



ROLE OF NATIONAL SECURITIES DEPOSITORY LIMITED (NSDL) IN GROWTH OF INDIAN CAPITAL MARKET

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ABSTRACT

The capital market provides a means for issuers to raise capital from investors. Capital market a medium for mobilizing the finance out of the savings of the community and making it available to the users i.e. to the industry, trade, commerce for meeting their funds requirement. It is the barometer of the economy. Depository means a place where something is deposited for safe keeping; a bank in which funds or securities are deposited by others, usually under the terms of specific depository agreement. The depository is an organization where the securities of a shareholder are held in the form of electronic accounts, in the same way as a bank holds money. A depository interfaces with its investors through its agents called Depository Participants (DPs). According to SEBI guidelines, financial institutions, banks, custodians, stock brokers, etc. can become DPs. If an investor wants to utilize the services offered by a depository, he has to open an account with a DP. The main objective of a depository is to reduce settlement risk by minimizing the paperwork involved in trading, settlement and transfer of securities. The principal function of depository is to dematerialize securities and enable their transactions in book-entry form. The securities are transferred by debiting the transferor's depository account and crediting the transferee's depository account. At present the two Depository Organisations are working in India- National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited (CDSL).

Dematerialisation is the process by which physical certificates of an investor are converted to an equivalent number of securities in electronic form and credited in the investor's account with his DP. Dematerialisation is the foundation of concurrent changes in the capital market in India. The new face of emerging world economy has made it mandatory for each and every national economy to make it updated in terms of capital market. Therefore, Dematerialisation is not a matter of choice but a matter of compulsion. NSDL was registered by the SEBI on June 7, 1996 as India's first depository to facilitate trading and settlement of securities in the dematerialised form. The NSDL is promoted by IDBI, UTI and NSE to provide electronic depository facilities for securities traded in the equity and debt markets in the country. NSDL has been set up to cater to the demanding needs of the Indian capital markets.

The present study is an attempt to know the role of NSDL in Indian Capital Market, analyze the performance of NSDL and growth of Indian Capital Market for a period of 15 years, i.e. March 2001- March 2015. On the basis of results, it is concluded that number of beneficiary accounts, number of companies available for DEMAT, DEMAT custody, depository participants growth, number of depository participants service centers in NSDL, Quantity of Demat Shares/Securities and Demat Value of Securities.

Keywords: National Securities Depository Limited (NSDL), Dematerialization, Indian Capital Market, Depository, Depository Systems, Depository Participants (DPs), Rematerialization, CRA, Beneficiary Investor Accounts, TIN, TAN, PAN, SPEED-e, OLTAS.



Introduction:

The economic development of any country depends upon the existence of a well organized financial system. It is the financial system which supplies the necessary financial inputs for the production of goods and services which in turn promote the well being and standard of living of the people of a country. Thus, the 'financial system' is a broad term which brings under its fold the financial markets and the financial institutions which supports the system. The major assets traded in the financial system are money and monetary assets. The responsibility of the financial system is to mobilize the savings in the form of money and monetary assets and invest them to productive ventures. An efficient functioning of the financial system facilitates the free flow of funds to more productive activities and thus promotes investment. Thus, the financial system provides the intermediation between savers and investors and promotes faster economic development.

A vibrant and efficient capital market, which ensures an orderly development and contains measures for protection of the investor's interest, is the most important parameter for evaluating health of any economy. The practice of physical trading imposed limits on trading volumes and hence the speed with which new information was incorporated into prices system.

Dematerialization is the processes by which a client can get physical certificates converted into electronic balances maintained in its account with the participant in the depository system securities held in dematerialization form are fungible, i.e., they do not bear any distinguishing features. The financial market exists to facilitate sale and purchase of financial instruments and comprises of two major markets namely the capital Market and the money market. The capital market mainly deals in medium and long – term investments (maturity more than a year) while the money market deals in short- term investments (maturity up to a year). Capital market a medium for mobilizing the finance out of the savings of the community and making it available to the users i.e. to the industry, trade, commerce for meeting their funds requirement. It is the barometer of the economy¹. Capital Market in India is regulated by Government of India through Ministry of Finance and strong legal system. Money Market is a place for trading in money and short term financial assets that are as liquid as money. It provides a platform for short term surplus funds of lenders or investors and short term requirements of borrowers. The instrument can be traded at low cost and are highly liquid.

Capital market can be divided into two segments viz., primary and secondary. Primary Market is a market for new issues or new financial claims. Hence, it is also called New Issue Market. The primary market deals with those securities which are issued to the public for the first time. In the primary market, borrowers exchange new financial securities for long term funds. Thus, primary market facilitates capital formation. The primary market is mainly used by issuers for raising fresh capital from the investors by making initial public offers or rights issues or offers for sale of equity or debt. There are three ways by which a company may raise capital in a primary market. They are Public issue, Rights issue and Private placement. The most common



method of raising capital by new companies is through sale of securities to the public. It is called public issue. When an existing company wants to raise additional capital, securities are first offered to the existing shareholders on a pre-emptive basis. It is called right issue. Private placement is a way of selling securities privately to a small group of investors.

The secondary market provides liquidity to these instruments through trading and settlement on the stock exchanges. Capital market is, thus important for raising funds for capital formation and investments and forms a very vital link for economic development of any country. The capital market provides a means for issuers to raise capital from investors. Thus savings normally flow from household sector to business or government sectors that normally invest more than they save.

Importance of Capital Market:

Absence of capital market acts as a deterrent factor to capital formation and economic growth. Resources would remain idle finances are not funneled through capital market. The importance of capital market can be briefly summarized as follows:

- The capital market serves as an important source for the productive use of the economy's savings. It mobilizes the savings of the people for further investment and thus avoids their wastage in unproductive uses.
- It provides incentives to saving and facilitates capital formation by offering suitable rates of interest as the price of capital.
- It provides an avenue for investors, particularly the household sector to invest in financial assets which are more productive than physical assets.
- It facilitates increase in production and productivity in the economy and thus enhances the economic welfare of the society. Thus, it facilitates "the movement of stream of command over capital to the point of highest yield" towards those who can apply them productively and profitably to enhance the national income in the aggregate.
- The operations of different institutions in the capital market induce economic growth. They give quantitative and qualitative directions to flow of funds and bring about rational allocation of scarce resources.
- A healthy capital market consisting of expert intermediaries promotes stability in values of securities representing capital funds.

