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Short Review Paper

The impact of technology on the trading of securities

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Abstract

In recent world, Technology is playing major role in every fields and also in field of trading, dealings and decision made quickly by the help of electronic trading, but securities and regulations related to trading properly handled by SEBI. In India for security and regulation of trading has controlled and properly regulated by an organization which has known as SEBI (Securities and Exchange board of India).The ministry of Finance, Govt. of India has transferred most of the power under the security contract act 1956 to SEBI. The SEBI act 1992, was enacted to empower SEBI with statutory powers. For protecting the interests of investors in securities, promoting the development of the securities market and regulating the securities market. February 2000 witnessed the introduction of stock trading on the internet in India. Currently ICICI web trade, Sharekhan, Kotak street, Geogit securities, Investmart and other offer internet trading. To do internet trading you have to register yourself as a client with the internet broker, apart from having a computer, a modem, and a telephone connection. You also have to keep a minimum deposit in the bank account with the internet broker which the brokers directly debit or credit. Given the short coming of broker intermediated trading there is a worldwide trend toward electronic trading. In India the first step toward electronic trading in bonds was taken when RBI's negotiated dealing system (NDS) was introduce in Feb 2002. NDS was meant to be used for bidding in the primary auctions of Govt. securities conducted by RBI as well as for trading and reporting of secondary market transactions. So for the proper utilizations of developing technologies which related to trading, SEBI has taken amendment in 2002 for proper securities and regulation of trading.

Keywords: SEBI, trading, securities.

Introduction

Each stock exchange has certain listed securities and permitted securities which are traded on it. Members of the exchange alone are entitled to the trading privileges. Investors interested in buying and selling securities should place their orders with the members of the exchange .A stock exchange is an institution where securities that have already been issued are bought and sold. Presently there are 23 stock exchanges in India, the most important once being the NSE and BSE[1]. Securities that are listed on various stock exchanges and hence eligible for being traded there are called listed securities. Recently about 10000 securities are listed on all the stock exchanges in India put together. The securities issued by central govt., state govt., semi govt. bodies port trust, public sector corporation and financial institutions like IDBI, state financial corporation etc are known as govt. securities or gilt-edged securities, govt. and its various institutions raise money from the market to meet their short term and long term needs. The issue various kind bonds and other securities. Govt. securities form and important part of the stock market in India. The brokers are registered member of the stock exchange through whom investors transact. There about 10000 plus brokers in India.

Review of literature: The securities contract act was enacted in 1956 and come into force on 20th Feb 1957. To supplement the act securities contact rules were framed in 1957. It regulates the business of trading in securities and option dealings on stock exchange, provide recognition to stock exchange and deals with other allied matters. The SEBI act 1992 envisages transfer of certain powers which were earlier exercised by the central govt. under the security contract act to SEBI. Contract means a contract for or relating to the purchase or sale of securities. The security market is the market for equity, debt, and derivatives. The structure of the securities market is shown[1]. Computers have revolutionized the trading of securities and the stock market is currently in the midst of a dynamic transformation. It is clear that the market of the future will not resemble the markets of the past.' According to the Securities and Exchange Commission, investors have unprecedented access to information about companies and their stocks. The Internet provides current stock prices, company earnings reports, and breaking news about stocks and the companies issuing those stocks. Financial advisers can relay current developments to their clients, and companies can track the performance of their stock in real time. The result of this nearly instantaneous information is better-informed investors, traders and advisers.

