# DEPOSITORY SYSTEM: ROLE IN DEVELOPMENT OF CAPITAL MARKETS IN INDIA

A Thesis submitted to the University of Hyderabad in partial fulfillment for the award of degree of

**DOCTOR OF PHILOSOPHY**

**in**

**MANAGEMENT STUDIES**

By

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# DECLARATION

I, BISHETTI RAMESH, hereby declare that this thesis entitled, "DEPOSITORY SYSTEM: ROLE IN DEVELOPMENT OF CAPITAL MARKETS IN INDIA" submitted by me under the guidance and supervision of Prof. V. MARY JESSICA is a bonafide research work which is also free from plagiarism. I also declare that it has not been submitted previously in part or in full to this University or any other University or Institution for the award of any degree or diploma. I hereby agree that my thesis can be deposited in Shodhganga/INFLIBNET.

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This thesis is free from plagiarism and has not been submitted previously in part or in full to this or any other university or institution for award of any degree or diploma.

Further, the student has the following publication(s) before submission of the thesis/monograph for adjudication and has produced evidence for the same in the form of acceptance letter or the reprint in the relevant area of his research.

1. B.Ramesh (2017), DEMAT Account Holder's Perception about the efficiency of Depository Services offered by Depositories: An Empirical Study. International Journal of Applied Financial Management Perspectives, Volume 6, Number 2, April – June' 2017.ISSN: 2279-0896.
2. B.Ramesh (2013), an overview of Factoring Services in India. ZENITH International Journal of Business Economics & Management Research, Vol.3 (3), March, 2013 ISSN 2249- 8826.

and has made presentations in the following conferences:

1. B.Ramesh (2017), "Exploring the Factors Influencing the Choice of Investors for Opening DEMAT Account while Selecting Depository Participants: A Factor Analysis Approach" International Conference on Applied Economics and Finance (ICAEF) GSIB, GITAM University, Rushikonda, Vishakhapatnam Andhra Pradesh, India January -28.

2. B.Ramesh (2015), A Study Of Investors Expectations Towards Depository Participants in Telangana State, international conference on ICRBS, IIT Roorkee ,NOIDA,India, December 4-6.

Further, the student has passed the following courses towards fulfillment of course work requirement for PhD:

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|---|---|---|---|
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| 2 | Research Methodology | 3 | Pass |
| 3 | Financial Management and Strategic Finance | 3 | Pass |
| 4 | Financial Services and SAPM | 3 | Pass |

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- **BISHETTI RAMESH**

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# ABBREVIATIONS

| | |
|---|---|
| ADR | American Depository Receipts |
| ALBM | Automated Lending and Borrowing Mechanism |
| ASBA | Applications Supported by Blocked Amount |
| BCF | Brokers Contingency Fund |
| BOLT | BSE Online Trading |
| BSE | Bombay Stock Exchange of India Limited |
| CDSL | Central Depository Securities Limited |
| CET | Coefficient of Elasticity of Trading |
| CSD | Central Securities Depositories |
| DEMAT | Dematerialization |
| DP | Depository Participant |
| DRF | Dematerialization Requisition Form |
| ETF | Electronic Trading Fund |
| FCCB | Foreign Currency Convertible Bonds |
| FII | Foreign Institutional Investors |
| GDR | Global Depository Receipts |
| IICM | Indian Institute of Capital Markets |
| IISL | India Index Services Limited |
| IPO | Initial Public Offering |
| ISE | Inter-Connected Stock Exchange of India Limited |
| KYC | Know Your Client |
| MCX | Multi Commodity Exchange of India Limited |
| NASDAQ | National Association of Securities Dealers Automated Quotation |
| NCFM | NSE Certified Financial Markets |

| | |
|---|---|
| NDS | Negotiated Dealing System |
| NSCCL | National Securities Clearing Corporation Limited |
| NSDL | National Securities Depository Limited |
| NSE | National Stock of India Limited |
| NYSE | New York Stock Exchange |
| OTCEI | Over the Counter Exchange of India Limited |
| PAN | Permanent Account Number |
| RBI | Reserve Bank of India |
| REMAT | Rematerialisation |
| RRE | Rematerialisation Requisition Form |
| RTA | Registrar and Transfer Agents |
| SAT | Security Appellate Tribunal |
| SBI | State Bank of India |
| SBTS | Screen Based Trading System |
| SCRA | Securities Contracts Regulation Act |
| SEBI | Securities Exchange Board of India Limited |
| SIP | Share issue Privatisation |
| SPSS | Statistical Packages for Social Sciences |
| UTI | Unit Trust of India |

