prohibit their members from dealing with sub-brokers who are not registered with SEBI.

VI. *Investment Advice by Intermediaries*

SEBI notified in June 2001 the SEBI (Investment Advice by Intermediaries) (Amendment) Regulations, 2001. This amended a number of SEBI regulations requiring market intermediaries to appoint a Compliance Officer who shall be responsible for monitoring the compliance requirements of the SEBI Act, rules, regulations, notifications, guidelines, instructions, etc. issued by SEBI or Central Government and for redressal of investors' grievances. The Compliance Officer shall independently report to the SEBI about any non-compliance observed by him. It also requires that the intermediaries or any of its employees shall not render any investment advice about any security in the publicly accessible media unless a disclosure of his/employees or his dependent family members' interest in the said security has been made while rendering such advice. The intermediaries mandated to have a Compliance Officer are Bankers to an Issue, Credit Rating Agencies, Custodian of Securities, Debenture Trustees, Depositories and Participants, Foreign

Institutional Investors, Merchant Bankers, Mutual Funds, Portfolio Managers, Registrars to an Issue and Share Transfer Agents, Stock Brokers and Sub-Brokers and Underwriters. The Intermediary/Compliance Officer contravening the provisions of the regulations shall be liable for action under the concerned regulation and the SEBI Act.

VI. *Rules and Bye-Laws of Stock Exchanges*

SEBI had constituted a committee in May 1997 for examining the existing Articles and Memorandum of Association, Rules, Byelaws and Regulations of stock exchanges and framing a uniform set of Rules and Byelaws to be followed by all the stock exchanges in the country. The Committee submitted its report recommending that the NSE, OTCEI and ISE may continue with their existing Articles of Association and Rules. Other recommendations of the committee are:

Membership

In order to be eligible to become a member of a stock exchange, a person may be a graduate or have such higher education as may be prescribed by the Governing Board of the exchange. An existing member not having prescribed qualification may undergo a prescribed refresher course. The new member may pass a SEBI-recognised certificate/ diploma course/examination. The members may undergo at least once in three years a refresher course on the syllabus governing the stock market/capital market as may be prescribed by the Governing Board of the Exchange and/or SEBI from time to time.

The membership requirements may apply to at least two designated partners in case of partnership firms and two designated directors/nominees in the case of a company/ body corporate.

Any body and everybody fulfilling the conditions – legal, educational, financial- should be able to acquire membership. There may be arrangement for buy back/surrender of membership rights.

Every member may appoint a compliance officer.

There may be a class of 'clearing members' who can clear and settle trades executed by him/others.

A member may be deemed to have become inactive if he fails either to achieve a turnover of at least one-tenth of the average turnover of the members of the stock exchange or fails to trade for a minimum period of 50 trading days in an immediately preceding financial year.

The Governing Boards of stock exchanges may have power to declare a deceased member a deemed defaulter.

Management

In addition to Arbitration, Defaulters' and Disciplinary Action Committees, there may be four other standing committees viz., Audit Committee, Membership Selection Committee, Investors' Services Committee and Ethics Committee. No committee, other than the Standing Committees, may be formed, the functions of which would either overlap or conflict with the functions of the Managing Director (MD).

- The President of the Stock Exchange shall be renamed as its Chairman who would be non-executive. He would deal with any matter relating to the administration, functions, working and affairs of the stock exchange only at the meetings of the Governing Board and shall not deal with any of the operational or administrative matters. There shall not be any Vice-President and Honorary Treasurer and Trustees.

- SEBI may issue to the public representatives directions with regard to affairs of an exchange and they may report to SEBI in that behalf.
- No person may hold the office as a member of the Governing Board after he completes seventy-five years of age.
- The president of the Governing Board may be elected from amongst the members of the Governing Board. This would enable a nominated member of the Governing Board also to become the Chairman of the stock exchange.
- The Executive Director may be redesignated as MD, who would be the sole deciding authority on all matters concerning the day-to-day management, operations and administration of the stock exchange. The powers of the MD need to be clearly spelt out in order to enable him to discharge the duties cast on him promptly and efficiently.
- The appointment of MD shall ordinarily be for a tenure of five years, and will be normally renewed, subject to superannuation upon completion of 60 years of age.
- The stock exchanges may publish on a half-yearly basis details of size and utilisation of Settlement Guarantee Fund, Investors' Protection Fund and Investors' Services Fund, number of cessation of membership rights including declaration of defaulters and expulsions and number of surrender of membership rights, etc.
- The annual statement of income and expenditure and balance sheet and half-yearly report may be posted on the stock exchanges in their respective websites and copies may be made available to investors, intermediaries and general public at a reasonable cost.

VII. *Unique Client Code*

SEBI made it mandatory for all brokers to use unique client codes for all clients. Brokers shall collect and maintain in their back office the Permanent Account Number (PAN) allotted by Income Tax Department for all their clients. Sub-brokers will similarly maintain the same for their clients. Where an individual client does not have PAN, such a client shall be required to give a declaration to that effect and until the PAN is allotted, such client shall furnish passport number and place and date of issue. Where the client does not have a PAN or a passport, such client shall furnish driving licence number, place and date of issue. If none of the above is available, the client shall give his voter ID number. Until the PAN is allotted, SEBI registration number for FIIs and sub-account shall be used for FIIs (where FII itself is the investing entity) and their sub-accounts, and the unique registration number issued by the relevant regulatory authority shall be used for tax paying body corporates and non-tax paying entities. SEBI registration number followed by any number given by mutual fund to denote Scheme/Plan shall be used for mutual funds.

Brokers shall verify the documents with respect to the unique code and retain a copy of the document. They shall also be required to furnish the above particulars of their clients to the stock exchanges/clearing corporations and the same would be updated every quarter. The stock exchanges shall be required to maintain a database of client details submitted by brokers. Historical records of all quarterly submissions shall be maintained for a period of seven years by the exchanges.

The above requirement shall be applicable for clients having order value of Rs. 1 lakh or more and shall be enforced w.e.f. August 01, 2001.

Initiatives from RBI

I. *Bank Financing for Margin Trading*

Based on the recommendations of the RBI-SEBI Technical Committee, RBI had permitted banks to extend finance to stock brokers for margin trading. RBI reviewed the guidelines in consultation with major commercial banks and decided in November 2001 that the Board of each bank should formulate detailed guidelines for lending for margin trading subject to the following parameters:

i. The finance extended for margin trading should be within the overall ceiling of 5% prescribed for exposure to capital market.

ii. A minimum margin of 40% should be maintained on the funds lent for margin trading.

iii. The shares purchased with margin trading should be in dematerialised mode, under pledge to the lending bank. The bank should put in place an appropriate system for monitoring and maintaining the margin of 40% on a regular basis.

iv. The bank's Board should prescribe necessary safeguards to ensure that no "nexus" develops between inter-connected stock broking entities/stockbrokers and the bank in respect of margin trading. Margin trading should be spread out by a bank among a reasonable number of stockbrokers and stock broking entities.

The Audit Committee of the Board should monitor periodically the bank's exposure by way of financing for margin trading and ensure that the guidelines formulated by the bank's Board, subject to the above parameters, are complied with.

II. *FII Investments*

Under the FEMA (Transfer on Issue of Security by a Person Resident outside India) 2000, the total holdings of all FIIs put together shall not exceed 24% of the paid-up capital. These regulations were amended in September 2001 to provide that the limit of 24% can be increased up to the sectoral cap/statutory ceiling, as applicable, provided this has the approval of the Indian company's board of directors and also its general body.

III. *ADR/GDR Fungibility*

RBI issued in February 2002 the guidelines for the limited two-way fungibility of ADRs/GDRs under the Foreign Exchange Management Act, 1999. Under the said guidelines, re-issuance of ADRs/GDRs would be permitted to the extent of ADRs/GDRs that have been redeemed into underlying shares and sold in the domestic market. No specific permission from RBI would be needed for re-conversion. The re-conversion of shares into depository receipts would be distinct from portfolio investment by Foreign Institutional Investors (FIIs). The transactions would be demand driven and as such would not require company involvement or fresh permissions. The custodian would be responsible for monitoring the reissuance of the depository receipts within the sectoral cap fixed by the Government. Each purchase transaction would be only against delivery and payment received in foreign exchange through banking channels. The transaction would be effected through SEBI registered stock brokers as intermediaries between foreign investors and domestic shareholders. The acquisition of shares through the intermediary on behalf of overseas investors would fall within regulatory purview of SEBI.

Market Design*

At the end of March 2002, there were 23 operative stock exchanges where 9,644 securities were listed. On the same date, there were 9,687 registered brokers and 12,208 registered sub-broker trading on these exchanges in the listed companies. The exchange wise distribution of companies primarily listed and registered brokers and sub-broker is presented in Annexure 4-1.

Stock Exchanges

The stock exchanges need to be recognized under the Securities Contracts (Regulation) Act, 1956. Out of 23 exchanges, 8 have permanent recognition, while the balance 15 have temporary recognition and need to renew their recognition at periodic intervals. Only 3 exchanges (Mumbai, Ahmedabad, Madhya Pradesh) are organsised in the form of "Association of Persons", while the balance 20 are organized as companies – either limited by guarantee or by shares. Except one exchange (NSE), all exchanges, whether corporates or association of persons, are not-for-profit making organizations (Annexure 4-1).

The stock exchanges, except NSE and OTCEI, are organised as "mutuals", which was considered beneficial in terms of tax benefits and matters of compliance. The trading members, who provide brokering services also own, control and manage the stock exchange. They elect their representatives to regulate the functioning of the exchange, including their own activities. In the changed environment, these mutual exchanges do not seem to offer an effective model for self-regulatory organisations. The regulatory and public interest role of the exchange at times conflicts with private interests of the elected broker directors. This limitation has been realised by the stock exchanges themselves as well as the regulators. Various committees have recommended reducing dominance of trading members in the management of stock exchanges by prescribing composition of governing council and strengthening the position of Executive Director. The reform process made some attempts in this direction, but this did not materially alter the situation. In view of the less than satisfactory quality of administration of broker-managed exchanges, the Finance Minister in March 2001 proposed demutualisation of the exchanges by which ownership, management and trading membership would be segregated from each other. The process of demutualisation is expected to be completed during 2002-03.

Two stock exchanges *viz.* OTCEI and NSE are already demutualised. These are managed by boards of directors, which do not include trading members. These are purest forms of demutualised exchanges, where ownership, management and trading are in the hands of three different sets of people. This model of demutualisation has completely eliminated any conflict of interest and helped the exchanges to pursue market efficiency and investors interest aggressively. The NSE model of demutualisation compares well with the international models of demutualised stock exchanges, as may be seen from Table 4-1.

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

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

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

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

Membership

The trading platform of a stock exchange is accessible only to brokers. The broker enters into trades in exchanges either on his own account or on behalf of clients. The clients may place their orders with them directly or through a sub-broker indirectly. A broker is admitted to membership of an exchange in terms of the provisions of the Securities Contracts (Regulation) Act, 1956, the SEBI Act 1992, the rules, circulars, notifications, guidelines, etc. prescribed thereunder and the byelaws, rules and regulations of the concerned exchange. No stock broker or sub-broker is allowed to buy, sell or deal in securities, unless he or she holds a certificate of registration granted by SEBI. A broker/sub-broker complies with the code of conduct prescribed by SEBI.

The stock exchanges are free to stipulate stricter requirements for its members than those stipulated by SEBI. The minimum standards stipulated by NSE for membership are in excess of the minimum norms laid down by SEBI. The standards for admission of members laid down by NSE stress on factors, such as, corporate structure, capital adequacy, track record, education, experience, etc. and reflect a conscious endeavour to ensure quality broking services. The eligibility criteria for membership on the CM segment of NSE are presented in Table 4-2.

The authorities have been encouraging corporatisation of the broking industry. Over time, a number of brokers - proprietor firms and partnership firms - have converted themselves into corporates. As at end-March 2002, there were brokers 9,687 (including multiple registrations) registered with SEBI as compared to 9,782 brokers as at

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

(Amount in Rs. lakh)

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

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

end-March 2001. Of these, 3,862 brokers, accounting for nearly 40% of total, were corporate entities. It may be noted that around 88% of brokers on NSE were corporatised as at end-March 2002, followed by OTCEI with 77% corporate brokers. Some of the brokers hold multiple memberships of exchanges, i.e. they trade on more than one exchange. As at end-March 2002, 8,101 brokers had single membership, while 627 double, 90 triple and 9 quadruple memberships. Four members held membership of five exchanges, while one member held membership of six exchanges. As end-March 2002, there were 12,208 sub-brokers registered with SEBI, as compared with 9,957 sub-brokers as at end of previous year. Of these 86% of the sub-brokers were from NSE and BSE.

Listing of Securities

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

1. The Companies Act, 1956 requires a company intending to issue securities to public to seek permission for dealing with its securities on one or more recognised stock exchanges. The prospectus should state the names of the stock exchanges where application for listing has been made and any allotment of securities shall be void if permission for listing is not granted by all the stock exchanges before expiry of 10 weeks from the closure of the issue.

2. The SC(R)A empowers exchanges to make byelaws, which may provide for the listing of securities, the inclusion of any security for the purpose of dealings and suspension or withdrawal of any such securities and the suspension/prohibition of trading in specified securities. All listed companies are under obligation to comply with the conditions of listing agreement with the stock exchange where their securities are listed. On failure to comply with the conditions of listing, they are punishable with a fine up to Rs. 1,000. A company can prefer an appeal to the Securities Appellate Tribunal (SAT) against refusal of a stock exchange to list its securities.

3. The SC(R)R prescribe requirements with respect to the listing of securities on a recognised stock exchange and empowers SEBI to waive or relax the strict enforcement of any or all of them. A company seeking listing has to satisfy the stock exchange that at least 10% of the securities were offered to public for subscription, subject to the condition that a minimum of 20 lakh securities, are offered to the public, and the size of the net offer to the public (i.e. the offer price multiplied by the number of securities offered to the public, excluding reservations, firm allotment and promoters' contribution) is not less than Rs. 100 crore, and the issue is made only through book building method with allocation of 60% of the issue size to the qualified institutional buyers as specified by SEBI. In the alternative, it is required to offer at least 25% of the securities to public.

4. The listing agreement contains a provision requiring the issuer to irrevocably agree that unless the Exchange agrees otherwise, the issuer will not, without the previous permission in writing of SEBI, withdraw its adherence to the agreement for listing. It also requires an issuer to agree that any of its securities listed on the Exchange shall remain on the list entirely at the pleasure of the Exchange which has

right to suspend or remove from the list the said securities at any time and for any reason which the Exchange considers proper in its absolute discretion. As a precondition for continuous listing, an issuer undertakes to forthwith comply with such conditions as may be prescribed by the Exchange.

5. A government circular requires that the companies wishing to list their securities must get listing on the regional (an exchange is considered regional for the state/ Union Territory where it is located) stock exchange nearest to their registered office. If they so wish, they can seek listing on other exchanges also. All the exchanges where application has been made for listing must dispose off applications within the time specified in the Companies Act.
6. A SEBI circular requires the basic norms for listing of securities on the stock exchanges to be uniform for all the exchanges. They may, however, prescribe additional norms over and above the minimum norms. These norms are part of the byelaws of the stock exchanges. SEBI has been issuing guidelines/circulars prescribing certain norms to be included in the listing agreement and to be complied with by the companies. The listing requirements for companies in the CM segment of NSE are presented in Table 4-3.
7. The exchanges provide trading platform for the securities listed primarily on them. They also provide trading facility for the securities listed (not primarily) on them and also permitted securities, which are listed primarily on other exchanges.
8. The stock exchanges levy listing fees from the companies listed on their exchange. The listing fee has two components – initial fees and annual fees. While initial fee is a fixed amount, the annual fee varies depending upon the size of the company. NSE charges Rs.7,500 as initial fees from the companies at the time of listing. In addition, NSE collects a minimum of Rs. 4,200 as annual fees from companies with a paid-up share and/or debenture capital of less than or equal to Rs. 1 crore. For companies with a paid-up share and/or debenture capital of more than Rs. 50 crore, the annual listing fees is Rs. 70,000 *plus* Rs. 1,400 for every additional Rs. 5 crore or part thereof. NSE levies half of the prescribed annual fees in respect of listed securities for which it is not the regional exchange. It does not levy any listing fee in respect of "permitted to trade" securities. From the aggregate amount collected as listing fees by the stock exchanges during a month, 5% of it is paid to SEBI on a quarterly basis.

The SC(R)R, the byelaws, the listing agreement prescribe a number of requirements to be continuously complied with by the issuers for continued listing. The listing agreement also stipulates the disclosures to be made by the companies and the corporate governance practices to be followed by all listed companies. The Exchange monitors such compliance. Failure to comply with the requirements invites suspension of trading of the security for a specified period, or withdrawal/delisting, in addition to penalty prescribed in the SC(R)A. SEBI circular permits voluntary delisting of securities from non-regional stock exchanges after providing an exit opportunity to holders of securities in the region where the concerned Exchange is located. An Exchange can, however, delist the securities compulsorily following a very stringent procedure.

The number of primary listed companies listed on various stock exchanges decreased to 9,644 at the end of March 2002 from 9,954 at the end of previous year. Exchange wise distribution of primary listings is given in Annexure 4 -1. Many of these 'primarily' listed companies are listed (not primarily) on other exchanges. Many of the listed companies are permitted for trading on other stock exchanges. The Calcutta Stock Exchange had the highest number of companies primarily listed on it, accounting for more than 19% of primary listings across all stock exchanges.