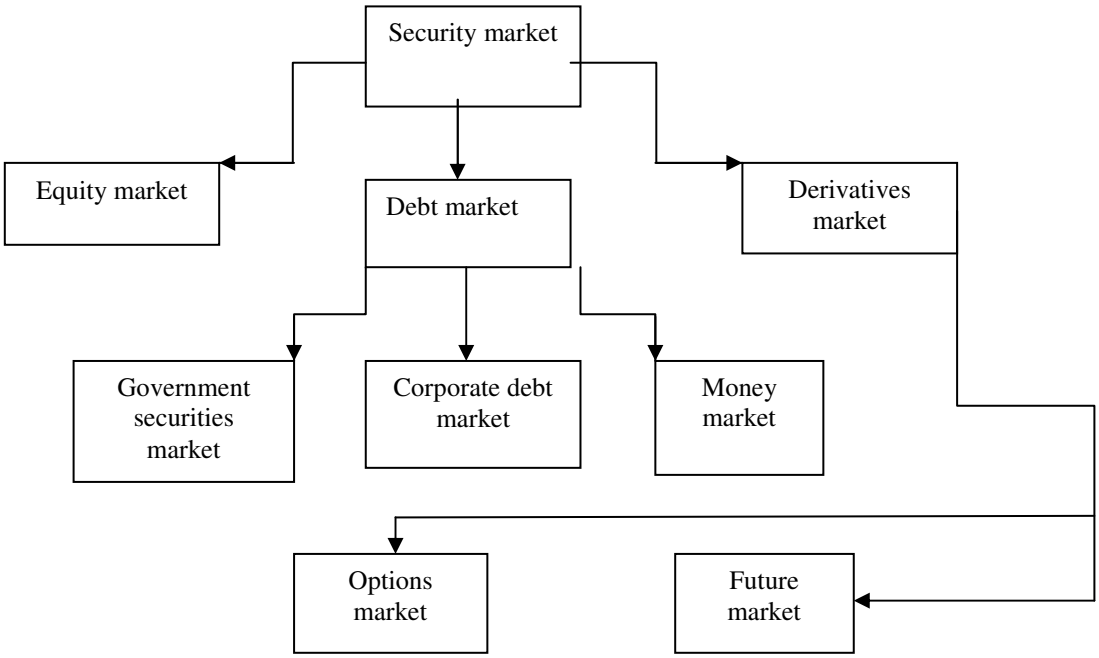

Figure-1: Structure of the securities market[1].

Methodology[2,3]

Objectives: To portray accurately the characteristics of a particular individual, situation or a group (studies with this object in view are known as descriptive research studies).

This study on review of literature on retention initiatives undertakes the following objectives: i. To find out the various research works that have been done in the area of trading of securities. ii. To highlight the various factors which affect technology of trading of securities. iii. To explore the processes of technology related to trading of securities.

The study is descriptive in nature and only secondary data has been used in it. The secondary data consist of the books and various research journals.

Secondary data sources can be broadly classified into internal and external secondary data sources. The internal secondary data are generated within the organization and the external secondary data are obtained from the sources available outside the organization. I have used external secondary data for research paper. The external secondary data can be further classified into the following four groups: books, periodicals, and other published material; reports and publication from government sources; computerized commercial and other online data sources, and media sources.

Trading processor of govt. securities

Trading in govt. securities takes place by following methods: i. Direct sale of securities by public debt office of the reserve bank of India: whenever the reserve bank of India intends to sell govt. securities its public debt office issues a notification specifying the date of opening of the issues for subscriptions. The issue is kept open for a few days. The securities may be available on tap i.e. any time one wants to purchase, till the continuation of the scheme. The RBI can also authorize other banks to sell securities on its behalf. ii. Through securities general ledger account: under the system the bank which wants to deal with the RBI maintains a securities general ledger account with the RBI. The dealing bank has to fill up the prescribed SGL form when doing any transaction of sale or purchase with the RBI. The SGL form helps in maintenance of securities ledger account as it contains particulars about date and value of the transaction which has taken place. iii. Through issue of bank receipt: sometimes the banks issuing the govt. securities may not actually issues securities but issue a receipt to the purchaser that it holds securities of so much value with it on the behalf of the purchaser. This system avoids the physical transfer of securities .it also does not require filling up of SGL form and submitting them to the RBI. This method is adopted when the transaction of sale has a condition that the securities will be bought back at a future date at a pre determined price. It is also called “repo” transaction, a short form of repurchase agreement.

Govt. securities are marketed through a network of agents of LIC, UTI, general Insurance Corporation, post offices, banks and private sector mutual funds. The national stock exchange (NSE) has also started trading in govt. bonds.

The stock issuing company also approaches the institutional underwriters like LIC, UTI, ICICI and IDBI, to ensure the marketability of an issue. The underwriters like LIC and UTI purchase securities from the New Issue Market to hold these in their own asset portfolio[4].