Moreover, it serves as an important source for technological up gradation in the industrial sector by utilizing the funds invested by the public. Thus, a capital market serves as an important link between those who save and those who aspire to invest these savings. The capital market apart from the primary market also includes the secondary market where existing issues are traded. These secondary markets - also referred to as stock markets – predominantly deal in stocks or equity shares. They enable shareholders to sell their holdings readily thereby ensuring liquidity. Investors



are the backbone of the securities market.² Indian market is now comparable to many developed markets in terms of a number of qualitative parameters.

The capital market was a marginal institution in the Indian Financial Market for almost three decades after India's Independence. However, until late eighties the common man kept away from capital market. Not many companies accessed the capital market and thus the quantum of funds mobilized through the market was meager. A major problem however continued to plague the market. The Indian markets were literally weighed down by the need to deal with shares in the paper form. There were problems galore with handling documents - fake and stolen shares, fake signatures and signatures mismatch, duplication and mutilation of shares, and transfer problems etc. So the institutions and the stock exchanges experiences that the paper certificates are the main cause of investor disputes and arbitration cases. Thus, the Government of India decided to setup a fully automated and high technology based model exchanges, which could offer screen, based trading and depositories as the ultimate answer to all such reforms.

The move on depository in India was initiated by the Stock Holding Corporation of India Limited (SHCIL) in July 1992 when it prepared a concept paper on "National Clearance and Depository System" in collaboration with Price Waterhouse under a programme sponsored by the U.S. Agency for International Development. Thereafter, the Government of India constituted a Technical Group under the Chairmanship of Shri R. Chandrashekharan, Managing Director, SHCIL, which submitted its Report in December, 1993. The Securities and Exchange Board of India (SEBI) constituted a seven member action squad subsequently to discuss the various structural and operational parameters of Depository System. Considering the various problems and issues, the Government of India promulgated the Depositories Ordinance in September 1995, thus paving the way for setting up of depositories in the country. The Depositories Act was passed by the Parliament in August 1996, which lays down the legislative framework for facilitating the dematerialisation and book entry transfer of securities in a depository. The Act provides that a depository, which is required to be a company under the Companies Act 1956, and depository participants (i.e. agents of the depository) need to be registered with SEBI. The Depository shall carry out the dematerialisation of securities and the transfer of beneficial ownership through electronic book entry. The investors, however, have the option to hold securities in physical or dematerialised form, or to rematerialise securities previously held in dematerialised form. SEBI issued a Consultative Paper No. X on the draft regulations for depositories and participants in October 1995 for wider consultation and notified the regulations in may 1996, which, inter alia, cover the norms for registration of depositories and participants, the eligibility criteria for admission of securities to a depository, the specific rights and obligations of depositories, participants and issuers, the periodic reports to and in sections by SEBI. The Depository Related Laws (Amendment) Ordinance, 1997 issued in January 1997 enabled units of mutual funds and UTI, securities of statutory corporations and public corporations to be dealt through depositories.



The unparalleled success of the introduction of the depository concept in Indian capital markets is reflected in the on-going successful reaction in the period between trading and settlement. Over the last decade, the Indian capital market has been growing by leaps and bounds. India has the largest number of listed companies in the world today.³ It also boasts of a large number of shareholders. Paradoxically, the problems associated with transactions clearing and settlement, etc. were also on rise. Electronic revolution has brought about a number of changes in the functioning of Indian Capital Market. The most revolutionary change that was brought in the entire history of the Indian Capital Market is the introduction of depository system.

Scope, Relevance and Period of the Study:

Dematerialisation is the foundation of concurrent changes in the capital market in India. The new face of emerging world economy has made it mandatory for each and every national economy to make it updated in terms of capital market. Therefore, Dematerialisation is not a matter of choice but a matter of compulsion. This study covers the contribution of the depository mode in the promotion of scrip less trading in securities through dematerialisation of securities in India and the contribution the depository system has made in helping to remove the inherent weaknesses in the traditional system like loss/theft of certificates, forged/fake certificates, cumbersome and time consuming procedure for transfer of shares, etc. The study has covered the period of 15 years since March 2001 – March 2015.

OBJECTIVES OF THE STUDY:

- to know Role and benefits of NSDL and the structure of the depository system in India;
- to know the various checks and measures in the depository system to ensure safety of the investor holdings;
- to observe the nature of facilities provided by the NSDL in the depository system;
- to evaluate the performance of NSDL in India Capital Market and Growth of Indian Capital Market;
- to study the working of NSDL and to measure the extent of role played by NSDL in the execution of transactions;

Research Design and Methodology:

(i) Research Design:

Research design of the study is analytical.

(ii) Methodology:

The basis of present analysis is the comparison of data on yearly (financial Year) basis.

Data Collection and Analysis:

The study is based upon secondary data collected from various websites i.e. NSDL, SEBI, CDSL, NSE and Official publications, annual reports of NSDL



brochures of depository participants and research papers/articles published in journals/magazines/newspapers for a period of 15 years i.e. from March 2001- March 2015.

Definition of Dematerialisation:

Dematerialisation is the process by which the certificates of an investor available in physical form are converted to an equivalent number of securities in electronic form and credited in the investor's account with his DP. Dematerialised shares do not have any distinctive numbers. These shares are fungible, which means that all the holdings of a particular security will be identical and interchangeable.⁴ Conversion of securities from physical (paper) form to electronic form can be achieved by two methods Dematerialization and Immobilization. Under the dematerialization method, the securities issued in physical form are destroyed and exactly equal numbers of securities are created in the depository system, which are credited into the account of the investor. Unlike physical securities, the securities converted into the electronic form do not have any distinctive numbers and they are treated as equal and replaceable in all ways i.e. securities in the electronic form are fungible. All subsequent transactions (transfer of ownership) of such securities take place in book- entry form. Under the immobilization method, after giving credit in the securities in physical form are stored or lodged with an organization, which acts as a custodian – a securities depository. Subsequent transactions in such immobilized securities take place through book – entries. The securities are held by the depository in a physical form in its own vaults, but the transfer of securities takes place; through book entries. India has adopted dematerialization method where as immobilization method has been adopted by some of the countries like Hong Kong, USA, Japan. Japan has adopted both dematerialization as well as immobilization for achieving a paperless securities market. Whether a country has adopted dematerialization or immobilization, the investor has a right to get the securities converted back into physical form through a process called as rematerialisation, in case of need. Depository system is concerned with conversion of securities, from physical to electronic form, settlements of trades in electronic segment transfer of ownership of shares and electronic custody of securities. All securities to the depositories are identical in all respects and one thus fungible.