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

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

Note:

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

Explanations:

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

Trading Mechanism

All stock exchanges in India follow screen-based trading system. NSE was the first stock exchange in the country to provide nation-wide order-driven, screen-based trading system. NSE model was gradually emulated by all other stock exchange in the country. The trading system at NSE, known as the National Exchange for Automated Trading (NEAT) system, is an on-line, fully automated, nation wide, anonymous, order-driven system screen based trading system where a member can punch into the computer quantities of securities and prices at which he likes to transact and the transaction is executed as soon as it finds a matching sale or buy order from a counter party. It electronically matches orders operates on a strict price/time priority and hence cuts down on time, cost and risk of error, as well as on fraud resulting in improved operational efficiency. It allows faster incorporation of price sensitive information into prevailing prices, thus increasing informational efficiency of the market. It enables the market participants to see the full market on real time, making the market transparent. It allows a large number of participants, irrespective of their geographical locations, to trade with one another simultaneously, improving the depth and liquidity of the market. A single consolidated order book for each stock displays, on a real time basis, buy and sell orders originating from all over the country. The book stores only limit orders, which are orders to buy or sell shares at a stated quantity and stated price. The limit orders are executed only if the price quantity conditions match. Thus, the NEAT system provides an open Electronic Consolidated Limit Order Book (OECLOB). It ensures full anonymity by accepting orders, big or small, from members without revealing their identity, thus providing equal access to everybody. It provides perfect audit trail which helps to resolve disputes by logging in the trade execution process in entirety. The trading system provides tremendous flexibility to the users in terms of kinds of orders that can be placed on the system. Several time-related (Good-till-Cancelled, Good-till-Day, Immediate-or-Cancel), price-related (buy/sell limit and stop-loss orders) or volume-related (All-or-None, Minimum Fill, etc.) conditions can be easily built into an order.

The trading platform of the CM segment of NSE is accessed not only from the computer terminals from the premises of 928 brokers spread over 375 cities, but also from the personal computers in the homes of investors through the Internet and from the hand-held devices through WAP.

SEBI has allowed use of internet as an order routing system for communicating clients' orders to the exchanges through brokers. SEBI-registered brokers can introduce internet-based trading after obtaining permission from respective stock exchanges. SEBI has stipulated the minimum conditions to be fulfilled by trading members to start internet based trading and services. NSE was the first exchange in the country to provide web-based access to investors to trade directly on the exchange. It launched internet trading in February 2000. It was followed by the launch of internet trading by BSE in March 2001. The orders originating from the PCs of investors are routed through the internet to the trading terminals of the designated brokers with whom they have relations and further to the exchange for trade execution. Soon after these orders get matched and result into trades, the investors get confirmation about them on their PCs through the same internet route.

SEBI has also allowed trading through wireless medium or Wireless Application Protocol (WAP) platform. NSE is the only exchange to provide access to its order book through the hand held devices, which use WAP technology. This serves primarily retail investors who are mobile and want to trade from any place when the market prices for stocks of their choice are attractive.

Technology

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

In recognition of the fact that technology will continue to redefine the shape of the securities industry, NSE stresses on innovation and sustained investment in technology to remain ahead of competition. NSE is the first exchange in the world to use satellite communication technology for trading. It uses satellite communication technology to energise participation from more than 2,867 VSATs from 375 cities spread all over the country. NSE has the largest VSAT-based trading network in the world and the largest VSAT network for any purpose in the Asia Pacific region. It has been continuously undertaking capacity enhancement measures so as to effectively meet the requirements of increased users and associated trading loads. With recent upgradation of trading hardware, NSE can handle up to 2.5 million trades per day. The capacity enhancement ensured that NSE could successfully handle peak volume of nearly 14 lakh trades involving a turnover of about Rs. 11,000 crore on February 28, 2001. NSE has also put in place NIBIS (NSE's Internet Based Information System) for on-line real-time dissemination of trading information over the Internet. NEAT is a state of-the-art client server based application. At the server end all trading information is stored in an in-memory database to achieve minimum response time and maximum system availability for users. It has uptime record of 99.7%. The NSE system also ensures data integrity with past record of a single error in 10 million bits. For all trades entered into NEAT system, there is uniform response time of less than 1.5 seconds. All communications between NSE and its members take place through the extranet without any delay.

As part of its business continuity plan, NSE has established a disaster back-up site at Chennai along with its entire infrastructure, including the satellite earth station and the high-speed optical fibre link with its main site at Mumbai. This site at Chennai is a mirror replica of the complete production environment at Mumbai. The transaction data is backed up on near real time basis from the main site to the disaster back-up site through the 2 mbps high-speed link to keep both the sites all the time synchronised with each other.

Trading Rules

Insider Trading

Insider trading is prohibited and is considered an offence. The SEBI (Prohibition of Insider Trading) Regulations, 1992 prohibit an insider from dealing (on his own behalf or on behalf of others) in listed securities on the basis of 'unpublished price sensitive information', communicating, counseling or procuring such information any other person to deal in securities of any company on the basis of such information. Price sensitive information is any information, which if published, is likely to materially affect the price of the securities of a company. Such information may relate to the financial results of the company, intended declaration of dividends, issue of securities or buy back of securities, amalgamation, mergers, takeovers, any major policy changes, etc. SEBI, on the basis of any complaint or otherwise, investigates/inspects the allegation of insider trading. On the basis of the report of the investigation, SEBI may prosecute persons found *prima facie* guilty of insider trading in an appropriate court or pass such orders as it may deem fit. Based on inspection, an adjudicating officer appointed by SEBI can impose monetary penalty.

In order to strengthen insider trading regulations, SEBI recently mandated a code of conduct for listed companies, its employees, analysts, market intermediaries and professional firms. The insider trading regulations were amended to include requirements for initial and continual disclosure of shareholding by directors or officers, who are insiders, and substantial shareholders (holding more than 5% shares/voting rights) of listed companies. The listed companies are also mandated to adopt a code of disclosure with regard to price sensitive information, market rumours, reporting of shareholding/ownership, etc. (please see policy development section for details).

Unfair Trade Practices

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

Takeovers

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

- crossing the threshold limit of 15%,
- crossing the creeping acquisition limit of 5% (relaxed to 10% up to September 2002) during 12 month period by persons holding between 15% and 75% of shares,
- attempts by persons having 75% or more to acquire more shares, and
- changes in control with or without acquisition of shares.

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

Buy Back

Buy back aims at improving liquidity in the shares of companies and helps corporates in enhancing the shareholders' wealth. Under the SEBI (Buy Back of Securities) Regulations, 1998, a company is permitted to buy back its shares from:

a. Existing shareholders on a proportionate basis through the tender offer, i.e. by means of offer documents;

b. Open market through stock exchanges, and book building process; and

c. Shareholders holding odd lot shares.

The regulations provide for extensive disclosures in the explanatory statement to be annexed to the notice for the general meeting and the letter of offer. The company has to disclose the pre and post buy back holdings of the promoters. With a view to ensure completion of the buy back process speedily, the regulations provide for time bound steps in every mode. For example, in the cases of purchases through stock exchanges, an offer for buy back shall not remain open for more than 30 days. The verification of shares received in buy back has to be completed within 15 days of the closure of the offer. The payments for accepted securities has to be made within 7 days of the completion of verification and bought back shares have to be extinguished and physically destroyed within 7 days of the date of the payment. To ensure security for performance of its obligation, the company making an offer for buy back will have to open an escrow account on the same lines as provided in takeover regulations.

Price Bands

Stock market volatility is generally a cause of concern for both policy makers as well as investors. To curb excessive volatility, SEBI has prescribed a system of price bands. The price bands or circuit breakers bring about a coordinated trading halt in all equity and equity derivatives markets nation-wide. An index-based market-wide circuit breaker system at three stages of the index movement either way at 10%, 15% and 20% has been prescribed. The breakers are triggered by movement of either S&P CNX Nifty or Sensex, whichever is breached earlier (please see chapter 5 for details). As an additional measure of safety, individual scrip-wise price bands has been fixed as below:

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

Demat Trading

A depository holds securities in dematerialised form. It maintains ownership records of securities in a book entry form and also effects transfer of ownership through book entry. SEBI has introduced some degree of compulsion in trading and settlement of securities in dematerialised form. While the investors have a right to hold securities in either physical or demat form, SEBI has mandated compulsory trading and settlement of securities in select securities in dematerialised form. This was initially introduced for institutional investors and was later extended to all investors. Starting with twelve scrips on January 15, 1998, all investors are required to mandatorily trade in dematerialised form in respect of 2,335 securities as at end-June 2001. By November 2001, 3,811 companies were under demat mode and the rest of the companies were brought under compulsory demat mode by January 02, 2002. The securities of companies, which fail to establish connectivity with both the depositories on the scheduled date as announced by

SEBI, are traded on the 'trade for trade' settlement window of the exchanges. However, in order to mitigate the difficulties of small investors, the stock exchanges provide additional windows for sales up to 500 shares in the physical form.

At the end of March 2002, 4,172 and 4,284 companies were connected to NSDL and CDSL respectively. The number of dematerialised securities increased from 39 billion at the end of March 2001 to 56.5 billion at the end of March 2002. During the same period the value of dematerialsied securities increased from Rs. 3,371 billion to Rs. 4,669 billion and the number of investor accounts increased from 3,828,736 to 4,605,588.

Since the introduction of the depository system, dematerialisation has progressed at a fast pace and has gained acceptance amongst the participants in the market. All actively traded scrips are held, traded and settled in demat form. The details of progress in dematerialisation in two depositories, *viz.* NSDL and CDSL, are presented in Table 4-4A.

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

Parameters of Progress	NSDL		CDSL	
	March-01	March-02	March-01	March-02
Companies - Agreement signed	2,821	4,210	2,380	4,296
Companies - Available for Demat	2,786	4,172	2,356	4,284
Market Cap. of Companies available (Rs. Bn.)	5554	6150	—	—
Number of Depository Participants	186	212	144	161
Number of DP Locations	1,896	1,648	132	181
Number of Stock Exchanges Connected	10	10	12	16
No. of Investor Accounts	3,748,090	4,477,336	80,646	128,252
Demat Quantity (Mn.)	37,208	51,673	1,920	4,820
Demat Value (Rs. Bn.)	3,262	4,426	109	243

Source: NSDL & CDSL.

According to a SEBI working paper titled "Dematerialisation: A Silent Revolution in the Indian Capital Market" released in April 2001, India has achieved a very high level of dematerialisation in less than three years' time, and currently more than 99% of trades settle in demat form. Competition and regulatory developments facilitated reduction in custodial charges and improvements in qualities of service standards. The paper observes:

i. One imminent and apparent immediate benefit of competition between the two depositories is fall in settlement and other charges. Competition has been driving improvement in service standards.

ii. Depository facility has effected changes in the stock market microstructure.

iii. Breadth and depth of investment culture has further got extended to interior areas of the country faster.

iv. Explicit transaction cost has been falling due to dematerialisation.

v. Dematerialisation substantially contributed to the increased growth in turnover.

vi. Dematerialisation growth in India is the quickest among all emerging markets and also among developed markets excepting for the UK and Hong Kong.

The paper recommends that the depositories need to develop necessary expertise at the earliest to successfully face coming challenges posed by the internet and on-line trading. They also need to equip themselves technically with soft and hard technologies earlier than late to meet the challenges of consolidation of business and convergence of technologies. Further, they need to prepare for the challenges of single liquidity pool across the globe which would require consolidation of the global clearance and settlement infrastructure.

Charges for Services

As per SEBI Regulations, every stock broker is required to pay a registration fee of Rs. 5,000 every financial year, if his annual turnover does not exceed Rs. 1 crore. If the broker's turnover is more than Rs. 1 crore during any financial year, the broker has to pay Rs. 5,000 plus hundredth of 1% of the turnover in excess of Rs. 1 crore. After the expiry of five years from the date of initial registration as a broker, he has to pay Rs. 5,000 for a block of five financial years. The trading members are required to collect the annual fees payable by their sub-brokers and submit it to the stock exchanges for onward transmission to SEBI.

In addition to the registration fee collected by SEBI, the stock exchanges collect transaction charges from its trading members. In order to share the benefits of efficiency with market participants, NSE has been reducing its transaction charges over time. At present a trading member is required to pay the exchange transaction charges @0.004% (Rs. 4 per Rs. 1 lakh) of the turnover.

The maximum brokerage chargeable by a broker in respect of trades effected on an Exchange is fixed at 2.5% of the contract price, exclusive of statutory levies like, SEBI turnover fee, service tax, and stamp duty. This maximum brokerage is inclusive of the brokerage charged by the sub-broker which shall not exceed 1.5% of contract price. The brokerage charged by brokers from clients varies. However, brokerage charges as low as 0.15% are also observed in the market.

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

The depositories provide depository services to investors through depository participants. They do not charge the investors directly, but charge their DPs who are free to have their own free structure for their clients. The depositories, however, have been reducing their charges from DPs over a period of time. The charges levied on DPs by NSDL and CDSL are presented in Table 4-4B. SEBI has recently set up a committee to look into aspects of reduction in cost for the investors relating to their demat operations.

Table 4-4B: Service Charges levied by the Depositories (March, 2002)

Depositories Services	NSDL	CDSL
Dematerialisation	Nil	Nil
Rematerialisation	Rs. 10 per certificate	Rs. 10 per certificate
Custody	Rs. 9 per ISIN per annum	Nil
Settlement	Rs. 10 per debit instruction Nil for credit instruction	0.01% subject to a minimum of Rs. 5 and a maximum of Rs. 12 per debit instruction Nil for credit instruction
Pledge Creation	Rs. 25 per instruction	Rs. 12 per instruction
Pledge Closure	Nil	Rs. 12 per instruction
Pledge Invocation	Nil	Rs. 12 per instruction
Securities Borrowing	Rs. 25 per instruction	Not available

Source: NSDL & CDSL.

Institutional Trades

Transactions by MFs in the secondary market are governed by SEBI (Mutual Funds) Regulations, 1996 and the investment objective of the scheme. A mutual fund under all its schemes is not allowed to own more than 10% of any company's paid-up capital. Mutual funds are allowed to do only 'delivery-based' transactions and are not allowed to short sell. A mutual fund cannot invest more than 10% of the NAV of a particular scheme in the equity shares or equity related instruments of a single company.

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

Index Services

The most important index in financial market is the stock index, which uses a set of stocks that are representative of the whole market, or a specified sector, to measure the change in overall behaviour of the markets or sector over a period of time. India Index Services & Products Limited (IISL), promoted by NSE and CRISIL, is the only specialised organisation in the country to provide stock index services. It has developed and has been maintaining scientifically an array of indices of stock prices in NSE, in technical partnership with Standard & Poor's, USA. The popular indices are the S&P CNX Nifty, CNX Nifty Junior, S&P CNX Defty, S&P CNX 500, CNX Midcap 200, S&P CNX Industry indices (for 76 industries) and CNX segment indices (for 3 segments). IISL maintains over 80 indices comprising broad-based benchmark indices, sectoral indices and customised indices. These indices are monitored and updated dynamically and are reviewed regularly. These are maintained professionally to ensure that it continues to be a consistent benchmark of the equity markets. This involves inclusion and exclusion of stocks in the index and the day-to-day tracking and giving effect to corporate actions on individual stocks.

S&P CNX Nifty, which comprises of 50 largest and most liquid stocks, was introduced in April 1996. It has a historical time series dating back to January 1990. It accounted for 54.86% of total market capitalisation of CM segment of NSE as at end-March 2002. CNX Nifty Junior, introduced in December 1996, is built out of the next 50 large and liquid stocks. It accounted for 6.66% of market capitalisation as at end-March 2002.

While trying to construct Nifty, a number of calculations were done to arrive at the ideal number of stocks. An analysis of liquidity suggested that Indian market had comfortable liquidity of around 50 stocks. Beyond 50, the liquidity levels became increasingly lower. Hence the index set size of 50 stocks was chosen. The stocks included in the Nifty index are being picked up based on impact cost worked out from snapshots of limit order book of NSE. The selection of stocks is based on the criteria of liquidity and market capitalisation. The composition of Nifty is reviewed every quarter. This helps in maintaining liquidity of the index while preventing too many changes making the index unstable. The index is calculated afresh every time a trade takes place in an index stock. It is calculated on-line and disseminated over trading terminals across the country. (The movement of Nifty since 1991 is presented in Chart 1-1 of Chapter 1). Annexures 4-2 to 4-5 present the market capitalisation, weightage, beta and monthly returns of the S&P CNX Nifty stocks since April 2001 to March 2002.

S&P CNX Nifty was introduced by the NSE keeping in mind that it would be used for modern applications such as index funds and index derivatives, besides reflecting the stock market accurately. It has become the most popular and widely used indicator of the stock market in the country. Many financial and risk management products based on S&P CNX Nifty index have gained immense popularity in the recent past. As many as ten index funds are based on Nifty Index.

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

Market Outcome

Turnover – Growth and Distribution

Trading volumes in the equity segments of the stock exchanges have been witnessing phenomenal growth for last few years. It increased from Rs. 164,057 crore in 1994-95 to Rs. 2,880,990 crore in 2000-01. During 2001-02, the turnover on all stock exchanges taken together, however, decreased by 69% to Rs. 895,826 crore (Table 4-5). It may, however, be noted that the volume declined sharply in value terms rather than in quantity terms. For example, the value of turnover declined by 62% on NSE during 2001-02, while the quantity of turnover declined only by 15%. This was due to falling prices which reduced all India market capitalisation from Rs. 1,020,426 at the end of March 2000 to Rs. 657,487 at the end of March 2001.

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

Stock Exchanges	Turnover (Rs. crore)		Share in Turnover (%)	
	2000-01	2000-02	2000-01	2000-02
1 NSE	1,339,510	513,167	46.49	57.28
2 Mumbai	1,000,032	307,392	34.71	34.31
3 Calcutta	355,035	27,075	12.32	3.02
4 Uttar Pradesh	24,747	25,237	0.86	2.82
5 Ahmedabad	54,035	14,844	1.88	1.66
6 Delhi	83,871	5,828	2.91	0.65
7 Pune	6,171	1,171	0.21	0.13
8 Ludhiana	9,732	857	0.34	0.10
9 Bangalore	6,033	70	0.21	0.01
10 ICSE	233	55	0.01	0.01
11 Hyderabad	978	41	0.03	0.00
12 SKSE	0	27	0.00	0.00
13 Madras	109	24	0.00	0.00
14 Madhya Pradesh	2	24	0.00	0.00
15 Vadodara	1	10	0.00	0.00
16 OTCEI	126	4	0.00	0.00
17 Gauhati	0	0	0.00	0.00
18 Cochin	373	0	0.01	0.00
19 Magadh	2	0	0.00	0.00
20 Bhubaneshwar	0	0	0.00	0.00
21 Coimbatore	0	0	0.00	0.00
22 Jaipur	0	0	0.00	0.00
23 Mangalore	0	0	0.00	0.00
Total	**2,880,990**	**895,826**	**100.00**	**100.00**

* Excludes turnover in WDM and derivatives segments of Exchanges.