Computer systems record buy and sell orders so quickly that investors can know their price and other details within seconds. In addition, because electronic trading eliminates handling of transactions by people, errors have become infrequent. Though the long-established standard of three days remains in effect for verification that money has changed hands and the shares have been recorded in the buyer's account, in practice, electronic trades accomplish all of that in seconds[5].

Technology and the trading of securities[6]: Technology has been the backbone of the exchange. Providing the services to the investing community and the market participants using technology at the cheapest possible cost has been its main thrust. NSE chooses to harness technology in creating a new market design. It believes that technology provides the necessary impetus for the organization to retain its competitive edge and ensure timeliness and satisfaction in customer services. 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 energize participation from about 2,500 VSATs from nearly 200 cities spread all over the country[7].

Its trading system called National Stock Exchange for automated trading (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. For all trades entered into NEAT system, there is uniform response time of less than 1.5 seconds[6]. ''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 fiber link with its main site at Mumbai. This site at Chennai is a replica of the 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 STM-4 (1.24 GB) high-speed links to keep both the sites all the time synchronized with each other[7].

Maintenance of sensex and index closure alogorithm[8]

During the trading hours index is calculated and disseminated on real time basis. This is automatically based on the trading on 30 scrips of Sensex. The BSE index cell maintains the index with the broad index policy framework, as decided by the BSE index committee.

The closing value of Sensex, on all trading days, is calculated by taking the weighted average of trades on all 30 scrips of the Sensex, In the last 30 minutes of the trading session. If particular scrip of Sensex 30 does not trade in the last 30 minutes, then the last price at which it is traded is considered for calculating the closing value of the index. If any particular scrip does not trade at all on a given day, then its closing price on the day it last traded comes in for calculation of the index. The index closure algorithm prevents any manipulation in the market.

Companies listed on the Stock Exchange should be mandated to provide timely electronic information on their operations such as quarterly and annual financial statements on their websites thus making them available to all investors. This would enable the market learn, absorb and act on information quickly leading to market efficiency and precise pricing of securities[9].

Electronic communication networks: Large institutional investors may prefer to trade with one another directly, rather than send a large order to the floor of the exchange where they tend to suffer market impact costs. One way to do is through electronic communication networks (ECNs), which are electronic trading system that match buy and sell orders at specified prices. In 1997, the securities exchange commission allowed trading through ECNs. ECNs-instinct and island ECN being the two most prominent ECNs-have captured nearly 35 to 40 percent of the NASDAQ-listed stock volume and represent an important source of competition[1].

Development of e-companies

The increased use of the internet in the 1990s caused a surge of websites dedicated to selling products or services online. These companies didn't always make a profit but concentrated on building up traffic to their websites and faster and better connectivity. As connectivity to the internet grew Venture capitalists became interested in investing in the what they saw as the future market. In 1999 many dot.com companies such as 'lastminute.com' and ''boo.com' were able to make initial public offerings of their stock at high prices because of all the hype surrounding them. The London stock exchange was buzzing with this new exciting flotation. Choosing the path of "growth over profit" requires ever-increasing amounts of capital and it wasn't long before what is referred to as the "dot.com bubble" started to burst. Today practically the whole population has access to the internet but back then not so many people owned PCs and there was mistrust about buying online. Boo.com was one of the companies to go into receivership after spending over £100 million in just 6 months. Ernst Malmsen founder of Boo.com said later "The internet was new back then: we were the pioneers. Today the technology is so accessible– "Lastminute.com along with Amazon and Google managed to stay afloat despite their share prices plummeting in the crash by riding the storm. Many people believe that all the speculating around the dot.com bubble helped to build the internet we have today.

Growth of stock market technology[10]

Electronic trading has encouraged the phenomenon of high-frequency trading. People using this trading style buy and sell stocks within the same day, sometimes executing a full buy and

sell cycle within minutes. Though this gave rise to what is commonly called "day trading" for individuals, the true impact comes from institutional investors who initiate trades in millions of shares in a matter of moments. This can trigger a buying or selling frenzy among other investors who want to participate in what they see as a trend developing in a particular stock. This type of trading was unavailable when trading was much slower[10].