Meaning of Depository:

Depository system essentially aims at eliminating the voluminous and cumbersome paper work involved in the scrip-based system and offers scope for 'paperless' trading through state-of-the-art technology. A depository can be compared to a bank. A depository holds securities of investors in the form of electronic accounts, in the same way as bank holds money in a saving account. Besides, holding securities, a depository also provides services related to transactions in securities. A depository interfaces with its investors through its agents called Depository Participants (DPs). According to SEBI guidelines, financial institutions, banks, custodians, stock brokers, etc. can become DPs. If an investor wants to utilize the services offered by a depository, he has to open an account with a DP. This is



similar to opening an account with any branch of a bank in order to utilize the bank's services.

The first depository in the world was set up way back in 1947 in Germany. Then the total number of depositories in the world was 22 only and the number had crossed 250 by the end of 2004 and 310 by the end of 2014. Depository in India is a relatively new concept as it was introduced in 1996 with the enactment of Depositories Act, 1996. The term depository means a place where something is deposited for safe keeping; a bank in which funds or securities are deposited by others, usually under the terms of specific depository agreement. Depository means one who receives a deposit of money, securities, instruments, or other property, a person to whom something is entrusted, a trustee, a person or group entrusted, with the preservation of safe keeping of something. The depository is an organization where the securities of a shareholder are held in the form of electronic accounts, in the same way as a bank holds money. The depository holds electronic custody of securities and also arranges for transfer of ownership of securities on the settlement dates. A depository transfers securities without physically handling securities, the way a bank transfers funds without actually handling money. This system is known as 'scripless trading system'. Anybody to be eligible to provide depository services must register with SEBI.

The Depositories Act, 1996 defines a depository to mean "A Company formed and registered under the Companies Act, 1956 and which has been granted a certificate of registration under sub-section (1A) of section 12 of the Securities and Exchanges Board of India Act, 1992". According to the Germany Depository, "A Depository is a file or a set of files in which data is stored for the purpose of safe keeping or identity authentication". As per The Bank for International settlements (BIS), depository is "a facility for holding securities which enables securities transactions to e-processed by book entry, physical securities may be immobilized by the depository or securities may be dematerialized".

Depository System in India:

India has adopted the Depository System for securities trading in which book entry is done electronically and no paper is involved. The physical form of securities is extinguished and shares or securities are held in an electronic form. Before the introduction of the depository system through the Depository Act, 1996, the process of sale, purchase and transfer of securities was a huge problem, and there was no safety at all. There are two depositories in India, namely: National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited (CDSL).

Depository Participant (DP):

A DP is an agent of the depository and functions as the interacting medium between the Depository and the Investor. A DP is a person registered with SEBI and must possess the requisite qualifications prescribed by the Depository of which he is a Participant. A DP is responsible for maintaining the investor's securities account



with the Depository and handles the account in accordance with the investor's written instructions. A DP could be linked to a broker who deals / trades on the Investors behalf.

National Securities Depository Limited (NSDL):

NSDL carries out its activities through service providers such as depository participants (DPs), issuing companies and their registrars and share transfer agents and clearing corporations/ clearing houses of stock exchanges. These entities are NSDL's business partners and are integrated in to the NSDL depository system to provide various services to investors and clearing members. The investor can get depository services through NSDL's depository participants. An investor needs to open a depository account with a depository participant to avail of depository facilities. It is possible for a clearing member to open a special account in the depository system to settle trades completed on stock exchanges. The clearing account helps the clearing member to get securities from its clients for delivery to the clearing house/clearing corporation and to distribute the pay-out to its customers. An issuer can offer dematerialization services to its shareholders by means of an agreement with NSDL. The clearing corporations/houses of stock exchanges also need to be electronically linked to the depository to enable them to electronically receive and give securities from and to clearing members. An investor intending to dematerialize its securities needs to have an account with a DP. The client has to deface and surrender the certificates registered in its name to the DP. After intimating NSDL electronically, the DP sends the securities to the concerned Issuer/ R&T agent. NSDL in turn informs the Issuer/ R&T agent electronically, using NSDL Depository system, about the request for dematerialization. If the Issuer/ R&T agent finds the certificates in order, it registers NSDL as the holder of the securities (the investor will be the beneficial owner) and communicates to NSDL the confirmation of request electronically. On receiving such confirmation, NSDL credits the securities in the depository account of the Investor with the DP.

NSDL was registered by the SEBI on June 7, 1996 as India's first depository to facilitate trading and settlement of securities in the dematerialized form. The NSDL is promoted by IDBI, UTI and NSE to provide electronic depository facilities for securities traded in the equity and debt markets in the country.⁵ NSDL has been set up to cater to the demanding needs of the Indian capital markets. In the first phase of operations, NSDL will dematerialize scrips and replace them with electronic entries. This depository promoted by institutions of national stature responsible for economic development of the country has since established a national infrastructure of international standard that handles most of the trading and settlement in dematerialised form in Indian capital market. The Depositories Act also provides for multiple depository system. Using innovative and flexible technology systems, NSDL works to support the investors and brokers in the capital market of the country. NSDL aims at ensuring the safety and soundness of Indian capital market places by developing settlement solutions that increase efficiency, minimize risk and reduce costs. NSDL plays a quiet but central role in developing products and services that will continue to nurture the growing needs of the financial services industry.



NSDL commenced operations on November 08, 1996. NSDL has been promoted by a number of companies, the prominent of them being IDBI, UTI, NSE, SBI, HDFC Bank Ltd., etc. The initial paid up capital of NSDL was Rs. 105 crore which was reduced to Rs. 80 crore. During 2000-2001 through buy-back programme by buying back 2.5 crore shares @ 12 Rs./share. It was done to bring the size of its capital in better alignment with its financial operations and to provide same return to shareholders by gainfully deploying the excess cash available with NSDL.

Management of NSDL:

NSDL is a public limited company managed by a Board of Directors headed by a Managing Director. It is governed by its bye-laws and business operations are regulated by business rules.