Source: SEBI.

The year 2001-02 started in the backdrop of a market turbulence, which broke out in early 2001 involving some brokers and the banking system. The volumes declined further in the first quarter of 2001-02 following decisions affecting several structural changes in the market. These included a shift to rolling settlement (initially in respect of major securities on T+5 basis in July 2001, later for all securities), and withdrawal of deferral products. Such changes are usually accompanied by fall in volumes initially. However, as the market gains experience with the new mechanism, the trading volumes are expected to return to their normal levels. This is reflected in the monthly trend of volumes on NSE and BSE in Table 4-6. The monthly turnover at CM segment of NSE declined from a peak of Rs. 148,830 crore in January 2001 to Rs. 27,228 crore in July 2001. Similarly, at BSE, the turnover declined from a peak of Rs. 114,849 crore in January 2001 to Rs. 17,244 crore in July 2001. The market recovered thereafter till January 2002 as market adjusted to new market design. The last few months during the year, however, witnessed depressed volumes

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

(Rs. crore)

Month	Turnover		Average Daily Turnover		Market Capitalisation (end of period)	
	NSE	BSE	NSE	BSE	NSE	BSE
Apr-01	35,616	23,876	1,875	1,257	653,720	567,729
May-01	48,329	31,868	2,197	1,449	592,437	595,938
Jun-01	42,783	25,451	2,037	1,212	569,797	553,230
Jul-01	27,228	17,244	1,238	784	574,260	531,576
Aug-01	29,417	17,444	1,401	831	575,242	523,036
Sep-01	35,323	21,593	1,766	1,080	509,105	456,263
Oct-01	35,326	21,922	1,682	1,044	535,846	481,851
Nov-01	42,132	24,402	2,107	1,220	581,386	535,724
Dec-01	54,468	30,033	2,867	1,581	552,908	532,328
Jan-02	68,719	39,169	2,988	1,703	563,683	544,397
Feb-02	49,564	28,572	2,478	1,429	621,523	596,716
Mar-02	44,262	25,719	2,330	1,354	636,861	612,224
2001-02	**513,167**	**307,292**	**2,078**	**1,244**	**636,861**	**612,224**

Source: NSE & BSE.

Despite large scale decline in turnover, four exchanges (UP, MP, Vadodara and SKSE). Six exchanges (NSE, BSE, Calcutta, Delhi, Ahmedabad and UP) together accounted for 99.75% of total turnover, while the balance 17 together accounted for less than 0.25% of turnover during the year. As many as 13 stock exchanges recorded trading volumes close to nil and together reported less than 0.01% of the total turnover. NSE consolidated its position further as the market leader by reporting about 57% of the market. Since its inception in 1994, NSE has emerged as the favoured exchange among trading members. The consistent increase in popularity of NSE is clearly evident from Annexure 4-6, which presents business growth of CM segment of NSE since inception. NSE now reports higher turnover from its trading terminals in most of the cities than the corresponding regional exchange. The comparative picture of turnover of regional stock exchanges and turnover of NSE terminals at different cities is presented in Table 4-7. Except for Ahmedabad and UP exchanges, NSE generated higher turnover from the turf of the regional exchanges than the regional exchange.

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

(Rs. crore)

Stock Exchange/ Exchange City		2000-01		2001-02	
		NSE	Exchange	NSE	Exchange
1	Mumbai (BSE)	647,624	1,000,032	206,302	307,392
2	Mumbai (OTCEI)	647,624	126	206,302	4
3	Mumbai (ICSE)	647,624	233	206,302	55
4	Calcutta	110,352	355,035	46,948	27,075
5	Delhi	228,105	83,871	99,529	5,828
6	Ahmedabad	35,940	54,035	12,757	14,844
7	Uttar Pradesh	7,359	24,746	4,877	25,237
8	Ludhiana	2,404	9,732	2,712	857
9	Pune	14,349	6,171	5,290	1,171
10	Bangalore	22,690	6,033	14,335	70
11	Hyderabad	30,759	978	14,605	41
12	Cochin	10,067	373	4,065	0
13	Chennai	45,495	109	18,244	24
14	Madhya Pradesh	15,129	2	5,517	24
15	Magadh	1,006	2	572	0
16	Vadodara	9,814	1	3,166	10
17	Coimbatore	7,854	0	3,057	0
18	Bhubaneshwar	577	0	376	0
19	Jaipur	14,196	0	5,943	0
20	Guwahati	1,316	0	602	0
21	Mangalore	1,117	0	591	0
22	Rajkot	5,066	0	1,482	27

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

Source: SEBI & NSE.

The sectoral distribution of turnover has undergone significant change over last few years. Table 4-8 presents the share of top '50' companies at NSE, classified according to different sectors, in turnover and market capitalisation. A drastic change in the importance of different sectors is observed over last seven years. The share of manufacturing companies in turnover of top '50' companies, which was nearly 80% in 1995-96, declined sharply to about 6% in 2001-02. During the same period the share of information technology (IT) companies in turnover increased sharply from nil in 1995-96 to 67% in 2001-02.

Trades concentrate not only on a few exchanges and among particular sector/s, but also on a few securities/members, though decreasing concentration of trades is observed in the recent years. The concentration of trading among top 'N' securities/members on NSE is presented in Table 4-9. The share of top '5' securities in turnover, which had been declining till 1999-2000, increased to 52% in 2000-01 to fall to 44.43% in 2001-02. Trading in top '100' securities accounted for nearly 96% of turnover during 2001-02. Member-wise distribution of turnover as presented in Table 4-9 indicates increasing diffusion of trades among a larger number of trading members over the years. During 2001-02, top '5' members accounted for only 7.14% of turnover, while top '100' members accounted for 53.40% of total turnover.

Turnover in India seems to be more concentrated in comparison to that in other comparable markets as may be seen from Table 4-10. Ten most active index securities

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

Companies	Turnover													
	Amount (Rs. crore)							% to Total						
	1995-96 (Nov.-Mar)	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	1995-96 (Nov.-Mar)	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
Manufacturing	49,909	131,109	132,678	88,224	139,742	124,779	28,426	79.29	45.88	37.43	23.13	18.78	9.85	6.05
Financial Services	10,859	100,037	54,071	26,500	34,308	17,559	4,917	17.25	35.01	15.25	6.95	4.61	1.39	1.05
F.M.C.G	704	43,818	155,148	94,240	38,011	32,438	13,258	1.12	15.33	43.77	24.71	5.11	2.56	2.82
I.T.	0	159	2,579	138,148	369,315	957,159	312,851	0.00	0.06	0.73	36.22	49.63	75.56	66.58
Pharmaceuticals	158	408	1,976	9,029	48,230	21,085	22,538	0.25	0.14	0.56	2.37	6.48	1.66	4.80
Others	1,313	10,229	8,048	25,285	114,481	113,803	87,884	2.09	3.58	2.27	6.63	15.39	8.98	18.70
Total	**62,943**	**285,762**	**354,500**	**381,427**	**744,088**	**1,266,823**	**469,875**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Companies	Market Capitalisation													
	Amount (Rs. crore)							% to Total						
	1995-96 (Nov.-Mar)	1996-97	1997-98	1998-99	1999-`00	2000-01	2001-02	1995-96 (Nov.-Mar)	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
Manufacturing	139,546	162,188	177,371	106,572	151,692	96,718	56,109	62.05	62.18	54.95	34.39	20.53	20.79	12.41
Financial Services	25,655	29,083	34,061	18,334	36,209	36,460	42,485	11.41	11.15	10.55	5.92	4.90	7.84	9.39
F.M.C.G	22,648	29,888	59,199	90,773	79,522	80,497	56,507	10.07	11.46	18.34	29.29	10.76	17.30	12.49
I.T.	0	0	8,434	45,742	306,418	106,095	80,145	0.00	0.00	2.61	14.76	41.48	22.80	17.72
Pharmaceuticals	4,168	4,728	8,176	24,221	19,324	21,035	32,314	1.85	1.81	2.53	7.82	2.62	4.52	7.14
Others	32,880	34,934	35,545	24,272	145,609	124,502	184,720	14.62	13.39	11.01	7.83	19.71	26.76	40.84
Total	**224,897**	**260,821**	**322,786**	**309,912**	**738,774**	**465,306**	**452,280**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

FMCG Fast Moving Consumer Goods
IT Information Technology

accounted for 57% of turnover in India and top ten index securities in terms of equity base accounted for 40% of market capitalisation at the end of 2001.

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

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

Source: NSE.

Table 4-10: Market Concentration in Emerging Asian Markets: End 2001

(In per cent)

Market	Index Stock's Share of Market Capitalisation	Index Stock's Share of Turnover	Share of 10 Largest Index Stocks in Market Capitalisation	Share of 10 Most Active Index Stocks in Turnover
China	51.7	41.9	26.8	11.7
Thailand	69.3	61.2	42.3	27.7
Taiwan	70.1	61.5	38.6	27.8
Korea	83.5	50.7	50.3	21.9
Malaysia	70.6	71.5	37.5	32.4
India	74.1	82.5	40.3	57.1

Source: S&P Emerging Stock Markets Factbook 2002.

At the end of March 2002, 82 members were permitted by NSE to allow investors web based access to its trading system. The members in turn had registered 231,899 clients for web based access as on that date. About 70 lakh trades for Rs. 8,139 crore, constituting 1.6% of total turnover during 2001-02 were routed and executed through internet. The internet volumes are expected to go up as the spread of internet increases further. NSE.IT, a subsidiary of NSE, has launched NEAT*iXS* to help brokerage firms to conduct internet trading. This software can be accessed through internet from India and abroad using standard browsers. It provides real time on-line market information including stock quotes and order screens, allowing investors to place orders from their personal computers. The success of internet trading in India will, however, depend on expansion of internet bandwidth, which is necessary for faster execution of trades.

Market Capitalisation

The market capitalisation data are easily available for BSE and NSE, which are presented in Table 4-6. The market capitalisation of securities available for trading on NSE (CM segment) declined by 3.19% to Rs. 636,861 crore as at end-March 2002 from Rs. 657,847 crore as at end-March 2001. The market capitalisation of companies listed at BSE increased by 7.12% to Rs. 612,224 crore as at end-March 2002 from Rs. 571,553 crore the year before. All India market capitalisation is estimated at Rs. 796,076 crore at the end of March 2002 as against Rs. 768,863 crore at the end of March 2001. The market capitalisation on NSE is highest among the exchanges.

The sectoral distribution of market capitalisation on NSE is presented in Table 4-8. A sharp change in the shares of different sectors in market capitalisation is observed over the years. Traditionally, manufacturing companies and financial services sector accounted for a major share in market capitalisation. However, in the recent past, the importance of these traditional sectors has declined and new sectors like, information technology, pharmaceuticals and fast moving consumer goods have picked up.

Prices

The year 2001-02 started with bearish sentiments emanating from allegations of irregularities in stock market transactions. The prices suffered several ups and downs and witnessed a marginal decline during the year. On a point to point basis, the prices, as represented by the S&P CNX Nifty, suffered by 1.62% (Table 4-11). BSE Sensex also suffered a decline of 3.75% during the year on a point-to-point basis. The Nifty recorded a high of 1207 in May 2001 and a low of 850 in September 2001 before closing at 1129.55. The massive sale by FIIs and the terrorist attack on September 11, 2001 seem to have precipitated the fall in index in September 2001. The monthly averages of S&P CNX Nifty and Sensex are presented in Table 4-11.

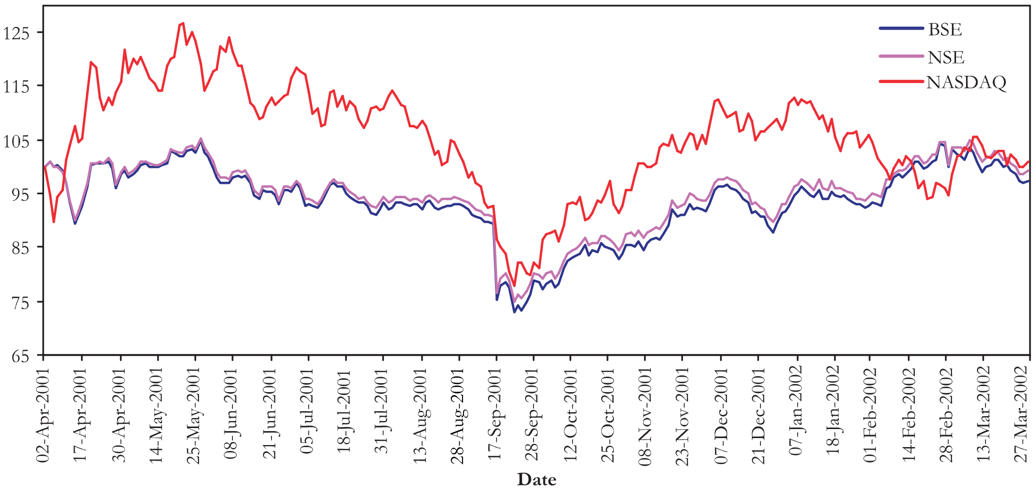
Table 4-11: Movement of Select Indices on Indian/Foreign Markets

Index	31.03.2000	31.03.2001	31.03.2002	Change during 2000-01 (%)	Change during 2001-02 (%)
S&P CNX Nifty	1528.45	1148.20	1129.55	-24.88	-1.62
BSE Sensex	5001.28	3604.38	3469.35	-27.93	-3.75
Hang Seng	17406.54	12760.64	11032.92	-26.69	-13.54
Dow Jones	10921.92	9878.78	10403.94	-9.55	5.32
Nasdaq	4572.83	1840.26	1845.35	-59.76	0.28
Nikkei	20337.32	12999.70	11024.94	-36.08	-15.19
FTSE	6540.20	5633.70	5271.80	-13.86	-6.42

Source: NSE, BSE & Bloomberg.

Of late, the market participants, analysts and investors have related the developments in domestic equity markets with Nasdaq market. Nasdaq Composite has come to symbolise the new economy or technology stocks. Chart 4-1 plots the daily movement in S&P CNX Nifty, Sensex and Nasdaq-100 index. During most part of the year, the stock prices in India tended to rise/fall in sympathy with that in Nasdaq. In a recent paper "Equity Market Interlinkages: A case of USA and India" (yet to be published) under the NSE Research Initiative, the authors found unidirectional causality running from the US stock markets to the Indian stock market. They found that the NASDAQ day time returns and volatility significantly affect the Nifty overnight returns and volatility. The effect of NASDAQ day time return and volatility shocks on Nifty overnight returns , on average, is 9.51% and that of Nifty day time volatility is a mere 0.5%.

Chart 4-1: Movement of S&P CNX NIfty, BSE and NASDAQ, 2001-02



Volatility

The volatility of S&P CNX Nifty and Sensex since April 2001 is presented in Table 4-12. The stock markets witnessed maximum volatility in September 2001, when volatility of Nifty was 2.52% while Sensex had the volatility 2.83%. The volatility of S&P CNX Nifty and Sensex was lowest in August 2001. Chart 4-2 presents the volatility of S&P CNX Nifty, Sensex and NASDAQ 100. It can be observed that NASDAQ 100 is more volatile than either S&P CNX Nifty or BSE Sensex.

Table 4-12: Stock Market Index, Volatility and P/E Ratio: April 2001 to March 2002

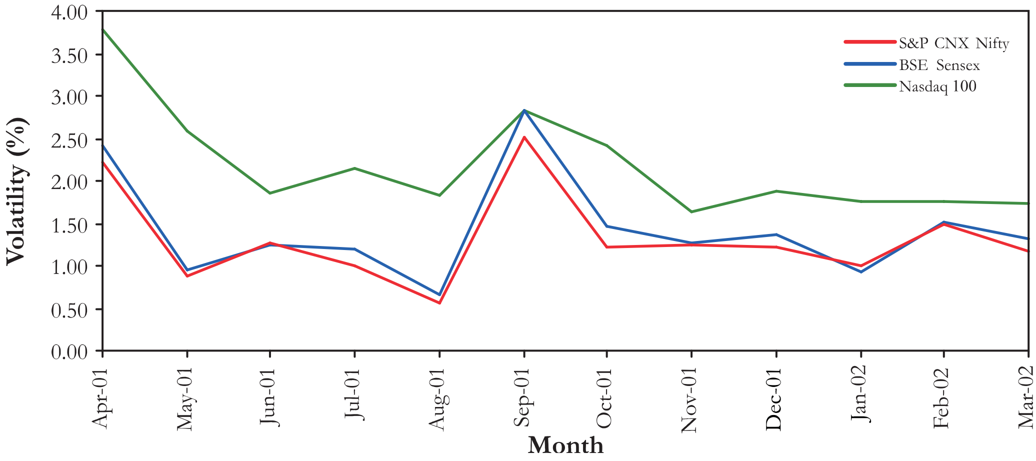
Month/Year	S&P CNX Nifty			Sensex		
	Index*	Volatility (%)**	P/E Ratio*	Index*	Volatility (%)**	P/E Ratio*
Apr-01	1116.41	2.23	16.09	3487.44	2.42	18.06
May-01	1159.44	0.89	15.74	3613.84	0.96	18.86
Jun-01	1107.15	1.27	15.36	3439.01	1.24	17.49
Jul-01	1077.98	1.01	15.32	3346.88	1.19	16.28
Aug-01	1069.01	0.57	15.23	3304.99	0.66	16.69
Sep-01	949.43	2.52	13.65	2918.28	2.83	15.20
Oct-01	953.92	1.21	13.75	2933.55	1.46	14.29
Nov-01	1031.62	1.25	14.86	3164.25	1.26	14.89
Dec-01	1075.87	1.22	15.59	3314.88	1.36	15.59
Jan-02	1087.20	0.99	16.42	3353.31	0.93	16.35
Feb-02	1138.17	1.48	18.32	3528.58	1.51	17.28
Mar-02	1159.33	1.18	18.59	3580.73	1.31	17.55

* Monthly Average of Closing Values.

