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Growth and Promotion of Information Technology in Stock Market in India

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Abstract

Information Technology is making profound inroads into the very fabric of our society and our economy as a nation in the global community. It is a decisive technology shaping the future. Information technology is a high tech industry, which requires a great deal of brainpower. It is highly versatile. After all, any economy consists of manufacturing and services. In every area of activity like manufacturing or services where are applies IT, one is bound to see the advantages in terms of productivity and savings in cost and energy. It has also helped to control inflation. The internet has really been the harbinger of e-commerce. In a present area, if there is any technology whose time has come, it is information technology. It is a decisive technology shaping our future. The success in today's competitive and complex environment depends on speed and information technology is designed for speed. Because of information technology, the world has become a global village. The Indian economy has got more closely linked with the global economy. Being a hi-tech industry, information technology requires a great deal of brain power. Human resources are the most vital resources in the technology. One of the most important economic developments in recent years has been the rapid increase in the IT sectors, computing and communication, share of investment activity and of the gross domestic product. The globalization of financial markets draws the e-business figure. Technological innovation has the power to change the dives of millions in one take. Modern communication, the deregulation and privatization of government owned business, competitive pressures to increase the speed of flow of trade, reduced the paperwork and the emergence of global financial system have all helped transform local drug operation into global enterprise. The study reveals that due to tremendous growth of information technology, trading in stock market has become easier and transparent.

Keywords: *Deregulation, E-business, Globalization, Information Technology (IT), Privatization.*

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1. INTRODUCTION

Information Technology is making a great impact on the industry, trade and business. By innovations, growth in computer power, worldwide networks and growing electronic factories, it enables the seamless flow of information and its usage by various sections and segments of the business. IT based business operations are the standards today. It not only helps in defining new organizations, products, services and ways of satisfying the existing customers rather it is exploring a newer ways to explore the needs of customers and suggest innovative ways to segment the market and satisfy them.

Internet revolution has paved the way for innumerable online activities. With the implementation of the knowledge of database logics, modern languages like SQL, Java, Oracle 8i etc., it is now possible to find online solutions to various problems. Some such problems and their online solutions are enumerated below like e – interviews, e - job advertising ,e - information service, e - selling and e - purchasing, e – judiciary, e – training and e – conferencing. Online commerce is an attractive and challenging job. A large number of companies with their variety of products interact with various business partners in several ways. Each methodology of commerce may demand a different dealing tactic.

After economic liberalization and globalization, information superhighways have played a key role. The IT industry has grown at a much faster rate and has given birth to many subsidiaries like e-commerce, m-commerce technology and e-business etc. Today, the world has been converted into an E-world. With the advent of computers in day-to-day life and evolution of internet, the slow paced traditional business is now being replaced by e-business which is instantaneous and extends over the globe. It is phenomena used for conducting, managing and executing business transactions using computer and telecommunication network. New technologies are budding at astonishing pace. Computers have added a new dimension to forecast as well as to analyze sales in an organization. They have enabled the business decision makers to be more logical & rational. As a result, the chances of committing gross mistakes have gone down. Information technology has opened several new avenues of employment and progress. There are a large number of organization and industries which are regulating their activities through e-commerce.

The study is based on primary and secondary data. The main sources of secondary are journals, periodicals, newspapers, annual reports of IT-DIT, IT tenth five year plan-MIT etc.

2. HYPOTHESIS

In this research the following hypothesis have been tested:

a. Information technology is emerged as an effective instrument in shaping the Indian stock market to become more transparent and developed.
b. It helps in controlling and regulating the financial frauds, crisis, corruption and misappropriation which prevailed in securities market today.