Functions of NSDL:

NSDL performs the following functions through depository participants:

- Safety Features in NSDL Depository System: Safety of data, efficiency in processing instructions given by account holders (transactions) and continuity of operations are of utmost importance in depository operations. Safety and efficiency of operations are a function of the system design/discipline and also of account holders' vigilance. It has been NSDL's Endeavour to provide safe, efficient and uninterrupted services by implementing various measures as described below:
- Central Database: The financial assets reflected as security balances in the accounts of account holders are kept in the form of data in the central computer system of NSDL. The central database helps in providing service to the account holders, if the Depository Participant (DP) had to abruptly stop services due to reasons like earthquake, flood or for legal/regulatory reasons. In order to help DPs to give prompt service to the account holders, NSDL has enabled DPs to hold the database of their clients. The system driven mandatory reconciliation between DPs database and central database at NSDL on a daily basis ensures integrity of data.
- Data Transmission: Data communication between NSDL and DPs is carried on through secured V-Sat/leased line network in a closed system. The network of communications between NSDL and its business partners is allowed only through predetermined communication lines and by using the software supplied by NSDL. The data interchange between NSDL and its business partners are encrypted which can be deciphered only by the software supplied by NSDL.
- Data Backup: NSDL has prescribed a system of data backup whereby DPs are required to copy data to an external media on a daily basis and keep it safely. A copy of the data is kept in the premises. Another copy is kept away from the premises (off-site backup) which can be used if the premise from which DP operates is not accessible. A similar practice is adopted by NSDL



for the data stored in its computer systems. Therefore in an unlikely event of failure of main systems, operations can be carried-out from the stand-by system.

- Disaster back up site: in addition, NSDL has established a disaster back up site at a remote location away from Mumbai which is equipped with facilities that are identical to the transaction processing facility set up in Mumbai. The facilities are actually put to use at frequent intervals to check the ability to operate from the facility.
- Periodic Review: NSDL hardware, software and communication systems are continuously reviewed in order to make them more secure. These reviews are a part of an ongoing exercise.
- Periodic Inspections: NSDL has prescribed operational procedures and system guidelines for DPs. NSDL conduct periodic inspections to check compliance of these procedures and guidelines. The inspection teams verify whether the facilities set up by the DP are consistent with the prescribed guidelines. If any deviations are found, DP is required to rectify and report compliance.
- Quarterly Internal Audit: All the DPs are required to have a quarterly audit of their operations from a practicing Chartered Accountant or Company Secretary. The objective of the audit is to identify gaps between prescribed procedures and practices, weaknesses in control systems and bring them to the notice of the DP's management.

NSDL OFFERS THE FOLLOWING FACILITIES:-

- AADHAAR i.e., Unique Identification Number;
- Automatic Delivery Out Instructions (AUTO DOs);
- Carry out settlement of trades not done on the stock exchange (off-market trades).
- Dematerialisation i.e., converting physical certificates to electronic form;
- Depository Account Validation (DAN),
- Effecting transmission of securities;
- Electronic credit in public offerings of companies.
- Electronic credit of securities allotted in public issues, rights issue;
- Electronic settlement of trades in stock exchanges connected to NSDL;
- Facilitating repurchase / redemption of units of mutual funds;
- KRA KYC Registration Agency under SEBI
- Maintain investor holdings in the electronic form.
- Market Transfers:
- Monetary benefits (dividends, etc):
- National Academic Depository (NAD)



- NSDL Database Management Limited Projects (NDML Projects)
- National Insurance-policy Repository under IRDA (NIR)
- Nomination facility for demat accounts;
- National Payment Services Platform for Deity (NPSP)
- National Skills Registry for NASSCOM (NSR)
- Procedure for CM Pool To CM Pool Transfers:
- Procedure for Inter-Settlement Transfers:
- Receipt of non-cash corporate benefits such as bonus, in electronic form;
- Rematerialization i.e., conversion of securities in demat form into physical certificates;
- RGESS Rajiv Gandhi Equity Savings Scheme
- Services related to Accounts Maintenance and change of address;
- SEZ online for Ministry of Commerce and Industry
- Stock lending and borrowing.
- Transmission of Securities held jointly:
- Transmission of Securities held singly:
- Transmission of Securities in the Depository System:

Role of NSDL in Indian Capital Market:

In the depository system, the ownership and transfer of securities takes place by means of electronic book entries. At the outset, this system rids the capital market of the dangers related to handling of paper. NSDL provides numerous direct and indirect benefits like:

- Elimination of bad deliveries In the depository environment, once holdings of an investor are dematerialized, the question of bad delivery does not arise i.e. they cannot be held "under objection". In the physical environment, buyer was required to take the risk of transfer and face uncertainty of the quality of assets purchased. In a depository environment good money certainly begets good quality of assets.
- Elimination of all risks associated with physical certificates- Dealing in physical securities have associated security risks of theft of stocks, mutilation of certificates, loss of certificates during movements through and from the registrars, thus exposing the investor to the cost of obtaining duplicate certificates etc. This problem does not arise in the depository environment.
- No stamp duty for transfer of any kind of securities in the depository. This waiver extends to equity shares, debt instruments and units of mutual funds.
- Immediate transfer and registration of securities: In the depository environment, once the securities are credited to the investors account on pay out, he becomes the legal owner of the securities. There is no further need to send it to the company's registrar for registration. Having purchased



securities in the physical environment, the investor has to send it to the company's registrar so that the change of ownership can be registered. This process usually takes around three to four months and is rarely completed within the statutory framework of two months thus exposing the investor to opportunity cost of delay in transfer and to risk of loss in transit. To overcome this, the normally accepted practice is to hold the securities in street names i.e. not to register the change of ownership. However, if the investors miss a book closure the securities are not good for delivery and the investor would also stand to lose his corporate entitlements.

- Faster settlement cycle - The settlement cycle follow rolling settlement on T+2 basis i.e. the settlement of trades will be on the 2nd working day from the trade day. This will enable faster turnover of stock and more liquidity with the investor.
- Faster disbursement of non cash corporate benefits like rights, bonus, etc. - NSDL provides for direct credit of non cash corporate entitlements to an investors account, thereby ensuring faster disbursement and avoiding risk of loss of certificates in transit.
- Reduction in brokerage by many brokers for trading in dematerialized securities Brokers provide this benefit to investors as dealing in dematerialized securities reduces their back office cost of handling paper and also eliminates the risk of being the introducing broker.
- Reduction in handling of huge volumes of paper
- Periodic status reports to investors on their holdings and transactions, leading to better controls.
- Elimination of problems related to change of address of investor - In case of change of address, investors are saved from undergoing the entire change procedure with each company or registrar. Investors have to only inform their DP with all relevant documents and the required changes are effected in the database of all the companies, where the investor is a registered holder of securities.
- Elimination of problems related to transmission of demat shares - In case of dematerialized holdings, the process of transmission is more convenient as the transmission formalities for all securities held in a demat account can be completed by submitting documents to the DP whereas, in case of physical securities the surviving joint holder(s)/legal heirs/nominee has to correspond independently with each company in which shares are held.
- Elimination of problems related to selling securities on behalf of a minor - A natural guardian is not required to take court approval for selling demat securities on behalf of a minor.
- Ease in portfolio monitoring since statement of account gives a consolidated position of investments in all instruments.