** Volatility is calculated as standard deviation of daily returns of the indices for the respective months.

Source: SEBI & NSE.

Chart 4-2: Stock Market Volatility, 2001-02



The volatility across different sectoral indices varied widely. The volatility of sectoral indices is presented in Table 4-13. For the month of April 2001, while the Nifty volatility was 2.82%, the volatility of CNX IT Index and S&P CNX Petrochemicals Index were 8.08% and 4.45% respectively. The S&P CNX Pharmaceuticals generally exhibited lower volatility than S&P CNX Nifty.

Returns in Indian Market

The performance of S&P CNX Nifty and various other indices over different periods of last 1 month to 12 months is presented in Table 4-14. It reveals that the indices have performed with varying degrees over varying periods. All indices provided substantial gain in 6 months period and good return in 3 months period while 1 month and 1 year returns were not encouraging. It may also be observed that the basket of IT companies, captured by the CNX IT index, provided maximum return in the 6 months category. The CNX Midcap 200 provided best return of 11.47% over one year time horizon, while S&P CNX Defty provided worst return of –6%.

The comparative performance of five major sectoral indices, *viz.* S&P CNX Petrochemicals Index, S&P CNX Finance Index, CNX FMCG Index, S&P CNX Pharma Index, and CNX IT Index, with that of S&P CNX Nifty Index since April 2001 is presented in Chart 4-3. It is observed that during the entire period, CNX Pharma Index out-performed the Nifty Index. The S&P CNX Finance Index, though underperformed Nifty during initial months of the year, it turned out to be the best performer for the year among all the indices. S&P CNX Petrochemicals was the worst performer for the year. The indices generally did not show any consistent trend. The monthly closing prices of these sectoral indices are presented in Table 4-13.

Exchange Traded Funds

The first ETF in India, Nifty BeEs (Nifty Benchmark Exchange Traded Scheme) based on S&P CNX Nifty, was launched in December 2001 by Benchmark Mutual Fund. It is bought and sold like any other stock on NSE and has all characteristics of an index fund. It would provide returns that closely correspond to the total return of stocks included in Nifty. During the month of March 2002, 3.52 lakh of Nifty BeES involving 1,403 trades were

Table 4-13: Performance of Sectoral Indices

Month/Year	Monthly Closing Prices						Average Daily Volatility (%)					
	S&P CNX Nifty	CNX FMCG	CNX IT	CNX Finance	S&P CNX Petrochem	S&P CNX Pharma	S&P CNX Nifty	CNXFMCG	CNX IT	CNX S&P Finance	CNX Petrochem	S&P CNX Pharma
Apr-01	1125.25	2630.61	17267.40	205.40	1464.08	1261.28	2.23	1.03	8.08	2.96	4.45	2.65
May-01	1167.90	2517.79	18982.64	221.74	1673.98	1331.90	0.89	0.55	2.81	1.31	1.75	1.10
Jun-01	1107.90	2492.01	16302.17	191.38	1576.26	1260.47	1.27	1.20	3.62	1.77	1.88	1.10
Jul-01	1072.85	2628.07	15972.81	170.34	1361.10	1247.46	1.01	1.24	3.18	1.10	2.32	1.11
Aug-01	1053.75	2533.59	15724.37	173.47	1322.16	1309.03	0.57	1.04	2.32	0.85	1.74	1.02
Sep-01	913.85	2308.48	10902.19	158.19	1137.93	1273.59	2.52	2.45	6.02	3.33	4.86	2.23
Oct-01	971.90	2420.68	12139.67	168.46	1094.25	1363.57	1.21	1.89	4.39	1.46	2.32	1.26
Nov-01	1067.15	2426.10	16778.78	201.56	1255.20	1421.17	1.25	1.06	3.54	2.05	2.64	1.21
Dec-01	1059.05	2500.65	18282.17	205.39	1317.56	1373.27	1.22	0.87	4.25	2.44	1.52	0.87
Jan-02	1075.40	2500.14	18362.80	229.55	1293.49	1412.94	0.99	0.79	3.62	1.94	2.32	0.70
Feb-02	1142.05	2718.08	17554.44	260.45	1354.16	1489.09	1.48	1.11	3.12	3.11	1.88	1.40
Mar-02	1129.55	2530.29	18557.80	293.40	1325.01	1547.08	1.18	1.24	2.00	2.96	1.90	0.62

Source: IISL.

Table 4-14: Performance of Select Indices as at end March 2002

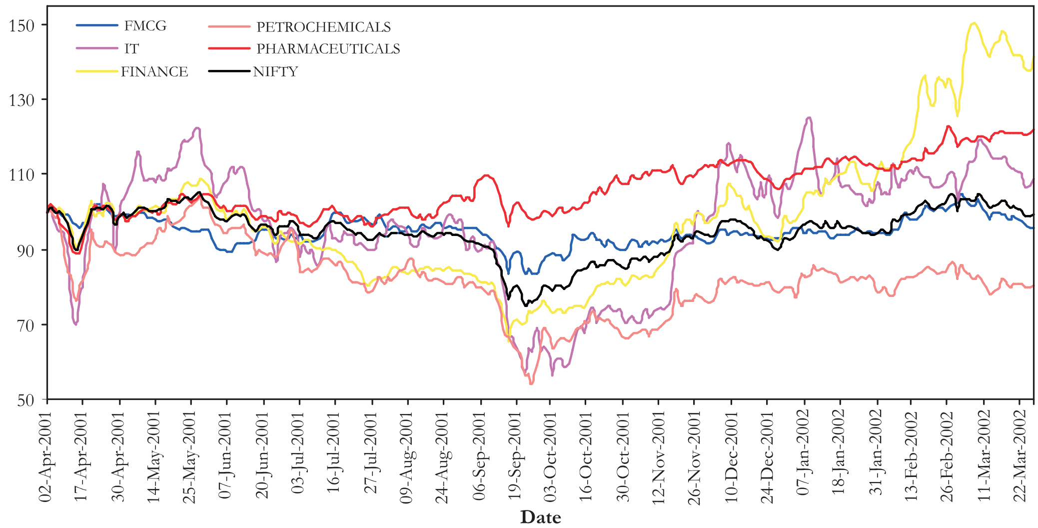
(In per cent)

	1 month	3 months	6 months	1 year
S&P CNX Nifty	-1.09	6.66	23.60	-1.62
S&P CNX 500	1.03	10.70	32.89	2.83
S&P CNX Defty	-1.21	5.50	21.23	-6.00
CNX Nifty Junior	4.77	20.69	44.50	-2.18
CNX Midcap 200	6.44	18.87	39.12	11.47
CNX IT Index	5.72	1.51	70.22	6.24

Source: IISL.

transacted valued at Rs. 4.07 crore. Further details about ETFs are available in Chapter 3 of this publication.

Chart 4-3: Movement of Nifty and Sectoral Indices, 2001-02



Arbitrage

Many securities are listed and traded at the same time on more than one stock exchange in the country. Every stock exchange follows its own practices and procedures in respect of listing and trading of securities, clearing and settlement of transactions, and risk containment measures. The existence of many exchanges with their regional peculiarities fragment the market, to some extent, and disperse liquidity. As a result, the same security is quoted at widely different prices on different exchanges at the same time because of differences in local demand and supply conditions and settlement systems. In an efficient market, two assets with identical attributes must sell for the same price, and so should an identical asset trading in two different markets. If the prices of such an asset differ, a profitable opportunity arises to sell the assets where it is overpriced and buy it back where it is underpriced. The arbitrageurs can step in and exploit this profit opportunity. Some idea about possibilities of arbitrage between NSE and BSE as at end-March , 2002 can be seen from Table 4-15, which lists securities and their prices where maximum arbitrage opportunities existed on that particular day.

Table 4-15: Arbitrage Opportunities between BSE and NSE

Company	Closing Prices (Rs.)		Difference
	NSE	BSE	(Rs.)
Lakshmi Mach	711.10	670.00	41.10
Ravalgaon	2682.00	2650.00	32.00
Moser Bear	270.20	252.25	17.95
Zandu Pharma	1800.00	1783.20	16.80
Madras Cements	4263.40	4250.00	13.40
CMC Ltd.	534.20	543.60	9.40
TVS Suzuki	378.05	388.70	10.65
Lakshmi Mills	154.25	166.00	11.75
Bayer India	1331.00	1348.00	17.00
Asahi India	281.05	300.00	18.95

Source: The Economic Times, dated March 29, 2002

Liquidity

Many securities listed on stock exchanges are not traded. Trading in many other securities is negligible. These suggest illiquidity in such securities. Table 4-16 gives a comparative picture of number of companies listed/available for trading and those actually traded at BSE and NSE during 2001-02. The percentage of companies traded on BSE was quite low at 21.46% in April 2001. Further, many of the companies whose stocks were traded experienced very thin trading. Only 23.15% of companies traded on BSE were traded for more than 100

Table 4-16: Trading Frequency on NSE & BSE

Month/Year	NSE			BSE		
	Companies Available for Trading*	Companies Traded	% of Traded to Available for Trading	Listed Companies	Traded Companies	% of Traded to Listed Companies
Apr-01	1,031	951	92.24	9,912	2,127	21.46
May-01	1,030	954	92.62	9,972	2,503	25.10
Jun-01	1,001	963	96.20	10,137	2,356	23.24
Jul-01	994	924	92.96	10,309	2,485	24.11
Aug-01	994	931	93.66	10,323	2,517	24.38
Sep-01	987	917	92.91	10,346	2,427	23.46
Oct-01	986	917	93.00	10,342	2,548	24.64
Nov-01	956	920	96.23	10,385	2,711	26.10
Dec-01	956	895	93.62	13,774	3,211	23.31
Jan-02	893	896	100.00	8,606	2,000	23.24
Feb-02	889	840	94.49	7,296	2,042	27.99
Mar-02	890	840	94.38	7,321	2,113	28.86

Source: BSE/SEBI and NSE.

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

days during 2001-02 (Table 4-17). Trading took place for less than 100 days in case of 76.85% of companies traded at BSE during the year, and for less than 10 days in case of 24.76% of companies traded. The situation at NSE is, however, different. On an average 93% of companies available for trading were traded every month during 2001-02. Nearly 78% of companies traded on NSE were traded for more than 100 days during 2001-02.

Table 4-17: Frequency Distribution of Companies Traded at NSE and BSE

No. of Days Traded	No. of Companies Traded at NSE		No. of Companies Traded at BSE	
	2001-02	% to Total	2001-02	% to Total
Above 100 days	796	78.12	1,238	23.15
91 to 100 days	18	1.77	93	1.74
81-90 days	25	2.45	113	2.11
71-80 days	29	2.85	197	3.68
61-70 days	16	1.57	579	10.83
51-60 days	22	2.16	402	7.52
41-50 days	19	1.86	315	5.89
31-40 days	24	2.36	299	5.59
21-30 days	13	1.28	360	6.73
11- 20 days	19	1.86	427	7.99
1-10 days	38	3.73	1,324	24.76
Total	**1,019**	**100.00**	**5,347**	**100.00**

Source: BSE/SEBI & NSE.

There was no trade in several companies listed on a number of regional stock exchanges. This indicates that trading is concentrated among only a limited number of stocks and is very thin in a large number of stocks.

One could also use liquidity ratio*, defined as annualised trading volume per unit market capitalisation, as a measure of liquidity. Table 4-18 presents liquidity ratios by size deciles for 4,595 stocks on NASDAQ and for 924 most liquid stocks traded on NSE.

Table 4-18: Liquidity Ratio by Size Deciles on NSE and NASDAQ (January 2001)

Decile	NSE		NASDAQ	
	Mean Market Capitalisation ($ Million)	Mean Liquidity Ratio (per cent)	Mean Market Capitalisation ($ Million)	Mean Liquidity Ratio (per cent)
1	1.18	10.38	5.44	97.51
2	2.54	14.01	13.61	82.92
3	3.96	5.25	24.31	82.14
4	6.27	9.96	39.66	85.71
5	9.85	17.00	63.34	96.80
6	15.37	25.84	102.82	118.24
7	23.44	45.26	167.48	160.89
8	42.28	127.54	302.16	195.33
9	105.12	88.69	645.95	253.05
10	847.64	351.43	6062.69	314.58

Source: Securities Market Infrastructure for Small Countries by Ajay Shah and Susan Thomas, October 4, 2001.

* Shah, A. & Thomas, S. (2001), 'Securities Market Infrastructure for Small Countries".

One can draw following inferences from the table:

- In deciles 1, 2 and 3, the stocks traded on NSE are smaller than those seen in the smallest decile on NASDAQ. Hence, while the liquidity ratios seen appear to be low in absolute terms, it is not clear whether these low liquidity ratios are innately associated with size, or a reflection of inferior market characteristics in India.
- In deciles 4 through 7, the stocks traded on NSE are comparable in size to the stocks traded on NASDAQ. However, their liquidity ratios are significantly inferior to their peers who trade on NASDAQ.
- In deciles 8, 9 and 10, the liquidity ratios seen on NSE are comparable to those seen on NASDAQ.
- The top decile on NSE and NASDAQ are both at a liquidity ratio of 350% or so. However, the mean market capitalisation seen in the top decile at NSE is just $847 million, which is much smaller than that seen on NASDAQ ($6 billion). In other words, stocks on NSE obtain liquidity ratios of the order of 350% at a much lower size threshold when compared with NASDAQ.

Thus, large stocks in India obtain liquidity ratios, which are comparable or better than those seen on NASDAQ. However, for firms with a market capitalisation below $30 million or so, which represents the bulk of firms in India, liquidity ratios at NSE are inferior to those on NASDAQ.

Transaction Costs

Liquidity to a large extent depends on transaction costs. Lower the transaction cost, the lower is the bid-ask spread and higher the volumes. According to a recent SEBI study (Transaction Cost for Equity Shares in India, November 2000), the transaction cost for equity shares in India, at least for the institutional investors, are much lower as compared to some of the developed and emerging markets. It observes that Indian market has the second lowest transaction cost in the world. There has been decline in transaction cost for equities for all groups of investors in the Indian market as an increasing number of scrips are being traded in dematerialised form and instances of bad delivery have come down substantially. Increasing competition has also put pressure on trading costs. The average transaction cost for retail investors is higher than that for institutional investors on account of higher brokerage. Institutional investors offer higher volume of business and therefore have better bargaining capacity. They are also not required to pay any margins. Average transaction cost for MFs and FIs is lower than that of the FIIs, as the FIIs pay higher brokerage compared to the MFs and the FIs.

SEBI released a Working Paper titled "Trade Execution Cost of Equity Shares in India" in January 2002. The study has measured implicit (indirect) costs in terms of quoted spread (possible cost of trading in a stock) and effective bid-ask spread (actual cost incurred by an investor to execute a trade in a stock) and their behaviour in relation to volume traded, market capitalisation, volatility and market hour. It has also measured these implicit costs for February, April and July 2001 on BSE and NSE to assess the impact of changes in market microstructure. The major findings of the study are as follows:

i. Effective spread is, by and large, lower than the quoted spread.

ii. Market micro-structural changes appear to have influenced spread size. On an average, the quoted as well as effective spreads have gone up on both BSE and NSE after February 2001, as indicated below:

Quoted and Effective Half Spread (%) on Exchanges

Mean Spread	BSE			NSE		
	Feb 01	April 01	July 01	Feb 01	April 01	July 01
Quoted	1.12	1.42	2.07	0.97	1.47	2.06
Effective	0.86	1.02	1.37	1.38	1.65	1.58

iii. The spread is inversely related to volume traded and market capitalisation and positively related to volatility (variance). Efforts to reduce volatility will also lead to reduction in bid-ask spread.

iv. Speed and time of arrival of information in the market also affects trade cost. The spreads are very high at the open of market hours and they slowly taper off as trading progresses. An investor who postpones his decision to buy or sell towards close of trading saves more than 50% in terms of spread.

v. Spreads are mostly independent of quantity quoted and traded.

Institutional Transactions

Though the volume of trades done by FIIs is not very high as compared to other market participants, they are the driving force in determination of market sentiments and price trends. This is so because they do only delivery-based trades and they are perceived to be infallible in their assessment of the market. During 2001-02, the FIIs invested heavily in the Indian stock markets with a net investment of Rs. 8,755 crore, though FII it was slightly lower than that in the previous year. The FII net investment was highest during the month of February 2002 when they made net purchases for Rs. 2,336 crore. FIIs recorded net outflows in September 2001. Trends in purchases and sales by FIIs are presented in Table 4-19. The cumulative net FII investment touched US $ 15.24 billion by end-March 2002.

Table 4-19: Trends in FII Investment

Period	Purchases (Rs. crore)	Sales (Rs. crore)	Net Investment (Rs. crore)	Cumulative Net Investment (Rs. crore)	Net Investment (US$ mn.)	Cumulative Net Investment (US$ mn.)
1994-95	**7,631**	**2,835**	**4,796**	**4,796**	**1,528**	**3,167**
1995-96	**9,694**	**2,752**	**6,942**	**11,738**	**2,036**	**5,202**
1996-97	**15,554**	**6,979**	**8,575**	**20,313**	**2,432**	**7,634**
1997-98	**18,695**	**12,737**	**5,957**	**26,270**	**1,650**	**9,284**
1998-99	**16,115**	**17,699**	**-1,585**	**24,686**	**-386**	**8,898**
1999-00	**56,856**	**46,734**	**10,122**	**34,808**	**2,339**	**11,237**
2000-01	**74,051**	**64,116**	**9,934**	**44,742**	**2,159**	**13,396**
2001-02	**49,920**	**41,165**	**8,755**	**53,497**	**1,846**	**15,242**
Apr 01	5,080	3,101	1,979	46,721	425	13,821
May 01	3,976	3,300	676	47,397	145	13,965
Jun 01	4,119	2,939	1,180	48,577	251	14,217
Jul 01	3,665	3,187	478	49,054	102	14,318
Aug 01	3,249	2,746	502	49,557	107	14,425
Sep 01	3,220	3,761	-541	49,016	-113	14,311
Oct 01	3,896	3,011	884	49,901	186	14,497
Nov 01	3,974	3,971	4	49,904	1	14,498
Dec 01	3,455	3,228	228	50,132	48	14,545
Jan 02	5,446	4,747	699	50,831	146	14,691
Feb 02	5,816	3,479	2,337	53,168	484	15,175
Mar 02	4,024	3,695	329	53,497	68	15,242

Source: SEBI.