## ABSTRACT

The need for setting up a depository system in India was realised after the huge irregularities in stock market transactions of 1992 brought out the limitations in the popular settlement system in the security transfer system. The importance of the depository system for the healthy growth of primary and secondary markets was also realised. It was felt that the depository system would reduce the time needed for allotment and transfer of shares to each shareholder. The depository system and paperless trading and settlement were introduced to increase the efficiency of the capital markets and eliminate the various problems associated with physical share certificates (heavy amount of paper work). These would also overcome the challenges posed by forged or fake certificates. The depository system has proved helpful for the investing public, the securities issuers and the intermediaries in the stock market. The depository legislation, providing for the establishment of depositories in India, was passed in the Parliament in August 1995. This has provided the framework for facilitating the dematerialisation, rematerialisation and book-entry transfer of shares in a depository. The first depository, NSDL was established in 1996, and the second, CDSL, in 1999. As per the Depository Act, India has been following the double entry depository system. The Depositories do not directly provide depository services to the investors. Instead, the Depository Participants provide the depository services to the investing community in the securities market.

This study will examines the role and impact of depository system in the development of the capital market in India. For the study, both primary and secondary data have been used. The primary data was collected from a total of 407 members of the investing community in the cities of Mumbai, Hyderabad and Gangtok through questionnaires. The secondary data was collected from 100 companies, those which have been continuously trading in the stock market from 1991.

The main aim of the study is to ascertain the impact of the depository system on the capital market and the investing community in India. The issues covered include how depository system impacted the capital market regarding return, number of shares, turnover, and number of traded, spread, and volatility of shares.

# CHAPTER –I

# INTRODUCTION

# CHAPTER-I

# INTRODUCTION

## 1.1 Introduction

Before 1991, the important investment area in India was the public sector. In those days, public sector was a monopoly, private investment was meagre and foreign investment was largely being discouraged. After 1991, due to the liberalisation of the economy, market forces' role was increased, foreign investment was permitted into stock markets, disinvestment policy was implemented in the public sector and private sector restrictions were liberalised. Therefore, the role of the private sector became important.

After more than 43 years of extensive regulation and colorless growth, the Indian government in 1991, interestingly opened the economy to market services and promoted innovation of financial services.

The introduction of electronic trading in India brought benefits such as simplicity in trading and identical prospects designed for market group of actors all over India, but the problems connected to settlement of trades such as elevated instances of appalling deliveries in addition to long settlement cycles continue. For solving this settlement problem and to provide an efficient and safe system of trading and settlement, the depository act was introduced in 1996. In the Indian capital market, depositories provided innovative dimension and modern scope for operating transactions in the new issue market as well as secondary market. Indian depository system provides a convenient, effective and efficient manner in paperless trade and also helps to avoid bad deliveries and extended settlement system in Indian stock market. Depositories provide services through depository participants, put in place to hold stocks of all companies in electronic form on behalf of the investors and maintain a record of all "buy", “sell", “bonus shares” and “dividend information” transactions.

## 1.2 Significance of the Study

Depository system the world over provides great convenience, safety and accuracy. This should normally result in increasing the breadth, depth and width of

the markets, increase investor base, and add to the profitability and satisfaction of the investor community. This study seeks to examine whether such impact is evident in the Indian context. To address the importance of the study, the research objectives outlined are indicated below.

## 1.3 Research Objectives

Based on the literature review, the broad objective of the study is to analyse the impact of the depository system on Indian stock market. The specific objectives of the study are as follows:

1. To investigate the impact of the depository system on liquidity, volatility, return and the market capitalization of Indian Capital Market.
2. To study the perception of investors on Depository System.

## 1.4 Research Hypotheses

In the light of the framed objectives, the researcher has set up the following 28 hypotheses and tested them with the help of statistical tools for the present study.

**$H_1$**: There is a significant difference in the index of the SENSEX before and after the introduction of the depository system.

**$H_2$**: There is a significant difference in the number of trades in the SENSEX before and after introduction of the depository system.

**$H_3$**: There is a significant difference in the number of shares of the SENSEX before and after introduction of the depository system.