- **Freeze Facility:** Account freezing means suspending any further transaction from the depository account till the account is de-frozen. A depository account maintained with a DP can be frozen if the DP receives a written instruction in prescribed form from the client. A frozen account can be de-frozen or re-activated if the client submits written instruction in prescribed form to the DP. A depository account holder (beneficiary account) may freeze securities lying in the account for as long as the account holder wants it. By freezing the account, account holder can prevent unexpected debits or credits or both, creeping into its account. The following types of freeze facility available in the NSDL system may be availed of by submitting freeze instruction to the DP in the prescribed form.
 - Freeze for debits only
 - Freeze for debits as well as credits
 - Freeze a particular ISIN in the account
 - Freeze a specific number of securities held under an ISIN in an account

- **Certification in Depository Operations (NCFM and NISM):** To achieve that the good services from the DPs, it was necessary to create a pool of manpower with knowledge of depository operations so as to deal with the investors. Accordingly, NSDL in association with NSE administers an examination on "Depository Operations" called NCFM (NSE's Certification Programme on Financial Markets).

- **Investor grievance:** All grievances of the investors are to be resolved by the concerned business partner. If they fail to do so, the investor has the right to approach NSDL.

- **Insurance Cover:** NSDL has taken a comprehensive insurance policy to help DP to indemnifying investors for the loss accrued to them due to errors, omissions, commission or negligence of DP.

- **Computer and communication infrastructure:** NSDL and its business partners use hardware, software and communication systems, which conform to industry standards. Further, the systems are accepted by NSDL only after a rigorous testing procedure. NSDL's central system comprises an IBM mainframe system with a back-up facility and a remote disaster back-up site.

- **Machine level back-up:** The IBM mainframe in which the data is processed has adequate redundancy built into its configuration. There is a standby central processing unit (CPU) to which processing can be switched over to in case of main system CPU failure. The disk has RAID implementation, which ensures that a failure of hard disk will not lead to loss in data. System has spare disk configuration where data is automatically copied from the main disk upon encountering the first failure (due to RAID implementation - first failure does not result in loss of data).

- **Pledging/hypothecation of dematerialized securities against loan;** Securities held in a depository account can be pledged / hypothecated to avail of



loan/credit facility. Pledge of securities in a depository requires that both the borrower (pledgor) and the lender (pledgee) should have account in the depository concerned.

- CRA Central Recordkeeping Agency for National Pension System for PFRDA:

NSDL e-Governance Infrastructure Limited and The Pension Fund Regulatory and Development Authority (PFRDA) have entered into an agreement relating to the setting up of a Central Recordkeeping Agency (CRA) for the National Pension System (NPS). The NPS was introduced by Government of India for its new recruits (except the Armed Forces) joining w.e.f. January 1, 2004. CRA is the core infrastructure for the National Pension System and is critical for its successful operationalization. PFRDA, the regulatory body for NPS, has appointed NSDL as Central Recordkeeping Agency (CRA) for National Pension System. CRA is the first of its kind venture in India which is carrying out the functions of Record Keeping, Administration and Customer Service for all subscribers under NPS. CRA shall issue a Permanent Retirement Account Number (PRAN) to each subscriber and maintain database of each Permanent Retirement Account along with recording transactions relating to each PRAN. In NPS, a government employee contributes towards pension from monthly salary along with matching contribution from the employer. The funds are then invested in earmarked investment schemes through Pension Fund Managers. NPS was made available to All Citizens of India from May 01, 2009.

INTERNET BASED SERVICES:

This initiative of the depository system serves the purpose of providing information to the users of depository system. The depository system extends this initiative by introducing the following services:

SPEED: NSDL offers a secured Internet based service for clearing members (such as brokers) of the stock exchanges linked to NSDL. This service named SPEED (Securities Position Easy Electronic Dissemination) enables the clearing members to view details of their clearing member pool accounts directly on the Internet.

SPEED-e: NSDL launched SPEED-e (pronounced as speedy) in September, 2001. Any Participant of NSDL can subscribe to SPEED-e, the common infrastructure of NSDL. SPEED-e enables demat account holders (including Clearing Members) to submit delivery instructions directly on the Internet through SPEED-e website. SPEED-e is available only to those Participants who have subscribed to it and the Users sign an agreement with the Participant.

IDeAS: Internet-based Demat Account Statement (IDeAS) is the facility for viewing balances and transactions in the demat account updated on an online basis with a delay of maximum 30 minutes. **STeADY:** Securities Trading-information Easy Access and Delivery (STeADY). SEBI appointed a committee to assess the feasibility



and suitability of introducing Straight Through Processing (STP) in India capital market. STP enables trade orders to be confirmed between brokers, fund managers and custodians, more cost effectively, with fewer errors since human intervention in the course of processing and communication of the trade order is minimized. The purpose to implementing STP is to facilitate the introduction of shorter settlement cycles in the capital market. It was launched by NSDL on November 30, 2002. STeADY is a means of transmitting digitally signed trade information with encryption across market participants electronically, through Internet.

Tax Information Network (TIN): NSDL after having modernised the settlement system in the Indian Capital Market by pioneering scripless settlement is now in the process of establishing a nationwide Tax Information Network (TIN) on behalf of the Income Tax Department (ITD). This is designed to make the tax administration more effective, furnishing of returns convenient, reduce compliance cost and bring greater transparency.

e-TDS: A website has been created to provide information on TIN. ITD has entrusted to NSDL the work of receiving and processing the applications for issue of new Tax Deduction Account Number (TAN), and demographic data change requests for TAN. NSDL on its part has established various facilities including online services through TIN website <http://www.tin-nsdl.com>.

e-TDS RPU: Income Tax Department (ITD) has notified the file formats for preparation of e-TDS returns. Deductors can prepare the e-TDS returns as per these file formats using in-house software or any other third party software and submit the same to any of the TIN-FCs established by NSDL. NSDL has developed a free software called 'e-TDS Return Preparation Utility' (e-TDS RPU – Light) to facilitate preparation of e-TDS returns.

OLTAS: As a parts of establishment of TIN, and 'Online Tax Accounting System' (OLTAS) has been developed for the purpose of enabling banks to electronically upload direct taxes challan data to ITD through NSDL. NSDL is in the process of setting up the infrastructure for second phase of TIN which will enable the deductors to submit quarterly TDS statement.