The details of transactions by MFs since April 2001 are presented in Table 4-20. During 2001-02, the MFs have invested more funds in the debt instruments than equity instruments. In the equity market, MFs were net sellers to the tune of Rs. 3,796 crore during 2001-02. Except for September and December 2001, MFs were net sellers in equities and except for September and March, they were net sellers in the debt market.

Table 4-20: Trends in Transactions by Mutual Funds

(Rs. crore)

Month/Year	Equity			Debt			Total Net Purchases/ Sales
	Gross Purchase	Gross Sales	Net Purchases/ Sales	Gross Purchase	Gross Sales	Net Purchases/ Sales	
Apr-01	747	1,039	-293	1,465	715	750	457
May-01	994	1,473	-479	2,548	1,407	1,141	663
Jun-01	659	771	-112	2,519	1,838	681	569
Jul-01	475	920	-445	2,554	1,476	1,077	632
Aug-01	644	1,021	-378	2,952	1,780	1,172	795
Sep-01	878	767	112	1,615	1,876	-262	-150
Oct-01	751	1,426	-674	2,626	1,649	977	303
Nov-01	1,003	1,348	-345	3,282	1,632	1,650	1,305
Dec-01	1,340	1,264	77	2,618	1,675	943	1,019
Jan-02	1,722	2,157	-435	4,922	2,825	2,098	1,663
Feb-02	1,705	2,057	-352	3,891	3,085	806	455
Mar-02	1,178	1,650	-472	2,592	2,667	-75	-546
2001-02	**12,098**	**15,894**	**-3,796**	**33,584**	**22,624**	**10,959**	**7,163**

Source: SEBI.

ADR/GDR Prices

The extent of divergence between the prices of ADRs/GDRs and the domestic prices is presented in Table 4-21. A comparison of the price of ADR/GDR of a company with the domestic price of its share gives an idea about the extent to which domestic price of the security is at premium/discount to the international price. The government proposed in the budget for 2001-02 to permit two-way fungibility for ADRs/GDRs, which means that investors (foreign institutional or domestic) in any company that has issued ADRs/ GDRs can freely convert the ADRs/GDRs into underlying domestic shares. They can also reconvert the domestic shares into ADRs/GDRs, depending on the direction of price change in the stock. This is expected to bring about an improvement in the liquidity in ADR/GDR market and elimination of arbitrage, implying that ADR/GDR prices and domestic share prices of companies that have floated ADRs/GDRs will be better aligned. In order to operationalise the proposal, RBI issued guidelines in February 2002. The transactions are expected to commence soon.

Takeovers

SEBI released a Working Paper titled "Impact of Takeover Regulations on Corporate Sector in India – A Critical Appraisal" in June 2001. The major findings of the study are as follows:-

- Since SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 1997 came into existence, 1011 companies have been taken over for various purposes, which include consolidation, change in control of management and substantial acquisition. The most important objective has been change in control of management.

Table 4-21: Divergence between ADR/GDR Prices and Local Prices (as on March 28, 2002)

(In per cent)

Company	Weight (%)	Premium/Discount to Local
Skindia GDR Index	**100.00**	**15.35**
Bajaj Auto	2.30	1.60
BSES	4.56	4.90
E.I. Hotels	0.74	7.88
Finolex Cables	0.69	0.43
Grasim	2.62	3.48
Gujarat Ambuja	4.14	3.54
Hindalco	8.17	9.71
ICICI	2.86	26.50
ICICI (ADR)	4.11	30.03
Indian Hotels	0.78	15.23
Infosys Tech (ADR)	8.45	71.14
IPCL	1.18	3.74
ITC	2.41	3.67
L & T	4.75	-0.51
Mahindra & Mahindra	1.46	3.10
MTNL	5.71	-0.71
Pentamedia Graphics	0.08	13.55
Ranbaxy Labs	7.61	13.07
Reliance	16.45	7.52
Satyam Infoway (ADR)	0.59	0.00
State Bank of India	11.51	34.88
Telco	3.21	-3.75
VSNL	5.61	-6.68

Source: The Economic Times, dated March 29, 2002.

The number of takeovers kept on increasing as corporates became better aware of the regulations and their utility in successful restructuring. The number of open offers grew from two in 1994-95 to 77 in the year 2000-01.

- There are clear industry concentrations: finance and information technology industries score very high on the number of companies acquired, but the amount involved in these two industries is small. On the basis of the amount spent, the electronic/electrical industry occupies number one position followed by metal and cement and construction.
- Cash is the dominant instrument used in acquiring companies. Only two companies used exchange mechanisms, i.e., preference shares and optionally convertible preference shares. In most other countries, exchange offers are very common.
- Mostly, Indian companies and Indian promoters are the major users of acquisition mechanisms. Foreign companies and foreign promoters accounted for only 15 % of all takeovers.
- Out of the total 1,011 acquisitions, 256 are through open offers and the balance 755 through exemption. Acquirer/s used the route of exemption mechanism for as many as 75 % of the acquisitions and only 25 % were in the form of open offers.
- Through the Takeover Regulations the investor has benefited to the extent of Rs. 42.5 billion.
- Of the total 256 offers made during the study period only eight resulted in hostile bids. Of these, only one resulted in change of control.

The details of take overs both under open offers and exempted category are presented in Table 4-22. The year 2001-02 witnessed 81 takeover under open category involving Rs. 3,610 crore as against Rs. 1,372 crore during the preceding year. However, there were 276 takeovers under exempted category involving Rs. 2,548 crore as against Rs. 5,489 crore in the previous year.

Table 4-22: Substantial Acquisition of Shares and Takeovers

(Value in Rs. crore)

Year	Open Offers								Automatic Exemption	
	Objectives						Total		Number	Value of Shares Acquired
	Change in Control of Management		Consolidation of Holdings		Substantial Acquisition					
	Number	Value	Number	Value	Number	Value	Number	Value		
1994-95	0	0	1	114	1	4	2	118	—	—
1995-96	4	30	4	26	0	0	8	56	—	—
1996-97	11	12	7	78	1	2	19	92	—	—
1997-98	18	143	10	340	12	95	40	578	126	3,696
1998-99	29	100	24	416	11	164	64	679	191	1,670
1999-00	42	259	9	71	24	131	75	461	193	4,184
2000-01	70	1,140	5	189	2	42	77	1,372	245	5,489
2001-02	54	1,756	26	1,815	1	39	81	3,610	276	2,548
Total	**228**	**3,440**	**86**	**3,049**	**52**	**477**	**366**	**6,966**	**1,031**	**17,587**

Source: SEBI.

Performance of Brokers

As mentioned earlier, there were 9,687 trading members at the end of March, 2002. The details of their performance are not readily available. However, brief details in respect of 751 members of NSE are presented in Table 4-23. It is observed that about 40% of the members had deployed a capital of less than Rs. 2 crore at the end of March 2002, while 12% have deployed more than Rs. 10 crore. Similarly about 40% of members had a turnover of less than Rs. 1,000 crore during 2001-02, while about 5% had turnover of more than Rs. 10,000 crore. About 12% of members of NSE had average daily turnover more than Rs. 10 crore during 2001-02.

Table 4-23: Distribution of Trading Members according to Capital/Turnover

Turnover (Rs. cr.) (2001-02) / Capital (Rs. lakh) as on March 31, 2002	£ 1000	> 1000 - 2000	> 2000 - 3000	> 3000 - 4000	> 4000 - 5000	> 5000 - 10000	> 10000	Total
£ 200	147	69	40	14	10	20	1	**301**
> 200 - 400	74	44	25	14	14	22	4	**197**
> 400 - 600	41	10	7	11	2	25	7	**103**
> 600 - 800	17	5	1	3	6	7	2	**41**
> 800 - 1000	5	3	2	2	1	5	3	**21**
> 1000	25	10	8	5	7	16	17	**88**
Total	**309**	**141**	**83**	**49**	**40**	**95**	**34**	**751**

Policy Debates

Management of Stock Exchanges

Most of the exchanges in India are directly or indirectly owned and managed by brokers. Apart from facing the handicap of a perceived conflict of interests, this model of exchange governance is considered unsuitable for electronic exchanges, which have trading members spread all over the country. On realising the limitations of mutual structure and discovering the advantage of a demutual structure, the stock exchanges are increasingly organising themselves as commercial entities and undergoing a process of demutualisation. The motivation for demutualisation ranges from expanding the business network, increasing fund raising capability, expediting decision making process, pursuing strategic alliances, internationalising their appeal, etc. NSE has been from day one the purest form of a demutualised stock exchange, where the brokers do not own the shares and its management is free from broker control. The right to trade is completely divorced from ownership and management. This has completely eliminated any conflict of interest. NSE, however continues to emphasise relationship building with all its participants, including trading members, investor community and the companies, whose securities are traded on the Exchange. This has enabled smooth conduct of business of the Exchange in a fair and non-partisan manner.

Successful demutualisation requires us to be aware about the following concerns:

- A "demutual" suffers from a different type of conflict of interest. Since it is a "for-profit" organisation, its commercial role may get precedence over the regulatory role. Every decision is likely to be tested against its impact on profitability. It may, for example, be either very lenient in enforcing the rules to encourage the volume of business or very strict in enforcement of rules to increase penal revenue. NSE has been able to strike a fine balance between its commercial and regulatory roles, which supplement each other.

- A demutualised exchange would like to be listed on an exchange. This would open up another arena for conflict of interest if it is listed on itself. It is unlikely that the exchange would like to subject itself to same strict discipline as applicable to other listed companies. One solution could be to list the securities on another exchange, but permit trading on itself. A better solution would be to vest the listing powers in a body, like UK Listing Authority, separate from stock exchanges.

- In a mutual environment, the governing councils include nominees of regulators and public representatives. This is necessary in public interest to refrain the elected directors from pursuing their self-interest only. In the demutualised environment, such a check is also necessary to ensure that the board of directors do not act only in the best commercial interest of the organisation. This may be achieved by including a few public representatives, who should have specific responsibilities and be held accountable.

- In the demutual environment, the shares can be cornered by a few or undesirable persons. The exchanges could be prone to hostile takeovers. Such probability can be reduced by prescribing ceiling on shareholdings and requiring regulator's approval for change in ownership beyond a threshold limit. Public representatives would be useful to prevent mismanagement in such cases.

- A "mutual" may have better access to expertise and knowledge of the market participants, which are critical inputs for framing rules. The access to market expertise and knowledge and compliance with the rules have been successfully achieved by NSE through EC, COSI, COTI etc.

- The process of demutualisation would involve offering shares of a corporatised exchange to public, including trading members. It is possible that the trading members subscribe for the shares and in terms of their rights under the Companies Act, get themselves elected to the board of directors. This may defeat the purpose of demutualisation. It would then be necessary to specify under the SCRA that a shareholder, who is also a trading member, may not join the board. There is thus an apparent conflict between the Companies Act and the SCRA in the sense that the former confers a right on the shareholder to join the management while the later deprives a broker-shareholder from doing so. This conflict may be resolved by the well-accepted principle that the special law (SCRA) prevails over the general law (Companies Act). A deep understanding of the laws, however, overshadows this conflict and makes it clear that both the Acts are seeking to fulfill the same objective. The Companies Act requires an interested director to refrain from participating in the deliberations in the board meetings. Since a broker-shareholder, if elected to board of directors of an exchange, would be a perpetually interested director, he has to refrain from attending the board meetings and hence can not really contribute to management. It is, therefore, desirable that such a shareholder refrains voluntarily from joining the board or is prevented from joining the board by the SCRA. Thus the SCRA would reinforce the objective of the Companies Act more explicitly.

- The corporatisation-cum-demutualisation would result in two classes of members namely, trading members and shareholder-members. Since "member" under the SCRA means a member of the recognised stock exchange, it is apprehended in some circles that the SCRA may not accommodate different classes of members. Again, NSE model, which has these two types of members, provides one solution. It has been affirmed recently by the Supreme Court that there can be more than one class of members and they will fall within the definition of "members" under the SCRA.

- The corporatisation-cum-demutualisation would involve transfer of assets and liabilities from the existing mutual exchange to the new demutual exchange and also from the members of the mutual exchange to the members of the demutual exchange. It may be necessary to exempt all such transfers from the income tax, stamp duties and sales tax.

Financials of Stock Exchanges

The trading volumes on exchanges have been witnessing phenomenal growth for last few years. The growth of turnover has, however, not been uniform across exchanges. The increase in turnover took place mostly at big exchanges and it was partly at the cost of small exchanges that failed to keep pace with the changes. The business moved away from small exchanges to exchanges, which adopted technologically superior trading and settlement systems. The huge liquidity and order depth of big exchanges further sucked liquidity of other stock exchanges. As a result, 15 small exchanges put together reported less than 0.01% of total turnover during 2001-02, while 2 big exchanges accounted for over 96% of turnover of all segments (equity, debt and derivatives) together. About a dozen exchanges reported nil turnover during 2001-02.

With fall in turnover, the financial health of many exchanges is deteriorating. While the income of the small exchanges is not increasing, they continue to incur increasing administrative and maintenance expenses and increased investment on setting up on-line trading and settlement systems. As may be seen from Table 4-24, total income of all exchanges (except NSE and BSE) declined from Rs. 107 crore in 1999-00 to Rs. 104 crore during 2000-01, while total expenditure for these exchanges increased from Rs. 104 crore to Rs. 121 crore during the same period. About a dozen exchanges suffered losses during 2000-01 which was a boom year in terms of turnover. The exchanges (except NSE and BSE) together incurred a total loss of about Rs. 17 crore. The data for 2001-02, which was rather a difficult year when many exchanges witnessed negligible turnover, when available, would paint a further gloomy picture.

Such poor financial performance is despite the fact that the exchanges earn substantial amount of non-business income (income from listing, interest and rent), as may be seen from Table 4-25. Listing contributed Rs. 44 crore during 2000-01. This has become a perennial source of income for the exchanges and irrespective of the volume of business, it contributes

Table 4-24: Financial Health of Stock Exchanges

(Rs. lakh)

Stock Exchanges	2000-01			1999-00		
	Income	Expenditure	Profit/Loss	Income	Expenditure	Profit/Loss
1 Ahmedabad	1,116	973	143	976	913	63
2 Bangalore	388	454	-66	337	445	-108
3 Bhubaneshwar	103	72	31	102	86	15
4 Calcutta	3,805	4,942	-1,137	3,769	2,774	995
5 Cochin	127	125	2	124	202	-78
6 Coimbatore	120	200	-79	93	210	-117
7 Delhi	1,735	1,430	305	2,210	1,620	589
8 Gauhati	48	47	1	54	52	1
9 Hyderabad	255	252	4	264	267	-2
10 ICSEIL	220	529	-310	66	517	-452
11 Jaipur	235	246	-11	221	295	-73
12 Ludhiana	390	439	-49	378	369	9
13 Madhya Pradesh	95	73	23	126	91	35
14 Madras	364	244	120	343	186	157
15 Magadh	38	59	-21	36	70	-34
16 Mangalore	60	49	11	55	60	-5
17 OTCEI	450	1,008	-558	568	1,175	-607
18 Pune	191	212	-21	286	257	28
19 SKSE	128	115	13	134	149	-16
20 Uttar Pradesh	331	364	-33	301	354	-54
21 Vadodara	224	248	-26	269	279	-10
22 Mumbai	13,905	13,343	561	13,008	7,781	5,227
23 NSEIL	27,100	16,600	10,499	20,524	15,976	4,548
Total (Except NSE & BSE)	**10,423**	**12,081**	**-1,659**	**10,710**	**10,375**	**336**
Total	**51,428**	**42,025**	**9,401**	**44,242**	**34,132**	**10,110**

Source: Annual Reports of Stock Exchanges.

Note: Extraordinary items like profit/loss on sale of assets, forfeitures and expenses on voluntary retirement schemes have been excluded.

almost the same amount year after year. The listing income accounted for as high as 84% of total income of Gauhati Exchange and 73% for MP Exchange. The exchanges also earned Rs. 130 crore from interest and rent during 2000-01. The interest income has increased in recent years mostly because of increase in custodial deposits collected by the exchanges for

Table 4-25: Sources of Income for Stock Exchanges

(In per cent)

Stock Exchanges	2000-01				1999-00			
	Non-Business Income		Business Income	Total	Non-Business Income		Business Income	Total
	Listing	Interest and Rent			Listing	Interest and Rent		
Ahmedabad	51.16	34.11	14.74	100.00	61.49	24.38	14.12	100.00
Bangalore	27.46	26.81	45.73	100.00	34.13	26.68	39.19	100.00
Bhubaneshwar	20.29	71.33	8.39	100.00	22.51	68.84	8.65	100.00
Calcutta	14.01	23.89	62.11	100.00	14.08	22.96	62.97	100.00
Cochin	28.28	11.25	60.47	100.00	32.86	21.93	45.22	100.00
Coimbatore	9.11	76.75	14.14	100.00	12.67	76.02	11.30	100.00
Delhi	42.61	52.49	4.90	100.00	37.45	58.30	4.25	100.00
Gauhati	84.01	1.47	14.52	100.00	84.82	5.35	9.83	100.00
Hyderabad	55.42	18.21	26.37	100.00	61.33	12.87	25.80	100.00
ICSEIL	0.43	48.44	51.13	100.00	1.08	49.91	49.01	100.00
Jaipur	66.70	23.17	10.12	100.00	70.52	20.45	9.02	100.00
Ludhiana	31.70	34.86	33.44	100.00	36.05	38.64	25.32	100.00
Madhya Pradesh	72.62	10.57	16.81	100.00	43.67	14.97	41.36	100.00
Madras	58.83	23.01	18.16	100.00	70.40	14.23	15.38	100.00
Magadh	34.83	30.10	35.07	100.00	55.13	15.50	29.37	100.00
Mangalore	28.76	46.21	25.03	100.00	32.17	47.35	20.48	100.00
OTCEI	4.31	67.02	28.68	100.00	3.41	75.02	21.57	100.00
Pune	37.02	49.87	13.12	100.00	25.42	64.22	10.36	100.00
SKSE	22.27	59.32	18.41	100.00	24.96	51.01	24.03	100.00
Uttar Pradesh	19.40	39.15	41.46	100.00	37.72	33.53	28.75	100.00
Vadodara	29.69	50.09	20.22	100.00	47.26	47.36	5.37	100.00
Mumbai	8.64	35.02	56.34	100.00	9.15	38.61	52.25	100.00
NSEIL	0.84	16.28	82.88	100.00	1.07	17.51	81.42	100.00
Total (Except NSE & BSE)	**29.20**	**35.26**	**35.53**	**100.00**	**31.27**	**36.56**	**32.17**	**100.00**
Total	**8.70**	**25.19**	**66.11**	**100.00**	**10.75**	**28.33**	**60.92**	**100.00**

Source: Annual Reports of Stock Exchanges.