**$H_4$**: There is a significant difference in the number of listed companies of the SENSEX before and after introduction of the depository system.

**$H_5$**: There is a significant difference in the market capitalization of the SENSEX before and after introduction of the depository system.

**$H_6$**: There is a significant difference in the return of the SENSEX before and after introduction of the depository system.

**$H_7$**: There is a significant difference in the volatility of the SENSEX before and after the introduction of the depository system.

**$H_8$**: There is a significant difference in the number of trades of stocks before and after introduction of the depository system.

**$H_9$**: There is a significant difference in the turnover of shares before and after the introduction of the depository system.

**$H_{10}$**: There is a significant difference in the number of shares before and after the introduction of the depository system.

**$H_{11}$**: There is a significant difference in the Spread I of stocks before and after the introduction of the depository system.

**$H_{12}$:** There is a significant difference in the Spread II of stocks before and after the introduction of the depository system.

**$H_{13}$**: There is a significant difference in the return of stocks before and after the introduction of the depository system.

**$H_{14}$**: There is a significant difference in the volatility of stocks before and after the introduction of the depository system.

**$H_{15}$**: There is a significant relationship between gender of the respondent and awareness about depository services.

**$H_{16}$**: There is a significant relationship between the marital status of the respondent and awareness about depository services.

**$H_{17}$**: There is a significant relationship between monthly income and awareness about depository services in India.

**$H_{18}$**: There is a significant relationship between the educational background and awareness about depository services in India.

**$H_{19}$**: There is a significant relationship between the profession of the respondent and awareness about depository services in India.

**$H_{20}$**: There is a significant relationship between the category (a trader or investor) of the respondent and awareness about depository services in India.

**$H_{21}$**: There is a significant relationship between the percentage of investment in securities of the respondent and awareness about depository services in India.

**$H_{22}$**: There is a significant relationship between age of the DEMAT account of the respondent and awareness about depository services in India

**$H_{23}$**: There is a significant difference between Mumbai and Gangtok with respect to liquidity and profitability.

**$H_{24}$**: There is a significant difference between Gangtok and Hyderabad with respect to liquidity and profitability.

**$H_{25}$**: There is a significant difference between Hyderabad and Mumbai with respect to liquidity and profitability.

**$H_{26}$**: There is a significant difference between Mumbai and Gangtok with respect to investors' level of satisfaction with the depository system.

**$H_{27}$**: There is a significant difference betweenGangtok and Hyderabad with respect to investors' level of satisfaction with the depository system.

**$H_{28}$**: There is a significant difference between Hyderabad and Mumbai with respect to investors' level of satisfaction with the depository system.

## 1.5 Scope of the Study

The present study describes the depository operation in the capital market. It analyses the impact of the depository system on liquidity, volatility, return, the volume of trade, the number of orders and market capitalization in Indian capital market. This work also examines the perception of investors on depository system. The study considered three cities in India. There is also another purpose of examining investors' experiences in the capital market and their opinion on depository system which will be taken as a part of the study; the geographical scope is confined to the specified cities in India: Mumbai, Gangtok, and Hyderabad.

## 1.6 Period of the Study

The main objective of the study is to study the impact of Dematerialization on the development of capital markets. Therefore, years immediately preceding Dematerilisation and 20 years thereafter have been taken into consideration and thus the secondary data time period taken is from 1991-2012.

## 1.7 Research Methodology

### 1.7.1 Type of Study:

The study is descriptive and explorative nature. This study is mainly based on the investors' perceptions and depository systems and qualitative and to some extent, quantitative data are also analysed.

### 1.7.2 Sources of Data

Both primary data, as well as secondary data, have been used for the study.

### 1.7.3 Primary Data

The research focuses on the investor perception of the depository system in the selected locations. The target group for the study is investors in the capital market. Primary data was collected from the broking houses including investors and traders. Some of the respondents were personally present in the broking houses. The rationale for choosing the three cities is Mumbai is the city which has highest DEMAT accounts, Gangtok has the lowest and Hyderabad is an average type of city with no extremities.

### 1.7.4 Secondary Data

The secondary data has been collected from different sources like books, journals, research reports,etc. The data about the share prices, the number of trades, turnover, and the number of shares and trading frequency are collected from annual reports of SEBI, RBI, BSE.NSE, ISE, IICM, NSDL, CDSL, etc.