Allotment of Market Participants & Investors Identification Number (MAPIN):

NSDL has appointed the Points of Service (POS) to provide application forms for registration accept application forms and collect bio-metric details like fingerprints of the applicants. The process of allotting unique identification number at full scale has started from December 1, 2003.

Permanent Account Number (PAN): Permanent Account Number (PAN) is a ten-digit alphanumeric number, issued in the form of a laminated card, by the Income Tax Department, to any "person" who applies for it. National Securities Depository Limited (NSDL) dispenses PAN services through a chain of TIN-



Facilitation Centres (TIN-FCs) established by NSDL across the country. NSDL has also launched an Online PAN application facility.

Tax Deduction/Collection Account Number (TAN):

Under Section 203A of the Income Tax Act, 1961, it is mandatory to quote Tax Deduction/Collection Account Number (TAN) allotted by the Income Tax Department (ITD) on all TDS returns. It is a unique 10 digit alphanumeric code.

This has made mandatory to get a TAN for any person or Organization is liable to deduct/collect or deduct tax and collect tax in accordance with Chapter XVII under the heading 'B- deduction at source' or 'BB- collection at source' of the Income Tax Act, 1961. Form (Form 49B) of application for allotment of Tax Deduction and Collection Account Number (TAN) under Section 203A and Rule 114A of the Income Tax Act, 1961. National Securities Depository Limited (NSDL) dispenses TAN services through a chain of TIN-Facilitation Centres (TIN-FCs) established by NSDL across the country. NSDL has also launched an Online TAN application facility.

Central Depository Services (India) Limited (CDSL):

This depository was set up on 8th February, 1999. Central Depository Services (India) Limited (CDSL), a depository managed by professionals has been promoted by the Stock Exchange, Mumbai (BSE) along with State Bank of India (SBI), Bank of Baroda (BOB) and Bank of India as original sponsors. Several leading private sector banks, viz. HDFC Bank, Standard Chartered Bank, Canara Bank, Union Bank of India, Bank of Maharashtra, Global Trust Bank (now Oriental Bank of Commerce) and Centurion Bank are also its sponsors. CDSL's objective is to provide convenient, dependable and secure alternative depository services to investors in shares and securities. Presently, it is compulsory to settle all trades done on any stock exchange in demat form only. Although investors have an alternative to hold securities and settle trades up to 500 shares in physical form, they need a demat account as, in practice, almost all trades on stock exchanges are now being settled in demat form only. The Bombay Stock Exchange which has contributed the lion's share in the capital of CDSL.

Connectivity with NSDL:

Central Depository Services (India) Limited has signed a memorandum of understanding (MOU) with NSDL for inter depository connectivity for which CDSL has received a certificate of commencement from SEBI. The MOU covers the understandings between the two depositories for inter depository transfers arising out of transactions not settled through the Clearing House/Clearing Corporation. CDSL and NSDL have established connectivity through internet.

Performance of NSDL in Indian Capital Market:

When the operations were commenced in 1996 with three participants and three companies connected to NSDL, it was difficult to even think of the likely time frame within which would be possible to achieve 100% settlement in paperless mode.



Yet in short period NSDL reached the stage where the equity market now settles over 99% of its volumes in paperless form. More than 13.7 million investors accounts have been opened with NSDL during this period and these investors are serviced through a network of 273 participants providing services from 15960 locations in 1549 cities spread all over the country. Continued efforts at investor education by NSDL have resulted in completely demystifying the concept of dematerialization. Retail investors are now familiar with this concept. In addition, NSDL has launched a certification programme for the employees of depository participants and it is now mandatory for the participant to have at least one employee in each branch with the necessary certification. While the focus of NSDL has been on ensuring settlement without cumbersome exchange of paper documents, its benefits in terms of distribution of shares resulting from corporate actions, such as, splits, mergers, bonus or rights have not been insignificant. The resultant saving in terms of elimination of use of paper, printing and postal costs and speedy receipt by investors have been appreciated by the beneficiaries.

Having achieved nearly 100 percent settlement in paperless form in equity market, NSDL has been looking at other instruments that could be brought within the purview of its activity. Bringing debt instruments within its scope was naturally the next step. At the suggestion of NSDL in June 2000, the Government of India made the necessary legislative changes to enable the transfer of the debt securities in demat form to be on par with transfer of equity instrument. NSDL has already started the work on demat of debt securities and it is expected that during the coming years the settlement of debt trades will take place only in paperless mode. The Reserve Bank of India in recent Credit policy has given the process a further boost by requiring banks, financial institutions, primary dealers and satellite dealers to hold various debt instrument as also to subscribe to new debt instruments only in demat form. The debt market in India has not developed in the same manner as the equity market. It is hoped that with the introduction of paperless trading in debt instruments together with various measures announced by the Government securities will constitute dominant segment of the debt market. NSDL intends to help retail investors gain access to Government securities through its system.

India has seen dramatic progress in the last few years in the area of Information & Technology. The use of internet is increasing rapidly. Keeping pace with the latest trend NSDL has launched a pilot project for enabling investors to give debt instruction to their participants for their respective accounts through the internet. It is expected that the facility has already been looking to the expansion of its activities and growth in volume of business as also with a view to providing high quality service to its clients. NSDL has been investing from time to time in enhancing the capacity and improving the technological capabilities of its IBM mainframe in Mumbai and disaster recovery site in Pune. With the increase in its client base and expansion of operations, NSDL has been reducing its charges for the various services rendered by it from time to time. Needless to mention, that NSDL's operations have been profitable all along. It has not only been able to meet all its capital expenditure



needs out of its internal accruals, but also bought back equity shares of Rs. 25 crore face values from the shareholders at a premium of Rs. 2 per share during 2000-2001.

The below tables show that, the development of de-materialization with reference to NSDL during the period March 2001- March 2015 under the study.

Table No: I
Beneficiary Accounts Growth in NSDL during 2001 - 2015

Year	Investors Accounts Value in Lakhs	Annual Growth Rate
2000 – 2001	34.21	-
2001 – 2002	37.18	8.68%
2002 – 2003	37.95	2.07%
2003 – 2004	52.03	37.10%
2004 – 2005	63.01	21.10%
2005 – 2006	75.60	19.98%
2006 – 2007	79.03	4.54%
2007 – 2008	93.72	18.59%
2008 – 2009	96.86	3.35%
2009 – 2010	105.85	9.28%
2010 – 2011	115.44	9.06%
2011 – 2012	120.48	4.37%
2012 – 2013	126.88	5.31%
2013 – 2014	130.57	2.91%
2014 – 2015	137.08	4.99%
Average Annual Growth Rate		10.13%

Source: Annual Reports and Monthly Nest Update of NSDL.