Note: Business Income includes income from membership, transaction and service charges, that is, total income minus income from listing, interest and rent.

risk management. The income from interest accounted for as high as 71% of total income of Bhubaneswar exchange and 67% of OTCEI. Rent contributed 73% of total income of Coimbatore exchange. Thus, non-business income accounted for 68% and 65% of total income for all exchanges (except NSE and BSE) and 39% and 34% for all exchanges respectively in 1999-00 and 2000-01. The decline in non-business income in relative terms during 2000-01 over 1999-00 is attributed to huge increase in turnover on exchanges during 2000-01. Despite zero/negligible turnover, a few exchanges like Bhubaneswar, Cochin, Gauhati, Madhya Pradesh, Madras, Managalore, SKSE managed to earn a profit, albeit negligible, only because of their non-business income. Business income (membership fees and subscriptions, transaction-based service charges, miscellaneous income) increased substantially from Rs. 270 crore in 1999-00 to Rs. 340 crore in 2000-01 primarily because of increase in volume of transactions in securities on exchanges. It still accounted for only 36% of total income of exchanges (except NSE and BSE) and 66% of all exchanges during 2000-01. It accounted for as high as 83% of total income of NSE in 2000-01. If the exchanges were not having non-business income, only one exchange, i.e. NSE, would be earning profit during 2000-01 and the exchanges together would have posted a loss of Rs. 80 crore.

The pattern of revenue of small exchanges varies sharply from that of big exchanges. Non-business income is the dominant source of income for small exchanges while business income contributes major portion of revenue of big exchanges.

This state of affairs will only worsen in the days to come. The year 2000-01 was a boom year in terms of turnover/business. Despite this, the financial health of the exchanges during 2000-01 is not encouraging. It would look more miserable for the year 2002-02 when a dozen exchanges have reported nil turnover. Another half dozen would report nil turnover 2002-03 as all deferral products have ceased to be available and exchanges have shifted to rolling (uniform) settlement cycles recently. Most of the transactions on small exchanges, which were positions shifted across exchanges to gain from different settlement cycles, has disappeared. Further, the business would keep on shifting from small exchanges to more sophisticated and big exchanges which provide quality processing of transactions. These would reduce business income further for small exchanges. The listing income, which has been more in the nature of a fixed component, is only likely to decline in future once the process of de-listing of companies from these exchanges gains momentum. The process has already begun and a number of Indian blue chip companies have declared plans to delist their securities from small exchanges. According to an estimate (Prime Press Release dated 18th February 2002), 16 MNCs bought the entire equity of their Indian subsidiaries and delisted them from stock exchanges in 2001. And over 90 companies are in the pipeline. Besides, many issuers find it difficult to keep on paying listing fees and complying with listing requirements of a number of exchanges without any corresponding gains in terms of volume of transactions. The new issuers, who are also few, prefer exchanges with nationwide network, not only because it makes sense to do so, but also it complies with the requirement of listing on the regional exchange. All these would contribute to decline in listing income in the years to come. In fact, it has already declined from Rs. 48 crore in 1999-00 to Rs. 44 crore 2000-01. Interest income will also decline with decline in the interest rates in market. Besides as turnover decreases, the deposits with exchanges also decline and hence interest on such deposits. While all the incomes decline, expenditure would not decline proportionately. All these indicate further deteriorating health of exchanges in the days to come.

Central Listing Authority

Under the current dispensation, while it is mandatory to list a security on a regional exchange, it can be listed on any number of exchanges. The issuer has option to list its securities on any one or more of the exchanges. The issue fails if the regional exchange refuses listing. The issue also fails if any of the exchanges, to which application for listing has been made, refuses to list the security. This arrangement generates unhealthy competition. There is a competition among the issuers to list securities on as many exchanges as possible to attract investors from all over the country and waste resources to comply with the listing requirements of a number of exchanges simultaneously. Similarly there is a competition among the exchanges to attract as many issuers as possible at times leading to dilution of listing standards particularly when listing constitutes a major source of income for many of them.

A corollary to the above is that there is a lot of avoidable waste. For all practical purposes, listing agreement is a one sided agreement, rather an undertaking, requiring the issuer to agree to all the conditions prescribed at the time of signing the agreement or to be prescribed subsequently. The agreement is also amended unilaterally. The issuer has absolutely no choice in the matter as none of the terms is negotiable. The issuer is deemed to have agreed to comply with anything that may be prescribed at any time in future. Even the stock exchange does not have any freedom to vary any of the terms of the agreement. Why should there be separate agreements for each security if it is the same agreement and why should an issuer sign the same agreement with a number of exchanges? Why should a company comply with listing agreement with different exchanges or why should a number of exchanges monitor compliance by a company? There are about 10,000 companies listed on Indian exchanges. Assuming that each company is listed on average on four exchanges there are 40,000 listing agreements, 40,000 sets of compliances by companies and the exchanges monitor 40,000 companies. It is just a waste of resources, as the terms are uniform across securities and across exchanges.

Every exchange exercises powers of listing/denial of listing, suspending/delisting of securities independently. As a result, a security not found suitable for listing on an exchange gets listed on a different exchange, as they follow different criteria for listing a security. A prospective issuer informally gets a feedback from an exchange if the latter would consider listing of his security favourably. If he does not get an encouraging response, he tries his luck with other lenient exchanges. This creates an anomalous situation that a security, which is not 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, that is, it should be suitable for all investors or not for any.

Given the speed of technological advances and trend in the market, extinction of a few stock exchanges is not a remote possibility. It is a normal market phenomenon that economic units come up and disappear due to market forces. But the exchange is just not an economic unit; it is a trustee for investors by virtue of being the listing authority. If an exchange, where a security is listed, disappears, the listing authority as well as the trading platform for the security disappears. Can a regulatory entity disappear for commercial reasons? This reinforces the argument that securities should be listed, but not listed on/by a particular stock exchange, but by a third party which would not be extinct for commercial reasons.

Listing signals that the issue has been properly supervised. The unwary investors take it as some kind of qualitative rating of the company, despite disclaimers to the contrary. Listing also casts onerous responsibilities on the exchange in the sense that it acts as a trustee for investors and ensures compliance of certain standards by a listed company. Most of the exchanges, given their financial health and organizational structure, are not in a position to supervise such large number of listed companies (9,644 companies listed on exchanges as at end of March 2002). Given their dependence on listing income, they can not discharge listing function efficiently. They can not easily deny a listing request nor can they suspend/ delist a security without a second thought as they would not like offend a listed company in view of their interest. This therefore suggests the need for listing and supervision of a listed company through an independent authority who would not depend on listing income for survival.

Most of the exchanges are "Association of Persons" which was considered beneficial in terms tax benefits and matters of compliance. They are now having a re-look at the way they conduct business and are gearing up to demutualise themselves by converting themselves into a public limited companies. They will also be accessing securities market to finance their ever expanding trading network and would be interested to list their securities. This would create an anomalous situation where a stock exchange would admit its own securities for trading. A satisfactory solution would be to vest the listing powers with a body separate from the stock exchanges.

In view of the foregoing, it is desirable that there is only one 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. The security should also be monitored, and suspended and withdrawn from trading centrally by the listing agency. The investors and market participants would get all the company related information, which are mandatorily required to be filed by companies, at one central location preferably a web site maintained by the CLA. The exchanges should concentrate on trading only while pre-trading activity (listing and compliance of terms of listing) is managed by CLA and post trading activity (clearing and settlement of trades) is managed by clearing corporations.

Margin Trading

Margin trading is purchasing securities by borrowing a portion of the transaction value and using the securities in the portfolio as collateral. It is another form leveraged trading implying that backed by the collateral, one can buy assets, which are far greater in value than the value of the collateral. The collateral in this case is termed 'margin' and can be made up of securities or other financial assets. It is also possible for one to enter into short sale through a margin account, i.e., borrow securities from the brokerage firm in order to sell it, hoping that the price will decline. Margin trading thus leads to an increase in the purchasing/selling power of the investors and also enables them to multiply their gains if the stock market moves on expected lines.

Margin trading is quite popular in most of the markets, which have switched over to rolling settlement and has become more popular as markets have moved over to rolling settlement with shorter settlement cycles. It provides an avenue for raising funds to speculators or day traders, who are instrumental in generating liquidity in the market. It is a well-accepted fact that the volumes in which day traders operate are not sustainable if they were to operate strictly with own funds.

The introduction of margin trading in India is critically linked to achieving integration between banking and securities market. Both the securities markets and banking systems can achieve tremendous gains in efficiency and risk management if the interface between these two segments can be improved through appropriate mechanisms. The reform in the payments system, which will bring about improvements in the infrastructure for funds transfer in the country, is an essential pre-requisite for this. In fact, further institutional development of the Indian securities market is hindered by bottlenecks in the payments system. In addition to this, banks will have to evolve adequate risk management systems for safeguarding loans given by them against collateral of securities. The stage has been set up after RBI allowed banks to finance margin trading within the over exposure limit.

Public Holding for Listing

The current listing framework prescribes different standards for continued listing for existing listed companies and would be listed companies. The existing listed company is required to have non-promoter holding of at least 10%, while the would be listed company would maintain non-promoter holding at the level of public holding as required at the time of listing, that is, at 10% plus 20 lakh securities plus Rs. 100 crore or 25%. Thus existing listed and would be listed companies and consequently investors in these companies are treated differently. It would be better if all the companies are required to maintain the non-promoter holding at the level of the public holding required at the time of listing. That is, the companies listed before 1993 would maintain at 60%, the companies listed between 1993 and 2001 would maintain at 25% and the companies listed after 2001 would maintain at 10% + 20 lakh + Rs. 100 crore or 25%. This is all the more desirable because the investor subscribes to the shares of the company based on the understanding that the non-promoter holding would be maintained at the level required at the time of listing. In the alternative, regulation has to be uniform in its application and all companies should be required to maintain non-promoter holding of 10% + 20 lakh + Rs. 100 crore or 25%. Further, the listing agreement as amended now provides that the companies would maintain public holding at the specified percentage. There is no indication as to how to achieve this. Can a company compel the promoters to divest their holdings? In case an existing listed company fails to do, it would be required to buy back the public shareholding in the manner provided in the SEBI takeover code. No such requirement has been prescribed for would be listed companies. Both the existing listed and would be listed companies should be required to buy back the public holding if they fail to maintain minimum public holding. In case the company does not buy back, would it be delisted? This needs to be clarified.

Similarly, there should not be any discrimination between a government company and non-government company. The powers of the stock exchange to relax any of the conditions of listing with the prior approval of SEBI in respect of a government company needs to be withdrawn.

The public offer is of no consequence unless the public are actually allotted shares. The SCRR should speak in terms of allotment to public, not just public offer. Only then the listing agreement can enforce minimum non-promoter holding required at the level of public shareholding at the time of listing.

As of now, there is nothing called public shareholding at the time of listing. And the word ‘public’ has not been defined. The words, ‘offer to public’, ‘public shareholding’, ‘non-promoter holding’, ‘floating stock’ etc. are creating confusion. By default ‘public’ means ‘non-promoters’ and includes FIs, FIIs, MFs, employees, NRIs/OCBs, private corporate bodies, etc. The SCRR now permits 10% public offer subject to the condition that 60% of the issue is allocated to qualified institutional buyers (QIBs). Since QIBs are part of public, allocating 60% to QIBs would automatically constitute 60% public offer and the retail public would not get any share. Or, if 60% of public offer of 10% is allocated to QIBs, the retail public would be left with just 4%. It is therefore necessary to define 'public' and other terms and explicitly exclude allocation to QIBs from the public offer.

The units of CIS are securities. The same requirement (10% + 20 lakh + Rs. 100 crore) as applicable to listing of securities, should also apply to listing of units of CIS. The requirements prescribed in the SCRR for units of CIS may be brought at par with those for securities.

The units of mutual funds are being considered as securities and are being traded like securities on exchanges. The requirement of public holding may also apply units of mutual funds as well.

Brokers as Sub-brokers

Protecting viability of small exchanges has been engaging the minds of policy makers who recognized them after being satisfied of their need and viability. In the competitive environment of today, it is difficult to imagine survival of 23 exchanges. In a novel experiment, SEBI has allowed small regional exchanges, who have been fighting for survival, to promote a subsidiary. This subsidiary has acquired membership of NSE and or BSE and the members of regional exchanges have become sub-brokers of the subsidiary. The subsidiary undertakes the responsibility for the trades executed as a member of NSE on behalf of the members of the regional exchange. Through this route the subsidiaries of the 7 taken together generated a turnover of Rs. 31,954 crore on NSE during 2001-02, while these exchanges reported a total turnover of Rs. 2,198 crore themselves.

In the process, the members of the small exchanges are getting an opportunity to trade on large exchanges at a fraction of the membership cost of the large exchange. While one can get membership on a small exchange for Rs. 2-5 lakh, he can trade on NSE or BSE (through subsidiary) where membership cost about Rs. 1 crore. This provides an incentive to be a member of small exchange, avoid the cost and other requirements of large exchange and still get benefits of large exchange. A section of brokers, however, hesitate to trade as a sub-broker through a subsidiary of a regional exchange. This is because they do not have an independent exposure limit. The subsidiary is granted a combined exposure which is shared by all the sub-brokers. If for some reason, exposure limit granted to a subsidiary is breached, not only the subsidiary, but also the sub-brokers trading through the subsidiary, are disabled from trading.

Short Selling

A short sale is a sale of securities which the seller does not *own* at the time of effecting the sale. It has the potential of being misused for rigging market prices. The absence of specific regulation of short selling is a critical gap in the scheme of stock market regulation in India. In a study (Short Selling and its Regulations in India by Dr. L. C. Gupta) under the NSE Research Initiative, the author emphasizes the need for regulation to prevent abusive uses of short selling. On the basis of the detailed examination of the provisions of the US short selling regulation and its long history of working for over 60 years, the researcher suggests tick test of the US type the ideal way of regulating short selling in India. It makes following three specific recommendations:

a. The closing price of the preceding day should be used as the bench mark for applying the tick test in India instead of the last reported price available at the time of short sale on the transaction day itself.

b. From the viewpoint of ensuring compliance and preventing manipulative use of short selling, the upfront identification of every short sale transaction is absolutely essential, as in the US.

c. Without regulating the bull-side excesses, not much can be achieved by short-selling regulation alone. It is absolutely necessary that the short-selling regulation should be operated along with margin trading regulation. The minimum initial margin for margin trading should be 50%. While the short selling regulation would help to control bear side speculative excesses, the initial margin for margin trading in shares will be instrumental in controlling the bull side excesses.

Delisting of Securities

The incidence of delisting has been increasing in the recent past. This has assumed importance in view of a number of MNCs acquiring the entire equity of their Indian subsidiaries through open offers and then delisting from the exchanges. According to Prime Database, there were 6 such offers in 1999, 8 in 2000 and 16 in 2001 and an estimated 90 companies are in the pipeline. It is believed that the historical low prices of shares in the recent years make buy back very attractive for the MNCs. In addition to these, there are also compulsory delistings by exchanges and voluntary delisting by companies.

It is argued in some circles that delisting should not be permitted at all. They argue that it is the intention of legislature, as listing of securities is governed by statutory provisions, rules, regulations, guidelines etc. while the law is conspicuously silent on the delisting. Only law that governs delisting is a circular of SEBI. It is probably considered that listing is so sacrosanct that once a security is listed, it should not be delisted. An investor subscribes to an issue on the basis of the contents in the prospectus which may state that the security would be listed on stock exchanges. Once he subscribes to the issue, he takes an irreversible decision, as the promises in the prospectus are irreversible. Hence if one considers investors interest to be the predominant and sole factor, there should not any delisting of securities. Once listed, a security should remain listed forever as long as the issuer exists. The terms and conditions of listing have to be enforced by recourse to other means rather than delisting.

Another view supports delisting. It argues that listing agreement is essentially a contract between a company and the Exchange. Like any contractual relations, it must have also a way to terminate the relationship in certain circumstances. If there is a way to get in, there must be also a way to get out. Should the exchange and the company consider terminating their relationship, after taking care of interest of the affected investors, they should be permitted to do so.

If a company has been incurring losses and its net worth has been reduced to less than its paid up capital, it carries on business at a risk to the creditors. In such cases there may not be any trading of shares. In this situation, if the company has to pay the listing fees, it harms the investor further, while no public interest or investor interest is served by continued listing. It may be desirable to allow a company to delist its securities in such cases.

According to SEBI circular, companies can voluntarily delist securities from exchanges other than regional exchanges. With growing irrelevance of regional exchanges and likely establishment of a central listing authority, the companies should be allowed to list and delist from any exchange they like.

In view of the above, it may not be desirable to put an absolute ban on delisting but it may be discouraged. If delisting is in the interest of investors, it must be permitted. If it is not in the interest of investors, they must be adequately protected. The exchanges should not delist the securities on frivolous grounds.