3. SIGNIFICANCE AND OBJECTIVES OF STUDY

Information Technology has been a significant element in every facet of life. Thus, it would be technically true that the classical economy theory is now replaced by the digital economy by a new component as information resource besides land, labor & capital. Even in the not so distant

future, information management can substantially improve the quality of life in Indian context. It has opened several new avenues of employment and progress. Computer based information management system allowing a financial institution to collect information from different sources and develop a composite picture about its customers, its market position in different financial centers and its net exposure in those markets.

The main objectives of this study are as under:-

- To examine the technologies emerging in Information Technology.
- To analyze how the information technology is shaping our lives.
- To analyze how the information technology is in expansion of Indian business and public services.
- To know the future of information technology.
- To find out the suggestions for expansion of information technology.
- To study the role & effectiveness of information technology in Indian business and stock markets in India.

4. RESEARCH METHODOLOGY

The paper is based on secondary data and some discussion with eminent persons in the securities market. Information technology is emerged as a hot topic today which has added in enhancing Indian stock market to be compared with other foreign markets. It plays a key role in tracing the financial frauds and misappropriations in stock market in India. However, IT helps the Indian stock market to become more prominent and transparent today.

5. INFORMATION TECHNOLOGY'S ROLE TO REGULATE STOCK MARKET

In the 21st century the business world is marked by drastic changes. These changes are paced by continuous innovations in computer & telecommunicating technologies. The choice of a relevant IT is a crucial decision as it is bound to have a long term & lasting impact on the future of the enterprise. Up-gradation of technology helps in increasing productivity, reducing cost & in improving total quality. IT is being helpful & has a great impact in business.

- IT can help to identify the critical areas for competitive advantage of business organization.
- Competitive advantages may be achieved by various techniques is business with the help of IT.
- Helps in managing strategic alignment of critical business process.
- Decision-making and operational control by managers has been improved by IT.
- IT can help in maintaining the changing relationship with customers, suppliers, trials, potential new entrants, etc.
- IT in business results in improved communication, decreased costs, reduceing decision making time, monitoring the competitors and better control on transaction.
- IT can be used as innovation in functioning of the complete business system during strategic business planning.
- IT is helpful in increasing the speed of flow of trade, reducing paperwork & emergence of global financial system.

6. MODERN TRENDS OF IT IN INDIA

The help of online database on both national and international information can be accessed which he valuable tool for making decisions. Expansion of e-commerce, e-business, m-commerce etc has emerged as a sunrise market for the software industry business. The modern trends of IT in India are as follows:

6.1 E-commerce

Electronic Commerce is doing business online or selling and buying products & services through Web storefronts. The use of computer is a primary tool to perform basic business operations. The Internet is the primary communication mode for electronic commerce. To provide foundation to this commerce, the electronic data interchange (EDI) is a strategically means. Thus, the business transactions between customers and suppliers, and all operations of a firm are facilitated. The functional areas covered by it are: finances, information services, human resources, manufacturing, and marketing. Electronic business also requires the firm's interaction with the environmental parties such as government, competitors, labour unions etc.

E-commerce has opened several new avenues of employment and progress. This new offspring is a blend of commerce, electronics and management. If electronic means are applied to commerce, the efficiency of commerce enhances. Here electronic imply the internet. In pursuing commerce, various technical methods like middleware, than section server etc., are emphasized upon instead of conventional methods of 'ordering', 'payment' etc. Also for efficient use of electronics, the knowledge of various software e.g., Java Beans, Servlet, COM/d, Com etc are required.

6.2 M–Commerce

M- Commerce (M-Com) is a type of e-commerce that enables the users to access the internet through handheld wireless devices. Buying & selling, the services are accomplished by means of cellular phones, personal data assistants such as palm pilots and their combination. The emerging technology that has made m-commerce as an advanced business mode is WAP (Wireless Application Protocol). It utilizes the mobile handset devices equipped with web-ready micro-browsers. M-Commerce has a great market potential due to its faster and more secured wireless working as compared to the working of wire line e-commerce. It saves time and money. It is quick and safe also due to mobile speed passwords. For example, in mobile banking, the customers can access their accounts through handheld devices from anyplace. They need not sit in front of their computer (having Internet connectivity). They can pay their bills, can see the stock quotations and trading and can acquaint themselves with any desired information from anywhere. They can even know about traffic bottlenecks, if any, in their movement way.