Table I shows that the beneficiary accounts continuously increased from 34.21 lakhs accounts to 137.08 lakh accounts. The percentage of growth was high in 2003-2004 at 37.10% and lowest at 2.07% in 2002-2003. The growth is recorded in 2008 and 2011, this can be attributed to the world economic crises and its impact on new capital issues in the IPO market. The noteworthy point is that inspite of the crises the annual average growth in accounts in NSDL during 2001-15 is 10.13%. During the years 2001-02 and 2002-03 the number of clients remained almost stagnant. But during 2003-04 the number of client accounts recorded a sudden jump in the opening of accounts due to substantial rise in the prices of shares, as a result of which the number of clients increased by 14.08 lac from 37.95 lac in 2002-03 to 52.03 lac in 2003-04, by 10.98 lac to 63.01 lac in 2004-05, by 12.59 lac to 75.60 lac in 2005-06, by 14.69 lac to 93.72 lac in 2007-08 and by 6.51 lac to 137.08 lac in 2014-15. Thus it may be concluded that with the familiarisation and compulsorisation of the demat system; the number of clients has recorded tremendous increase over the entire period of study.

**Table No: II: Companies Available for DEMAT in NSDL during 2001-2015**

Year	Available Companies for DEMAT	Annual Growth Rate
2000 – 2001	2786	-
2001 – 2002	4172	49.75%
2002 – 2003	4761	14.12%
2003 – 2004	5212	9.47%
2004 – 2005	5536	6.22%
2005 – 2006	6022	8.78%
2006 – 2007	6483	7.66%
2007 – 2008	7354	13.44%
2008 – 2009	7801	6.08%
2009 – 2010	8124	4.14%
2010 – 2011	8842	8.84%
2011 – 2012	9741	10.17%
2012 – 2013	10843	11.31%
2013 – 2014	12210	12.61%
2014 – 2015	13992	14.59%
Average Annual Growth Rate		12.65%

Source: Annual Reports and Nest Update monthly of NSDL.

Table II reveals the companies with de-materialization with NSDL during the period 2001-2015, the no of companies converted into de-materialization were 2786 in March 2001 and 13992 in March 2015 with an average annual growth rate of 12.65% during the period. Except during March 2010 the increase was marginal at 4.14% only 323 companies converted in to de-materialization form. The other years it was above 8.5%. In this figure the number has consistently increased year after year throughout the period and a smart jump was recorded in the number of companies which increased to 4172 in 2001-02 from 2786 in 2000-2001.

Table No: III: DEMAT Custody in NSDL during 2001-2015

Year	DEMAT Custody Value in Crores	Annual Growth Rate
2000 – 2001	5554	-
2001 – 2002	6150	10.73%
2002 – 2003	7749	26.00%
2003 – 2004	11071	42.87%
2004 – 2005	16383	47.98%
2005 – 2006	30051	83.43%
2006 – 2007	35988	19.76%
2007 – 2008	52197	45.04%
2008 – 2009	31103	-40.41%
2009 – 2010	61843	98.83%
2010 – 2011	67593	9.30%
2011 – 2012	90019	33.18%
2012 – 2013	108758	20.82%
2013 – 2014	110259	1.38%
2014 – 2015	217388	97.16%
Average Annual Growth Rate		35.43%

Source: Annual Reports and Nest Update monthly of NSDL.



Table III shows that DEMAT custody in NSDL during the years 2001-15 showed initial highest increment of 98.83% in March 2010, but in the March 2009 it fell drastically indicating a negative growth of (40.41%), this is an indication that the impact of Global Crisis is significant with respect to custodial accounts with the DP's. The overall average annual growth rate shows that there is an increase of 35.43% during the period, which is a positive indication.

Table No: IV: Depository Participants Growth in NSDL during 2001-2015

Year	Depository Participants	Annual Growth Rate
2000 – 2001	186	-
2001 – 2002	212	13.98%
2002 – 2003	213	0.47%
2003 – 2004	214	0.47%
2004 – 2005	216	0.93%
2005 – 2006	223	3.24%
2006 – 2007	240	7.62%
2007 – 2008	251	4.58%
2008 – 2009	275	9.56%
2009 – 2010	286	4.00%
2010 – 2011	293	2.45%
2011 – 2012	283	-3.41%
2012 – 2013	282	-0.35%
2013 – 2014	278	-1.42%
2014 – 2015	273	-1.80%
Average Annual Growth Rate		2.88%

Source: Annual Reports of NSDL and NEST Update published monthly by NSDL.

Table IV is seen that the depository participants was increasing from 186 in March 2001 to 293 in March 2011 and after that it declined to 283 in March 2012, 282 in March 2013, 278 in March 2014 and 273 in 2015 which is a marginal decline of (3.41%), (0.35%), (1.42%) and (1.80%). The average annual growth rate of DP's is 2.88%. The range of growth in DP's was high in March 2002, 2007 and 2009, the reason being no impact of world economic crises but in March 2003 and 2004 there was marginal increase of 0.47% (only 1 participants were added in that year). Now almost all the important towns and cities have a branch of at least one DP covering about two third area having pin codes.

Depository Services centers are presented in table V. In March 2001 the number of DP service centers was 1896 and in March 2015 they were 15960 with an average annual growth rate of 18.81%. In the March 2007 the number of DP service centers highest increased 85.58% with around 2582 new DP service centers.

**Table No: V: DP Service Centers Growth with NSDL during 2001-2015**

Year	DP Service Centres	Annual Growth Rate (%)
2000 – 2001	1896	-
2001 – 2002	1648	-13.08%
2002 – 2003	1718	4.25%
2003 – 2004	1719	0.06%
2004 – 2005	2819	63.99%
2005 – 2006	3017	7.02%
2006 – 2007	5599	85.58%
2007 – 2008	7204	28.67%
2008 – 2009	8777	21.84%
2009 – 2010	11170	27.26%
2010 – 2011	12767	14.30%
2011 – 2012	14033	9.92%
2012 – 2013	14641	4.33%
2013 – 2014	14444	-1.35%
2014 – 2015	15960	10.50%
Average Annual Growth Rate		18.81%

Source: Annual Reports of NSDL and NEST Update published monthly by NSDL.