Annexure 4-1: Stock Exchanges in India

Exchanges	Nature of Recognition	Profit Making	Organisational Structure	Participants at the end March					
				Primary Listing of Companies		Registered Brokers		Registered Sub-Brokers	
				2001	2002	2001	2002	2001	2002
Ahmedabad	Permanent	No	Association of Persons	692	671	326	325	138	149
Bangalore	Permanent	No	Company limited by Shares	269	278	249	249	157	159
Bhubaneshwar	Temporary	No	Company limited by Guarantee	46	46	234	232	17	17
Calcutta	Permanent	No	Company limited by Shares	1,900	1,865	993	992	135	140
Cochin	Temporary	No	Company limited by Guarantee	93	94	492	470	45	43
Coimbatore	Temporary	No	Company limited by Guarantee	108	93	197	193	26	26
Delhi	Permanent	No	Company limited by Shares	1,692	1,687	393	379	486	498
Gauhati	Temporary	No	Company limited by Guarantee	153	152	193	194	4	4
Hyderabad	Permanent	No	Company limited by Guarantee	680	675	310	303	201	202
ICSEIL	Temporary	No	Company limited by Guarantee	6	1	595	630	-	-
Jaipur	Temporary	No	Company limited by Guarantee	198	193	595	592	34	34
Ludhiana	Temporary	No	Company limited by Shares	291	290	302	300	27	33
Madhya Pradesh	Permanent	No	Association of Persons	251	93	187	187	5	5
Madras	Permanent	No	Company limired by Guarantee	674	640	202	192	125	125
Magadh	Temporary	No	Company limited by Guarantee	34	24	204	200	2	3
Mangalore	Temporary	No	Company limited by Guarantee	26	26	139	138	3	3
Mumbai	Permanent	No	Association of Persons	1,812	1,774	689	660	5,553	6,495
NSEIL	Temporary	Yes	Company limited by Shares	6	6	1,074	1,065	2,684	3,961
OTCEI	Temporary	No	Company limited by Shares	114	113	896	902	34	37
Pune	Temporary	No	Company limited by Guarantee	193	198	201	196	169	162
SKSE	Temporary	No	Company limited by Guarantee	46	48	448	446	0	0
Uttar Pradesh	Temporary	No	Company limited by Shares	334	332	541	520	27	28
Vadodara	Temporary	No	Company limited by Guarantee	336	345	322	322	85	84
Total	-	-	-	**9,954**	**9,644**	**9,782**	**9,687**	**9,957**	**12,208**

Annexure 4-2: Market Capitalisation of S&P CNX Nifty Securities: April 2001 to March 2002 (end of period)

(Rs. crore)

Sl .No.	Security	Apr-01	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02
1	ABB	1,019	1,152	1,035	1,045	952	818	802	839	846	920	1,075	1,099
2	ACC	2,548	2,389	2,339	2,387	2,195	2,127	2,279	2,907	2,593	2,739	2,789	2,628
3	ASIANPAINT	1,677	1,627	1,605	1,638	1,698	1,743	1,729	1,755	1,758	1,682	1,929	2,101
4	BAJAJAUTO	2,298	2,771	2,605	2,557	2,586	2,498	3,354	3,860	3,817	4,431	4,618	4,683
5	BHEL	3,849	4,609	4,358	3,777	3,764	2,931	3,179	3,580	3,413	3,580	4,117	4,136
6	BRITANNIA	1,935	1,789	1,709	1,618	1,570	1,406	1,441	1,544	1,638	1,532	1,521	1,460
7	BSES	2,669	2,938	2,731	2,756	2,500	2,569	2,618	2,836	2,722	2,820	2,945	3,073
8	CASTROL	3,041	2,892	2,670	2,615	3,209	3,169	3,140	2,331	2,317	2,374	2,345	2,300
9	CIPLA	6,887	6,637	6,855	6,420	7,377	6,771	6,361	6,677	6,799	6,648	6,078	6,101
10	COLGATE	2,454	2,360	2,192	2,231	2,242	2,137	2,193	2,219	2,264	2,061	1,937	1,920
11	DABUR	1,977	2,115	1,771	1,690	1,600	1,653	1,686	1,926	1,946	1,842	1,715	1,584
12	DIGITALEQP	1,539	1,841	1,644	1,432	1,550	758	972	1,282	1,643	1,912	1,746	1,860
13	DRREDDY	3,540	4,431	5,079	5,337	5,595	6,845	7,971	7,269	7,068	7,081	8,057	8,348
14	GLAXO	2,209	2,347	1,902	1,624	1,566	1,353	2,001	2,280	2,137	2,471	2,534	2,545
15	GRASIM	2,637	3,097	2,758	2,888	2,478	2,383	2,600	2,729	2,512	2,582	2,651	2,633
16	GUJAMBCEM	2,525	2,707	2,724	2,659	2,412	2,194	2,267	2,655	2,790	3,132	3,502	2,944
17	HDFC	6,837	7,963	8,290	8,046	8,470	7,492	8,402	8,292	8,021	7,614	8,221	8,282
18	HDFCBANK	5,605	5,600	5,106	5,705	6,652	6,105	6,125	6,250	6,347	6,322	6,574	6,658
19	HEROHONDA	2,794	2,771	2,925	3,263	3,665	3,733	4,434	4,860	5,004	6,054	6,970	6,760
20	HINDALCO	6,031	6,460	6,183	5,560	4,978	3,794	4,163	5,194	4,757	5,360	5,808	5,750
21	HINDLEVER	46,197	43,464	45,100	48,481	48,031	45,462	47,283	46,270	49,077	48,537	54,701	49,561
22	HINDPETRO	5,653	5,528	5,363	4,849	4,382	4,225	4,248	4,608	4,718	5,906	9,652	9,859
23	ICICI	6,511	6,401	5,627	4,712	4,170	3,695	4,080	3,970	3,452	3,974	4,559	4,775
24	ICICIBANK	—	—	—	—	—	—	—	—	—	* 1,992	2,754	2,730
25	INDHOTEL	1,077	1,085	921	900	803	569	604	750	703	610	709	792
26	INFOSYSTCH	24,537	24,955	24,799	24,827	23,412	15,662	19,295	25,755	27,019	25,655	23,378	24,803
27	IPCL	1,304	1,504	1,290	1,126	1,140	990	991	1,374	1,309	1,506	2,058	2,087
28	ITC	20,595	19,536	18,512	19,454	17,675	14,228	16,835	16,377	16,629	17,040	18,239	17,098
29	L&T	5,446	6,180	5,448	5,305	5,249	3,916	4,126	5,097	4,758	4,815	4,784	4,497
30	M&M	1,495	1,356	889	757	740	593	811	1,003	986	1,278	1,255	1,260
31	MTNL	9,415	9,066	7,947	7,529	7,806	8,089	8,152	8,896	7,944	7,226	9,261	9,245
32	NESTLE	5,276	5,113	5,370	5,208	4,875	5,158	4,807	4,781	4,926	4,869	4,810	4,944
33	NIIT	1,459	1,838	1,483	645	631	415	673	843	875	907	818	897
34	NOVARTIND	834	926	737	645	707	644	638	810	668	753	758	787
35	ORIENTBANK	758	739	694	691	659	604	613	653	641	692	707	760
36	P&G	1,282	1,234	1,157	1,158	1,057	864	866	943	993	960	1,094	1,071
37	RANBAXY	5,786	5,655	5,598	6,170	6,970	7,563	8,234	8,735	8,001	8,378	9,474	10,162
38	RELIANCE	36,091	41,339	38,831	33,599	32,788	27,882	26,808	30,554	32,266	31,623	32,440	31,644
39	RELPETRO	22,253	23,579	20,772	19,778	20,833	15,423	15,137	18,258	15,215	14,149	15,033	13,446
40	SATYAMCOMP	6,067	6,107	5,372	4,638	5,308	3,993	4,405	6,656	7,458	8,626	8,458	8,403
41	SBIN	11,029	11,658	11,413	10,613	10,437	8,681	9,765	10,968	9,550	11,052	11,976	11,576
42	SMITKLBECH	1,722	1,711	1,824	1,987	1,992	1,791	1,733	1,820	1,799	1,767	1,807	1,702
43	SUNPHARMA	—	—	—	—	—	—	—	—	—	* 2,898	2,955	3,122
44	TATACHEM	720	829	647	713	714	666	700	727	717	733	749	791
45	TATAPOWER	2,457	2,979	2,632	2,598	2,390	2,043	2,141	2,501	2,435	2,353	2,427	2,305
46	TATATEA	1,202	1,336	1,040	934	873	728	862	995	949	931	1,003	954
47	TELCO	1,935	2,105	1,597	1,809	1,932	1,767	2,170	2,672	2,555	3,200	3,619	3,225
48	TISCO	4,946	5,198	4,243	3,459	2,949	2,551	2,772	3,306	3,206	3,689	3,889	3,599
49	WIPRO	—	—	—	—	—	—	—	—	—	* 38,247	36,868	39,532
50	ZEETELE	4,063	5,484	4,820	3,496	4,818	3,578	3,878	5,307	4,604	5,080	5,895	6,909
	Total	**294,181**	**305,400**	**290,603**	**281,328**	**280,399**	**244,259**	**260,344**	**285,912**	**283,845**	**289,468**	**353,262**	**349,402**

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

Annexure 4-3: Weightage of S&P CNX Nifty Securities: April 2001 - March 2002

(In per cent)

Sl .No.	Security	Apr-01	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02
1	ABB	0.35	0.38	0.35	0.37	0.34	0.33	0.31	0.29	0.30	0.28	0.30	0.31
2	ACC	0.86	0.78	0.80	0.84	0.78	0.87	0.87	1.01	0.91	0.82	0.79	0.75
3	ASIANPAINT	0.57	0.53	0.55	0.58	0.60	0.71	0.66	0.61	0.62	0.51	0.55	0.60
4	BAJAJAUTO	0.78	0.90	0.89	0.90	0.92	1.02	1.28	1.34	1.34	1.33	1.31	1.34
5	BHEL	1.30	1.50	1.49	1.34	1.34	1.19	1.22	1.25	1.20	1.08	1.17	1.18
6	BRITANNIA	0.65	0.58	0.59	0.57	0.56	0.57	0.55	0.54	0.57	0.46	0.43	0.42
7	BSES	0.90	0.96	0.94	0.98	0.89	1.05	1.00	0.99	0.95	0.85	0.83	0.88
8	CASTROL	1.03	0.94	0.91	0.93	1.14	1.29	1.20	0.81	0.81	0.71	0.66	0.66
9	CIPLA	2.33	2.16	2.35	2.27	2.62	2.76	2.43	2.33	2.39	2.00	1.72	1.75
10	COLGATE	0.83	0.77	0.75	0.79	0.80	0.87	0.84	0.77	0.79	0.62	0.55	0.55
11	DABUR	0.67	0.69	0.61	0.60	0.57	0.67	0.64	0.67	0.68	0.55	0.49	0.45
12	DIGITALEQP	0.52	0.60	0.56	0.51	0.55	0.31	0.37	0.45	0.58	0.57	0.49	0.53
13	DRREDDY	1.20	1.44	1.74	1.89	1.99	2.79	3.05	2.53	2.48	2.13	2.28	2.39
14	GLAXO	0.75	0.76	0.65	0.57	0.56	0.55	0.76	0.79	0.75	0.74	0.72	0.73
15	GRASIM	0.89	1.01	0.94	1.02	0.88	0.97	0.99	0.95	0.88	0.78	0.75	0.75
16	GUJAMBCEM	0.85	0.88	0.93	0.94	0.86	0.89	0.87	0.92	0.98	0.94	0.99	0.84
17	HDFC	2.31	2.59	2.84	2.85	3.01	3.05	3.21	2.89	2.81	2.29	2.33	2.37
18	HDFCBANK	1.90	1.82	1.75	2.02	2.36	2.49	2.34	2.18	2.23	1.90	1.86	1.91
19	HEROHONDA	0.95	0.90	1.00	1.15	1.30	1.52	1.70	1.69	1.76	1.82	1.97	1.93
20	HINDALCO	2.04	2.10	2.12	1.97	1.77	1.55	1.59	1.81	1.67	1.61	1.64	1.65
21	HINDLEVER	15.63	14.16	15.45	17.15	17.04	18.52	18.08	16.11	17.22	14.59	15.48	14.18
22	HINDPETRO	1.91	1.80	1.84	1.72	1.56	1.72	1.62	1.60	1.66	1.78	2.73	2.82
23	ICICI	2.20	2.09	1.93	1.67	1.48	1.51	1.56	1.38	1.21	1.19	1.29	1.37
24	ICICIBANK	—	—	—	—	—	—	—	—	—	* 0.60	0.78	0.78
25	INDHOTEL	0.36	0.35	0.32	0.32	0.28	0.23	0.23	0.26	0.25	0.18	0.20	0.23
26	INFOSYSTCH	8.30	8.13	8.50	8.78	8.31	6.38	7.38	8.97	9.48	7.71	6.62	7.10
27	IPCL	0.44	0.49	0.44	0.40	0.40	0.40	0.38	0.48	0.46	0.45	0.58	0.60
28	ITC	6.97	6.37	6.34	6.88	6.27	5.80	6.44	5.70	5.83	5.12	5.16	4.89
29	L&T	1.84	2.01	1.87	1.88	1.86	1.60	1.58	1.77	1.67	1.45	1.35	1.29
30	M&M	0.51	0.44	0.30	0.27	0.26	0.24	0.31	0.35	0.35	0.38	0.36	0.36
31	MTNL	3.19	2.95	2.72	2.66	2.77	3.30	3.12	3.10	2.79	2.17	2.62	2.65
32	NESTLE	1.79	1.67	1.84	1.84	1.73	2.10	1.84	1.66	1.73	1.46	1.36	1.41
33	NIIT	0.49	0.60	0.51	0.23	0.22	0.17	0.26	0.29	0.31	0.27	0.23	0.26
34	NOVARTIND	0.28	0.30	0.25	0.23	0.25	0.26	0.24	0.28	0.23	0.23	0.21	0.23
35	ORIENTBANK	0.26	0.24	0.24	0.24	0.23	0.25	0.23	0.23	0.22	0.21	0.20	0.22
36	P&G	0.43	0.40	0.40	0.41	0.38	0.35	0.33	0.33	0.35	0.29	0.31	0.31
37	RANBAXY	1.96	1.84	1.92	2.18	2.47	3.08	3.15	3.04	2.81	2.52	2.68	2.91
38	RELIANCE	12.21	13.47	13.31	11.89	11.64	11.36	10.25	10.64	11.32	9.51	9.18	9.06
39	RELPETRO	7.53	7.68	7.12	7.00	7.39	6.28	5.79	6.36	5.34	4.25	4.26	3.85
40	SATYAMCOMP	2.05	1.99	1.84	1.64	1.88	1.63	1.68	2.32	2.62	2.59	2.39	2.40
41	SBIN	3.73	3.80	3.91	3.76	3.70	3.54	3.73	3.82	3.35	3.32	3.39	3.31
42	SMITKLBECH	0.58	0.56	0.62	0.70	0.71	0.73	0.66	0.63	0.63	0.53	0.51	0.49
43	SUNPHARMA	—	—	—	—	—	—	—	—	—	* 0.87	0.84	0.89
44	TATACHEM	0.24	0.27	0.22	0.25	0.25	0.27	0.27	0.25	0.25	0.22	0.21	0.23
45	TATAPOWER	0.83	0.97	0.90	0.92	0.85	0.83	0.82	0.87	0.85	0.71	0.69	0.66
46	TATATEA	0.41	0.44	0.36	0.33	0.31	0.30	0.33	0.35	0.33	0.28	0.28	0.27
47	TELCO	0.65	0.69	0.55	0.64	0.69	0.72	0.83	0.93	0.90	0.96	1.02	0.92
48	TISCO	1.67	1.69	1.45	1.22	1.05	1.04	1.06	1.15	1.13	1.11	1.10	1.03
49	WIPRO	—	—	—	—	—	—	—	—	—	* 11.50	10.44	11.31
50	ZEETELE	1.37	1.79	1.65	1.24	1.71	1.46	1.48	1.85	1.62	1.53	1.67	1.98
	Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

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

Annexure 4-4: Beta of S&P CNX Nifty Securities: April 2001 to March 2002

(In per cent)