7. STOCK TRADING AND INFORMATION TECHNOLOGY REVOLUTION

Information technology has made a tremendous development in respect of our approach at a mass level. It opens the door of several avenues as well as has brought in several threats, which should be analyzed carefully. Due to development in technology, the information can be transferred from one place to another in very short span of time, earlier which required lot of time. Transfer of large information and storing capacity for a long period also has some draw backs, inherent in the process itself. For example, manipulation of message is very easy and it requires small level of technical literacy. It is also observed that master in a subject may not be

many times able to express his views effectively as compared to a person having less knowledge of subject but more computer literacy, who can make better presentations. Here, the knowledge part of the core subject has been compromised with proficiency with technology. Whole economy of the world is very much dependent upon the technological advancement. This increased competition in each segment of the market.

The Internet makes the stock exchange accessible in the global market. Being more accessible will give them the opportunity to pick up a bigger market share, and give them a greater market value. There has been a migration from a Screen based trading system for government securities to an order matching system so as result in better price discovery and more transparency in the market related transactions in government securities Negotiated Dealing System (NDS)- which has been in use for many years now, has been enhanced to provide for changing market and regulatory requirements. Clearing Corporation Of India Ltd., (CCIL) as a fully IT enabled entity providing for electronic transaction processing as well as reporting has enabled the market to grow in depth and coverage as well. Use of the Multi-Lateral Net Settlement Batch facility for effecting the settlements arrived at by various clearing systems (such as the Stock Exchanges), through the RTGS mode Pilot projects entailing the use of Multi Application Smart cards have not only yielded satisfactory results; their usage for financial inclusion has opened up new vistas for their wide spread use across the country. Use of credit transfer based RTGS transactions by brokers, constituents etc. pertaining to the funds leg of secondary market transactions. To provide an interactive and user friendly service, banks and financial institutions have adopted the most recent technological trends. Queuing at banks is a thing of the past; now-a-days customers can enjoy various facilities at the doorstep of their banks and at other locations. Phone banking and SMS banking services can also keep customers updated with the status of their money, investments and offer an array of additional services.

8. TRENDS AND OPERATIONS IN SECURITIES MARKET

Year 2010-11 belongs to activities in primary market -which witnessed record number of Initial Public Offerings (IP0s)/ Follow-on Public Offerings (FPOs) and new debt issues (Non-Convertible Debentures/ Bonds) including the biggest ever IPO of Coal India which came out with issue size of Rs. 15,199.4 crore in October 2010. In debt segment, State Bank of India, the country's largest bank, came out with debt issues in multiple trenches which were subscribed by investors multiple times. Secondary market segment showed signs of recovery of Indian corporate from global financial crises witnessed in 2008. The recovery phase was clearly reflected in substantial increase in average market capitalisation, revenues and profit after tax of top 500 listed companies at NSE and BSE. With growth in domestic demand being intact, Indian companies also showed significant improvement on export front in 2010-11 despite the fact that the global economy is still recovering from financial crises. The cumulative value of exports for the period from April, 2010 to March 2011 to US $ 245.8 billion (Rs. 11,18,822.8 crore) as against US $ 178.7 billion (Rs. 8,45,533.6 crore) registering a growth of 37.5 per cent in Dollar terms and 32.3 per cent in Rupee terms over the same period last year. During 2010-11, Foreign Institutional Investors (FIIs) made record investments of Rs. 1, 46,438 crore in the Indian market (equities and debt combined) surpassing the previous high of 2009-10 net investments of Rs. 1, 42,658crore. This reflects their confidence in Indian securities market and better growth potential of Indian

economy as compared to many developed and emerging economies. There was substantial improvement in the resource mobilization by corporate in the primary market In 2010-11 as compared to that in 2009-10, however, unlike previous year, mobilization of resources by mutual funds was less than redemptions which resulted into substantial net outflow of funds from mutual funds.