Trading with Electronic media

In today's world trading has done with the help of Electronic media, which generally known as e- trading (paperless trading). This type of trading of securities, field of IT (information technology) has played huge role between buyers and sellers, IT sector played major role with the help of data, calculations of past, present and future aspects of trading which has much better than telephonic dealing and made more accuracy in human decisions. At present world, highly fast super computers are available which works on most of calculative data in same time and given more accuracy in dealing of trading of securities.

Algo Trading: It is much difficult for human being to calculate the data and making decision for trading in same time, so for calculations of data and dealing procedure Computers are playing huge role in present scenario. For this type of automation work through Computers, algorithm has generated for trading, sometimes it is called basic software of trading also known as "algo trading", which saves more time and making decision faster comparing to human work.

Effects of technology on Trading

Market liquidity: With the help of electronic trading different types of buyers and sellers has connected each other very quickly and no matter how long they are located in country, which makes higher liquidity in market.

Competitive nature: Real time management through electronic trading, and IT sectors making highly competitive nature for trading of securities.

Transparency in Market: All types of data and market history of trading are easily available through E-trading which makes more transparent dealing between buyers and sellers.

Accuracy dealing: Field of IT and "algo trading" create great dealing experience in trading of securities, but finally men's discretion is higher than technology in case of buying and selling.

Major Findings of the Study: i. Presently there are 23 stock exchanges in India. The national stock exchange (NSE), and the Bombay stock exchange (BSE) are the leading stock exchanges in the country[1]. ii. NSE introduced screen based trading in 1994. In 1995 electronic delivery facilitated by depositories was introduced. From 2002 rolling settlement was introduced in a phased manner. These three major developments transformed the character of the Indian stock market[1]. iii. Sensex and nifty are two most popular stock market indices in India[1]. iv. NYSE and NASDAQ are the world biggest exchange respectively in term of market capitalization and market turnover[1]. v. The securities and exchange board of India (SEBI), the regulatory body for the capital market, has taken important creations and amendments in rules and regulation about securities during last few years to reform the capital market in India. vi. In India, the first step toward electronic trading in bonds was taken when RBI's negotiated dealing system (NDS) was introduced in Feb 2002[1]. vii. Broker intermediated trading suffers from certain weaknesses: It generally takes more time to conclude a deal. It lacks adequate transparency. It entails higher transaction cost because of larger offer spreads and broker commission[1]. viii. Currently ICICI, Webtrade, Sharekhan, Kotak street, Geogit securities, Investmart and others offer internet trading in India[1].

Suggestions and Recommendations: Global economy raised day by day and their typical processes and securities totally depends on Technology which is in developing condition, so it's time to adopt new innovative things related to technology for better growth in our economy compare than to international stock market. Some suggestions and recommendations described below related to technology for trading of securities: i. Evolution of technology in global market, it's not just part of any regions and didn't generate in any particular time period, their development and research is a continuous process, so most important things to contribute technology worldwide, after research and analysis of technology related to stock market could be accepted by global economy. ii. It is most important fact that, SEBI has govern our trading of securities, and technology played a major role in field of stock market, but it's not easy task to handle and accept new innovations in technology which has directly related to processes of trading of securities. Research and analysis of that field in particular time period has to be done regularly. iii. According to demand of new technology in field of trading of securities with respect to time, SEBI should be amendment in rules and regulations for adopting innovative technology and for proper governance in stock market. iv. In Indian society, most of people didn't deal with stock market due to lack of knowledge and economical awareness. So stock market should be generating innovative technology for common people who will be easily understood process of trading of securities.

Conclusion

Technology has the backbone of the Exchange. Providing services to the investing community and the market participants using technology at the cheapest possible cost has been its main trust.

NSE chose to harness technology in creating a new market design, it believes that technology provides the necessary

impetus for the organization to retain its competitive edge and ensure timeliness and satisfaction in customer service.

In Global stock market, technology has utilized in different manners to achieve a better response in Exchange, and development about it is a continuous process, which helps to improve Global stock market in future.

SEBI govern the overall stock market in India, technical processes for trading of securities totally controlled and regulated through rules and regulations and proper amendment in laws takes place according to situations and time by SEBI.

The national stock exchange (NSE) and the Bombay stock exchange (BSE) are the leading stock exchanges in India, and involves major Exchange activities in Indian Stock Market.

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