Sl .No.	Security	Apr-01	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02
1	ABB	0.77	0.79	0.76	0.74	0.71	0.79	0.75	0.66	0.64	0.62	0.67	0.49
2	ACC	1.03	1.20	1.21	1.15	1.17	1.25	1.21	1.18	1.22	1.26	1.33	1.27
3	ASIANPAINT	0.24	0.25	0.27	0.26	0.26	0.28	0.30	0.24	0.24	0.25	0.29	0.34
4	BAJAJAUTO	0.35	0.36	0.37	0.37	0.38	0.36	0.39	0.39	0.33	0.34	0.32	0.27
5	BHEL	1.01	1.10	1.12	1.08	1.08	1.08	1.11	1.05	0.97	0.96	1.06	1.13
6	BRITANNIA	0.24	0.14	0.14	0.12	0.11	0.11	0.15	0.15	0.19	0.19	0.26	0.27
7	BSES	0.62	0.73	0.69	0.62	0.63	0.65	0.71	0.66	0.63	0.63	0.67	0.59
8	CASTROL	0.52	0.58	0.57	0.56	0.60	0.62	0.54	0.43	0.42	0.43	0.42	0.28
9	CIPLA	0.82	0.76	0.74	0.75	0.72	0.79	0.75	0.71	0.64	0.63	0.59	0.55
10	COLGATE	0.38	0.34	0.32	0.33	0.31	0.30	0.28	0.24	0.23	0.24	0.22	0.23
11	DABUR	0.68	0.66	0.65	0.66	0.67	0.64	0.62	0.62	0.60	0.61	0.56	0.40
12	DIGITALEQP	2.07	2.15	2.24	2.22	2.19	2.20	2.31	2.43	2.42	2.38	2.31	2.23
13	DRREDDY	0.81	0.73	0.72	0.71	0.70	0.53	0.55	0.51	0.49	0.50	0.55	0.48
14	GLAXO	0.54	0.49	0.45	0.43	0.43	0.43	0.43	0.46	0.46	0.46	0.48	0.63
15	GRASIM	0.85	1.01	1.05	1.01	1.05	1.10	1.11	1.01	1.03	1.01	0.99	0.91
16	GUJAMBCEM	0.72	0.88	0.89	0.86	0.87	0.87	0.86	0.84	0.80	0.82	0.88	0.71
17	HDFC	0.10	0.22	0.25	0.28	0.27	0.29	0.29	0.31	0.30	0.32	0.32	0.22
18	HDFCBANK	0.50	0.59	0.62	0.59	0.56	0.66	0.69	0.70	0.69	0.67	0.66	0.53
19	HEROHONDA	0.26	0.25	0.27	0.25	0.26	0.29	0.34	0.44	0.46	0.50	0.50	0.67
20	HINDALCO	0.39	0.37	0.38	0.38	0.39	0.42	0.44	0.49	0.49	0.53	0.57	0.58
21	HINDLEVER	0.82	0.65	0.65	0.64	0.66	0.74	0.74	0.72	0.74	0.71	0.62	0.68
22	HINDPETRO	0.66	0.73	0.70	0.67	0.68	0.77	0.71	0.68	0.72	0.64	0.65	0.83
23	ICICI	1.10	1.06	1.08	1.03	1.05	1.01	1.00	0.98	0.93	0.88	0.76	0.79
24	ICICIBANK	—	—	—	—	—	—	—	—	—	* 0.99	0.94	1.00
25	INDHOTEL	0.48	0.49	0.50	0.48	0.45	0.54	0.53	0.52	0.55	0.59	0.64	0.63
26	INFOSYSTCH	1.69	1.80	1.83	1.88	1.83	1.81	1.86	1.96	1.97	2.00	1.98	2.09
27	IPCL	1.06	1.25	1.23	1.26	1.26	1.27	1.24	1.21	1.16	1.16	1.18	1.01
28	ITC	0.63	0.55	0.55	0.54	0.56	0.52	0.58	0.61	0.62	0.60	0.63	0.58
29	L&T	1.00	1.11	1.08	0.98	0.98	1.07	1.09	1.06	1.06	1.02	1.06	1.09
30	M&M	1.21	1.10	1.13	1.02	1.02	1.09	1.07	1.08	1.07	1.13	1.18	1.09
31	MTNL	0.98	0.98	0.90	0.87	0.89	0.88	0.93	0.88	0.85	0.80	0.96	0.93
32	NESTLE	0.41	0.35	0.36	0.38	0.41	0.27	0.27	0.21	0.22	0.24	0.19	0.10
33	NIIT	1.52	1.66	1.74	1.75	1.77	1.81	1.89	1.92	1.94	2.02	2.04	1.93
34	NOVARTIND	0.54	0.49	0.50	0.51	0.50	0.49	0.47	0.45	0.45	0.46	0.51	0.38
35	ORIENTBANK	0.46	0.55	0.53	0.54	0.55	0.61	0.66	0.61	0.57	0.54	0.61	0.65
36	P&G	0.45	0.48	0.48	0.50	0.51	0.52	0.49	0.49	0.47	0.47	0.46	0.37
37	RANBAXY	0.83	0.83	0.80	0.83	0.84	0.82	0.83	0.78	0.77	0.76	0.81	0.87
38	RELIANCE	0.84	0.90	0.94	0.95	0.98	1.03	1.04	1.09	1.10	1.09	1.09	1.28
39	RELPETRO	0.88	0.97	0.98	1.00	1.02	1.14	1.18	1.23	1.28	1.27	1.32	1.29
40	SATYAMCOMP	2.27	2.43	2.44	2.44	2.43	2.33	2.32	2.32	2.39	2.48	2.47	2.65
41	SBIN	0.82	0.87	0.84	0.77	0.79	0.88	0.90	0.85	0.86	0.88	0.89	0.96
42	SMITKLBECH	0.30	0.29	0.30	0.28	0.27	0.29	0.28	0.29	0.27	0.31	0.28	0.20
43	SUNPHARMA	—	—	—	—	—	—	—	—	—	* 0.52	0.53	0.45
44	TATACHEM	0.95	1.05	1.08	1.08	1.14	1.11	1.10	1.08	1.04	1.04	1.01	0.73
45	TATAPOWER	1.04	1.22	1.18	1.16	1.17	1.07	1.09	1.12	1.17	1.19	1.30	0.87
46	TATATEA	0.91	1.04	1.11	1.08	1.10	1.12	1.14	1.12	1.17	1.19	1.10	0.86
47	TELCO	1.04	1.16	1.20	1.19	1.22	1.25	1.24	1.20	1.15	1.15	1.16	0.94
48	TISCO	1.08	1.23	1.20	1.19	1.21	1.18	1.13	1.11	1.14	1.16	1.21	1.00
49	WIPRO	—	—	—	—	—	—	—	—	—	* 2.22	2.21	2.10
50	ZEETELE	2.16	2.20	2.21	2.28	2.28	2.14	2.20	2.18	2.23	2.26	2.26	2.34

Beta is calculated for the 12 months ending on the last trading day of the respective month.
* Denotes the month in which the particular security was included in S&P CNX Nifty Index.
Source: IISL

Annexure 4-5: Monthly Returns of S&P CNX Nifty Securities: April 2001 - March 2002

(In per cent)

Sl .No.	Security	Apr-01	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02
1	ABB	3.12	13.11	(10.22)	1.02	(8.96)	(13.99)	(2.00)	4.57	0.81	8.82	16.79	2.27
2	ACC	14.51	(6.25)	(2.11)	2.05	(8.04)	(3.08)	7.13	27.58	(10.81)	5.65	1.78	(5.77)
3	ASIANPAINT	6.42	(2.97)	(1.34)	2.04	3.66	2.65	(0.79)	1.50	0.20	(4.34)	14.71	8.88
4	BAJAJAUTO	(12.08)	20.61	(5.99)	(1.86)	1.13	(3.38)	34.26	15.07	(1.11)	16.11	4.21	1.40
5	BHEL	10.23	19.75	(5.44)	(13.34)	(0.32)	(22.14)	8.48	12.59	(4.65)	4.88	15.01	0.48
6	BRITANNIA	(0.62)	(7.56)	(4.46)	(5.32)	(2.98)	(10.42)	4.78	8.72	6.03	(6.45)	(0.72)	(3.98)
7	BSES	3.44	10.06	(7.03)	0.91	(9.30)	2.78	1.90	8.31	(4.03)	3.62	4.45	4.33
8	CASTROL	6.53	(4.89)	(7.71)	(2.04)	22.69	(1.23)	(0.92)	(25.76)	(0.61)	2.48	(1.22)	(1.92)
9	CIPLA	15.06	(3.64)	3.29	(6.35)	14.91	(8.22)	(6.05)	4.97	1.83	(2.22)	(8.58)	0.38
10	COLGATE	16.12	(3.82)	(7.14)	1.80	0.49	(4.67)	2.61	1.21	2.02	(8.98)	(6.04)	(0.84)
11	DABUR	13.61	7.00	(16.25)	(4.59)	(5.32)	3.30	1.98	14.13	1.04	(5.36)	(6.90)	(7.66)
12	DIGITALEQP	12.22	19.64	(10.73)	(12.87)	8.27	(51.11)	28.20	31.90	28.22	16.32	(8.67)	6.56
13	DRREDDY	(9.99)	25.17	14.61	5.09	4.84	1.04	16.41	(8.80)	(2.76)	0.18	13.78	3.61
14	GLAXO	(13.22)	6.25	(18.95)	(14.63)	(3.59)	(13.57)	18.66	13.96	(6.26)	15.61	2.55	0.44
15	GRASIM	14.64	17.43	(10.95)	4.72	(14.19)	(3.83)	9.10	4.94	(7.93)	2.79	2.66	(0.67)
16	GUJAMBCEM	11.79	7.19	0.63	(2.38)	(9.29)	(9.03)	3.32	17.10	5.07	12.29	11.81	(15.94)
17	HDFC	5.05	15.52	4.10	(2.94)	5.20	(11.55)	11.98	(1.33)	(3.30)	(5.10)	7.67	0.56
18	HDFCBANK	0.90	(0.22)	(8.83)	11.74	1.00	(8.22)	0.28	2.04	1.55	(0.40)	3.96	1.28
19	HEROHONDA	(1.24)	(0.82)	5.59	11.54	12.33	1.85	18.78	9.61	2.96	20.97	15.14	(3.01)
20	HINDALCO	4.98	7.11	(4.29)	(10.07)	(10.46)	(23.78)	9.71	24.78	(8.42)	12.68	8.36	(1.01)
21	HINDLEVER	(4.04)	(5.92)	3.76	7.50	(0.93)	(5.35)	3.74	(2.14)	6.07	(1.10)	12.70	(9.40)
22	HINDPETRO	3.74	(2.22)	(2.98)	(9.59)	(9.62)	(3.60)	0.56	8.47	2.39	25.17	63.43	2.14
23	ICICI	(6.06)	(1.69)	(12.09)	(16.26)	(11.50)	(11.39)	10.41	(2.69)	(13.06)	15.13	14.72	4.74
24	ICICIBANK	—	—	—	—	—	—	—	—	—	* 2.15	38.27	(0.88)
25	INDHOTEL	(4.96)	0.80	(15.15)	(2.30)	(10.75)	(29.19)	6.27	24.11	(6.29)	(13.22)	16.31	11.61
26	INFOSYSTCH	(9.18)	1.71	(0.63)	0.11	(5.71)	(33.11)	23.21	33.48	4.91	(5.05)	(8.88)	6.09
27	IPCL	(4.14)	15.36	(14.23)	(12.71)	1.22	(13.17)	0.13	38.64	(4.74)	15.11	36.63	1.40
28	ITC	3.10	(5.14)	(5.24)	5.09	(9.15)	(19.50)	18.33	(2.73)	1.54	2.47	7.04	(6.26)
29	L&T	(0.88)	13.49	(11.84)	(2.62)	(1.05)	(25.43)	5.37	23.53	(6.66)	1.20	(0.65)	(6.00)
30	M&M	12.84	(9.31)	(34.43)	(14.85)	(2.19)	(19.93)	36.81	23.71	(1.76)	29.71	(1.82)	0.40
31	MTNL	12.84	(3.71)	(12.33)	(5.27)	3.68	3.63	0.78	9.12	(10.69)	(9.04)	28.16	(0.17)
32	NESTLE	7.67	(3.09)	5.02	(3.02)	(6.41)	5.80	(6.80)	(0.53)	3.03	(1.16)	(1.22)	2.79
33	NIIT	(47.70)	25.95	(19.33)	(56.47)	(2.22)	(34.32)	62.24	25.29	3.88	3.62	(9.84)	9.67
34	NOVARTIND	(3.47)	11.05	(20.36)	(12.47)	9.65	(8.92)	(0.94)	26.95	(17.52)	12.58	0.74	3.76
35	ORIENTBANK	(1.13)	(2.41)	(6.12)	(0.42)	(4.60)	(8.47)	1.59	6.44	(1.77)	7.96	2.09	7.49
36	P&G	6.91	(3.76)	(6.22)	0.07	(8.71)	(18.26)	0.19	8.98	5.24	(3.32)	14.04	(2.15)
37	RANBAXY	(13.20)	(2.26)	(1.00)	10.23	12.96	8.51	8.87	6.09	(8.41)	4.71	13.09	7.26
38	RELIANCE	(12.08)	14.54	(6.07)	(13.47)	(2.41)	(14.96)	(3.85)	13.97	5.60	(1.99)	2.58	(2.45)
39	RELPETRO	3.28	5.96	(11.90)	(4.79)	(10.50)	(25.97)	(1.85)	20.62	(16.67)	(7.01)	6.25	(10.55)
40	SATYAMCOMP	(7.62)	0.67	(21.36)	(13.67)	14.45	(24.77)	10.32	51.09	12.05	15.67	(1.95)	(0.65)
41	SBIN	4.23	5.70	(2.10)	(7.01)	(1.66)	(16.82)	12.49	12.31	(12.93)	15.73	8.36	(3.34)
42	SMITKLBECH	3.10	(0.62)	6.59	8.98	0.22	(10.07)	(3.23)	4.97	(1.13)	(1.79)	2.29	(5.83)
43	SUNPHARMA	—	—	—	—	—	—	—	—	—	* 9.08	1.96	5.67
44	TATACHEM	4.18	15.18	(22.00)	10.20	0.13	(6.71)	5.16	3.87	(1.37)	2.27	2.09	5.67
45	TATAPOWER	21.00	21.25	(11.65)	(1.28)	(8.03)	(14.52)	4.83	16.83	(2.64)	(3.38)	3.16	(5.03)
46	TATATEA	(8.87)	11.16	(22.18)	(10.17)	(6.50)	(16.65)	18.50	15.42	(4.66)	(1.87)	7.67	(4.88)
47	TELCO	15.77	8.80	(24.13)	13.30	6.79	(8.54)	22.81	23.11	(4.36)	25.24	13.07	(10.89)
48	TISCO	9.81	5.10	(18.38)	(18.48)	(14.74)	(13.48)	8.66	19.26	(3.01)	15.04	5.44	(7.48)
49	WIPRO	—	—	—	—	—	—	—	—	—	* 2.33	(3.61)	7.23
50	ZEETELE	(18.53)	34.97	(12.11)	(27.47)	37.82	(25.73)	8.36	36.86	(13.25)	10.35	16.04	17.21
	All Securities	**(2.00)**	**3.79**	**(5.13)**	**(3.16)**	**(1.78)**	**(13.28)**	**6.35**	**9.80**	**(0.76)**	**3.87**	**6.20**	**(1.09)**

Returns are calculated for the respective months.
* Denotes the month in which the particular security was included in S&P CNX Nifty Index.
Source: IISL

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

Month/Year	No. of Trading Days	No. of Companies Traded	No. of Trades (Lakh)	Traded Quantity (Lakh)	Turnover (Rs. cr.)	Average Daily Turnover (Rs. cr.)	Turnover Ratio (%)	Demat Securities Traded (Lakh)	Demat Turnover (Rs. cr.)	Demat Turnover as a % of Total Turnover	Market Capitalisation (Rs. cr.) *
Nov 94-Mar 95	**102**	—	**3**	**1,391**	**1,805**	**17**	**—**	—	—	0	**363,350**
1995-96	**246**	—	**66**	**39,912**	**67,287**	**276**	**—**	—	—	0	**401,459**
1996-97	**250**	—	**264**	**135,561**	**295,403**	**1,176**	**—**	—	—	0	**419,367**
1997-98	**244**	—	**381**	**135,685**	**370,193**	**1,520**	**—**	—	—	0	**481,503**
1998-1999	**251**	—	**546**	**165,327**	**414,474**	**1,651**	**—**	**8,542**	**23,818**	**5.75**	**491,175**
1999-2000	**254**	—	**984**	**242,704**	**839,052**	**3,303**	**—**	**153,772**	**711,706**	**84.82**	**1,020,426**
Apr-00	18	1,059	74	13,390	57,229	3,179	6.76	11,679	52,021	90.90	846,391
May-00	22	1,050	111	16,477	79,037	3,593	10.00	14,538	72,995	92.36	790,478
Jun-00	22	1,058	132	19,607	119,373	5,426	14.00	17,392	111,926	93.76	852,554
Jul-00	21	1,050	122	19,114	110,056	5,241	14.74	17,114	101,847	92.54	746,402
Aug-00	22	1,038	138	23,456	125,347	5,698	15.78	21,177	116,186	92.69	794,516
Sep-00	20	1,035	142	25,946	142,480	7,124	19.51	24,167	135,714	95.25	730,350
Oct-00	21	993	131	24,154	106,854	5,088	15.11	21,860	99,567	93.18	707,121
Nov-00	22	1,006	151	31,905	122,731	5,579	16.06	28,857	113,335	92.34	764,177
Dec-00	20	1,008	163	35,790	131,415	6,571	17.28	32,159	120,774	91.90	760,391
Jan-01	22	978	186	42,152	148,830	6,765	18.43	40,789	143,912	96.70	807,641
Feb-01	20	984	192	48,268	135,932	6,797	17.22	48,222	135,850	99.94	789,600
Mar-01	21	964	135	29,277	60,226	2,868	9.16	29,268	60,211	99.98	657,847
2000-01	**251**	**1201**	**1,676**	**329,536**	**1,339,510**	**5,337**	**—**	**307,222**	**1,264,337**	**94.39**	**657,847**
Apr-01	19	951	114	20,782	35,616	1,875	5.45	20,735	35,605	99.97	653,720
May-01	22	954	141	25,715	48,329	2,197	8.16	25,714	48,329	100.00	592,437
Jun-01	21	963	133	22,336	42,783	2,037	7.51	21,935	42,625	99.63	569,797
Jul-01	22	924	99	13,142	27,228	1,238	4.74	13,137	27,227	100.00	574,260
Aug-01	21	931	112	15,937	29,417	1,401	5.11	15,931	29,415	99.99	575,242
Sep-01	20	917	135	17,342	35,323	1,766	6.94	17,342	35,323	100.00	509,105
Oct-01	21	917	141	19,799	35,326	1,682	6.59	19,796	35,324	99.99	535,846
Nov-01	20	920	153	25,349	42,132	2,107	7.25	25,295	42,121	99.97	581,386
Dec-01	19	895	177	31,777	54,468	2,867	9.85	31,775	54,465	99.99	552,908
Jan-02	23	896	213	34,384	68,719	2,988	12.19	34,219	68,606	99.84	563,683
Feb-02	20	840	177	28,552	49,564	2,478	7.97	28,547	49,564	100.00	621,523
Mar-02	19	840	157	23,294	44,262	2,330	6.95	23,291	44,262	100.00	636,861
2001-02	**247**	**1,019**	**1,753**	**278,408**	**513,167**	**2,078**	—	**277,717**	**512,866**	**99.94**	**636,861**

* At the end of the period.
Source: NSE