9. INFORMATION TECHNOLOGY (IT) SHAPING INDIAN STOCK MARKET

Traditionally stock trading is done through stock brokers, personally or through telephones. As number of people trading in stock market increase enormously in last few years, some issues like location constrains, busy phone lines, miss communication etc start growing in stock broker offices. Information technology (stock market software) helps stock brokers in solving these problems with online stock trading. It is an internet based stock trading facility. Investor can trade shares through a website without any manual intervention from stock Broker. In this case these online stock trading companies are stock broker for the investor. They are registered with one or more Stock Exchanges. Mostly online trading websites in India trades in BSE and NSE. Installable Software Based Stock Trading Terminals and Web (Internet) Based Trading Applications are two different type of trading environments available for online equity trading.

9.1 Installable Software Based Stock Trading Terminals

These trading environments require software to be installed on investor's computer. This software is provided by the stock broker. This software requires high speed internet connection. These kind of trading terminals are used by high volume intraday equity traders.

- Orders directly send to stock exchanges rather than stock broker. This makes order execution very fast.
- It provide almost each and every information which is required to a trader on a single screen including stock market charts, live data, alerts, stock market news etc.

9.2 Web (Internet) Based Trading Applications

This kind of trading environments doesn't require any additional software installation. They are like other internal websites which investor can access from around the world through normal internet connection such as:

- Real time stock trading without calling or visiting broker's office.
- Display real time market watch, historical data, graphs etc.
- Investment in IPOs, mutual funds and bonds.
- Check the trading history; demat account balance and bank account balance at any time.
- Provide online tools like market watch, graphs and recommendations to do analysis of stocks.
- Place offline orders for buying or selling stocks.
- Set alert to inform you certain activity on the stock through email or sms.
- Customer service through email or chat.

10. FUTURE GROWTHOF INDIAN ECONOMY AND STOCK MARKET

The future of Indian stock market is heavily dependent upon the following three parameters, which are discussed in the sub-sections given below:

- Future growth of the Indian economy, annual inflation, and productivity related improvements.
- The in-flow and out-flow of Foreign Institutional Investment.
- Any movements of price-earnings ratios.

India's economy grew at an annual rate of from 9% to 10% last five years from 2005-2010; during the agriculture averaging around 5% per year. India also survived from the Great Recession of 2008-09 due to minimal exposure of financial sector to sub-prime lending and domestic demand driven growth. According to our estimates, its economy's average annual growth rate during the two years, 2008-10, is likely-to be around 7% (in real terms), with the current fiscal year outperforming the last one by over 1 %. Favorable demographics, high savings rate, rising middle class, and underleveraged households suggest that domestic demand, and the economy, will continue to grow strongly. Taking a long-term view and assuming an exchange rate of 46 INR to 1 USD, an annual growth rate of 7% in 2009-10 and 8.5% during 2010-11, the market sentiment being overly buoyant, an inflation of 6% per year, the size of the Indian economy in nominal terms is likely to be USD 1,250 billion in 2009-10, USD 2,400 billion in 2014-15, and USD 4,640 billion in 2019-20. This implies a cumulative nominal annual growth of 14% and an approximate four-fold increase in the coming decade.