Table No: VI: Quantity of Demat Shares/Securities during 2001- 2015

Year	Quantity of Demat Shares/Securities (Rs. In bn.)	Annual Growth Rate
2000 – 2001	37.21	-
2001 – 2002	51.67	38.86%
2002 – 2003	68.76	33.08%
2003 – 2004	83.69	21.71%
2004 – 2005	128.66	53.73%
2005 – 2006	174.72	35.80%
2006 – 2007	202.70	16.01%
2007 – 2008	236.90	16.87%
2008 – 2009	282.87	19.40%
2009 – 2010	351.14	24.13%
2010 – 2011	471.30	34.22%
2011 – 2012	579.80	23.02%
2012 – 2013	686.48	18.40%
2013 – 2014	795.50	15.88%
2014 – 2015	927.36	16.58%
Average Annual Growth Rate		26.26%

Source: Annual Reports and Nest Update monthly of NSDL.

It is observed from the above figures Table No: VI that Demat quantity of securities went up from Rs.37.21 bn in 2000-2001 to Rs.927.36 bn in 2014-15 registering an impressive increase of about 24.92 times over the period. In this period the average annual growth rate is 26.26%. This number has consistently increased year after year throughout the period.

**Table No: VII: Demat Value of Securities during 2001- 2015**

Year	Demat Value of Securities (Rs. in bn.)	Annual Growth Rate
2000 – 2001	3262.00	-
2001 – 2002	4426.00	35.68%
2002 – 2003	5513.00	24.56%
2003 – 2004	9662.00	75.26%
2004 – 2005	14477.00	49.83%
2005 – 2006	24789.00	71.23%
2006 – 2007	31426.00	26.77%
2007 – 2008	43770.00	39.28%
2008 – 2009	31066.00	-29.02%
2009 – 2010	56178.00	80.83%
2010 – 2011	66079.00	17.62%
2011 – 2012	71323.00	7.94%
2012 – 2013	76790.27	7.67%
2013 – 2014	89398.76	16.42%
2014 – 2015	117483.15	31.41%
Average Annual Growth Rate		32.53%

Source: Annual Reports and Nest Update monthly of NSDL.

Table VII shows that the value of dematerialised securities which has increased from Rs.3262 bn in 2000-2001 to Rs.117483.15 bn in 2014-15 registering a robust growth of about 36.02 times over the period. In this figure the Demat Value of Securities has consistently increased year after year throughout the period except the year 2008-2009. Upto March 31, 2015 almost all the companies have come up under compulsory demat category. Thus it is concluded the remarkable progress has been achieved by NSDL in respect of Demat Value of securities during the period from 2000-2001 to 2014-15.

The progress made by the securities market is partly reflected by the introduction of features and options which has resulted in the ever increasing volume. This has been made possible due to adoption of highly advanced information technology in the depository system.

Conclusion:

To sum up, there is a sizable increase in terms of number of beneficiary accounts, number of companies available for dematerialization, number of demat custody, number of depository participants, number of depository participants service centers of NSDL, Quantity of Demat Shares/Securities and Demat Value of Securities. And positive annual average growth rate shows the growth of Indian Capital Market. Introduction of depositories had improved the market efficiency through adopting criterion for describing scripts depositories' eligibility. The paper management substantially reduced. This helps in saving in time for allotment and transfers of scripts. This improves internal system effectively. NSDL and SEBI have undertaken a public awareness programme to popularise the concept of demat trading. NSE and BSE both are extensively pursuing the programme. After Dematerialization investors has been increased manifold. Demat trading has brought in transparency in



the Indian Capital Market. Depository System ensure quick execution of transaction and it has almost completely eliminated the problems of traditional script based system in Indian Capital Market, especially bad delivery, delayed transfer of securities, fake signature and Stolen of share certificate. The benefit of the depository system is significant.

REFERENCES:

1. Gopalsamy, N., "Capital Market (The Indian Financial Scene)", New Delhi, Macmillan Publication, 2005.
2. Gordon, E., & Natarajan, K., "Capital Market in India", Mumbai, Himalaya Publishing House, 2007.
3. Kothari, C. R., "Research Methodology: Methods and Techniques", New Delhi, New Age International Publication, 2004.
4. Machiraju, H. R., "International Financial Markets in India", New Delhi, New Age International Publication, 2008.
5. Machiraju, H. R., "Indian Financial System", New Delhi, Vikas Publications, 2007.
6. Raghunathan, V., "Stock Exchange and Investment", New Delhi, Tata McGraw-Hill Publishing Co., 2008.
7. National Stock Exchange of India Ltd. (NSEI), 'Investor Grievances', Arbitration, Fact Book 2006, June 2006
8. Sahoo, M. S., "An Overview of the Securities Market in India", SEBI Bulletin, Volume 3, March 2005.
9. Shah, Mahesh, "A Care for Depositories in India", The Management Accountant, April 1996.
10. Shah, Ravi, "Understanding Dematerialization", The Management Accountant, 2002.
11. Vikamsey, Kamlesh, "Capital Market Future in India", The Chartered Accountant, Volume 51, July 2002. Investor Grievances, Arbitration, Fact Book 2006, National Stock Exchange of India Ltd. (NSEI), June 2006,
12. Capital Market Future in India, Vikamsay, Kamlesh, The Chartered Accountant, Volume 51, July 2002, Page no. 89.
13. Investor Grievances, Arbitration, Fact Book 2006, National Stock Exchange of India Ltd. (NSEI), June 2006, Page no. 103.
14. Gopalsamy, N., Capital Market (The Indian Financial Scene), Macmillan India Ltd., New delhi, 2005, Page no. 386
15. Nishanth, P.V., "Dematerialisation in the Indian capital market", Sept. 2000, Page no. 1.
16. Gopalsamy, N., Capital Market (The Indian Financial Scene), Macmillan India Ltd., New delhi, 2005, Page no. 386



Periodicals and Annual Reports:

1. NEST Update, Mumbai: NSDL;
2. Understanding Dematerialisation, The Management Accountant, M. M. Chikodikar;
3. Dematerialisation, P. Mohana Rao;
4. Dematerialisation in the Indian Capital Market, P. V. Nishanth.
5. Annual Reports of NSDL;
6. Annual Reports of Securities and Exchange Board of India (SEBI);

Websites :

- a. www.sebi.gov.in
- b. www.nsdindia.com
- c. www.cdslindia.com
- d. www.depositoryindia.com
- e. www.rbi.org.in
- f. www.nseindia.com
- g. www.bseindia.com