During 2009-10, the hi-tech services and products include information technology (IT) and application development, business process outsourcing (BPO), knowledge process outsourcing (KPO), drug research and clinical research outsourcing (CRO), engineering services outsourcing (ESO), software and solutions related to the consumer Internet, software as a service (SAAS), open source, software services, and telecommunications (both wireless and wire-line) products and services are expected to grow at an annual rate of 17-18% annually. There would be considerable fluctuations in the growth rates over the years and within the sub-components of each group, but each group would continue to claim an important place in dictating the SENSEX level. Since productivity in Public Sector Undertakings (i.e., PSUs or companies where the federal and state governments own more than 50% equity) and family owned businesses has improved at a very fast pace, these two sectors have become particularly important for the investing community. For example, Evalueserve's analysis shows that on an average, the productivity improvement for the 500 companies listed in BSE-500 was approximately 8% per year during 2005-2011, and it was more than 10% per year for most family-owned businesses. These improvements were mainly driven by penetration of IT in all sectors and management and organizational innovations.

For PSUs that are listed in the Indian stock markets, productivity improvements were significantly higher. For example, during March 2005, the average net profit per employee for the PSUs that are a part of BSE-PSU index vent up from USD 1,000 per employee to USD 11,500 per employee and the average revenue per employee went up 8 times during the period. Although these figures are quite impressive, according to our estimates, an additional 80% in productivity improvements would occur during 2005-15 on an average for a typical firm listed in the Indian stock markets. Clearly, such an improvement of 6% a year by itself would not increase the valuations of these firms since the productivity of other good competitors would proportionately also increase. Nevertheless, such a productivity increase would help these firms compete more effectively in a global market place. (Table 1)

Table 1 - P/E Ratio for BSE during 2005-2011

Year	Sensex P/F	BSE-100P/E	Sensex Closing Value	BSE-100closing Value	Number of Companies
Mar 31,05	16.5	13.72	6.492.82	3481.86	4.75
Mar 31,07	19.84	17.22	13.072.10	6587.21	4.82
Mar 31,09	12.68	14.22	9.708.50	4942.51	4.929
Mar 31,10	18	17.5	15.622	8378	5132
Mar 31,11	22.8	18	50.136	30.247	8146

10.1 Predictions Regarding the Indian Stock Markets during 2005 and 2015

As shown above table, during April 2005 and March 2015, companies listed in SENSEX, BSE-100, and BSE-500 are expected to grow at an annual average rate of 11% (in real terms) and 17% (in nominal terms).

In March 31, 2005, the firms in SENSEX were trading at an price / earnings ratio of 16.05 whereas they were trading at an average price earnings ratio of 22.8 during 1991 and 2005. The analysis shows that by December 2015, these firms (that are part of SENSEX, BSE-100, and BSE- 500) are likely to trade at an average price/earnings ratio of 22.8 also, partly because of volatility and partly because the annual growth rates of these companies is quite high. Since these earnings are computed on the "last twelve month" basis and since the companies in India are growing more rapidly- as much as 7-8% more- than their counterparts in other countries. It is believed that the SENSEX, BSE-100, and BSE-500 will trade at an average price/earnings ratio of 22.8 (during 2005 and 2015).

11. ANALYSIS AND FINDINGS

11.1 Problems

- Most of the Investors are not aware about the new trends and technologies emerging through information technology in stock exchange today.
- There is no significant effect of IT in protection of Investor's interest due to presence of excessive speculation risk.
- Cyber Crime has become the major problem in financial markets today.

11.2 Solutions

- Financial guidance should be provided to the investors to help them nationally while making their investment decisions.
- Introduction of place circuit breakers system which trade in stock market when prices move after a specific level can help in reducing an excessive speculation risk for every investor.
- Web servers running public sites must be physically separate protected from internal corporate network to eradicate the problem of cyber crime.

12. CONCLUSION

Last but not least the tendency to adopt new technology is a very typical psychological tension of mind. With a great pressure one become ready to adopt new technology if he has no choice, otherwise the general tendency is to cope with the old technology or work with old technology for which people are habitual. So, the adoption of new technology is also difficult. All in all, the development of new information technology should be welcomed because it is the need of the

hour. And all of us should prepare ourselves to make it easier for us and should use it in ethical ways then only we would be able to survive in the global market.

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