## 1.8 Sample Size

### 1.8.1 Primary Data

The sample for the study consists of 407 investors' collected using purposive sampling technique, from the cities namely Hyderabad, Mumbai and Gangtok of India. The sample includes 73 investors from Gangtok (Sikkim), 167 from Mumbai (Maharashtra) and 167 from Hyderabad (Telangana) totaling up 407 investors as the complete sample.

### 1.8.2 Secondary Data

To measure the impact of depository system on liquidity, return and volatility in capital market, a sample of 100 listed companies were selected out of the total 2601 listed companies in BSE during 1991. The study covered a period of 20 years, i.e., from 1991 to 2012.The study adopted Simple Random Sampling method and the selected 100 listed companies became the representative sample for a detailed analysis.

**1.1 Table: List of Sample Companies**

| S.No. | Company Name | Symbols |
|---|---|---|
| 1 | 3 M India Limited | 3MIL |
| 2 | Baan Abshore Ltd | ABAN |
| 3 | ABC Bearings Limited | ABCB |
| 4 | ACC Limited | ACCL |
| 5 | Aditya BirlaNuvo Limited | ADIT |
| 6 | AkzoNobel Global India Limited | AKZG |
| 7 | Ambuja Cements Limited | AMBU |
| 8 | Amtek Auto Limited | AMTEK |
| 9 | Anant Raj Industries Limited | ANANT |
| 10 | Apollo Tyres Limited | APOLT |
| 11 | Apollo Hospitals Limited | APOLH |
| 12 | Ashok Leyland Limited | ASHOK |
| 13 | Asian Paints Limited | ASIAN |
| 14 | Astra Zeneca Pharma India Limited | ASTRA |
| 15 | Atlas Cycles Limited | ATLAS |
| 16 | Automotive Axcels Limited | AMAL |
| 17 | Bajaj Holding and Investments Limited | BHIL |
| 18 | Bajaj Steel Industries Limited | BSIL |
| 19 | Bala Krishna Industries Limited | BKIL |
| 20 | Batliboli Limited | BATL |
| 21 | Bayer Corp Sciences Limited | BCSL |
| 22 | Berger Paints Limited | BERG |
| 23 | Bharat Bijlee Limited | BHARB |
| 24 | Bharat Gears Limited | BHARG |
| 25 | Bombay Dyeing Limited | BOMB |
| 26 | Bosch Limited | BOSCH |
| 27 | Britannia Industries Limited | BRIT |
| 28 | Castrol Ltd | CAST |
| 29 | CEAT Ltd | CEAT |
| 30 | Chola Investment and Finance Company Limited | CHOL |
| 31 | Classic Diamonds India Limited | CDIL |
| 32 | Coromandel International Limited | CORO |
| 33 | Cosmo Films Limited | COSM |
| 34 | Cummins Ltd | CUMM |

| | | |
|---|---|---|
| 35 | DCM Limited | DCML |
| 36 | Deccan Cements Limited | DCL |
| 37 | Dewan Housing Finance Limited | DHFL |
| 38 | Dhanuka Agritech Limited | DAL |
| 39 | Digjam Limited | DIGJ |
| 40 | Eicher Motors Limited | EICH |
| 41 | Elecon Engineering Limited | ELEC |
| 42 | ELGI Equipments Limited | ELGI |
| 43 | Essar Ports Limited | ESSA |
| 44 | Everest Industries Limited | EVER |
| 45 | Food and Inns Limited | FIL |
| 46 | Gammon India Limited | GAMM |
| 47 | Great Eastern Shipping Company Limited | GESH |
| 48 | Glaxo SmithKline Pharma Limited | GLAXP |
| 49 | GlaxoSmithKline Consumer Health Care Limited | GLAXS |
| 50 | Grasim Suitings Limited | GRAS |
| 51 | Greave cotton Limited | GREA |
| 52 | Hind Motors Limited | HINDM |
| 53 | Hindalco Industries Limited | HINDA |
| 54 | Hindustan Lever Limited | HUL |
| 55 | Ingersoll-Rand (India) Limited | INGER |
| 56 | Indian Tobacco Company Limited (ITC) | ITC |
| 57 | Kesoram Industries Limited | KIL |
| 58 | KLRF Limited | KLRF |
| 59 | Larsen and Toubro Limited | LAT |
| 60 | Mahindra and Mahindra Limited | MAM |
| 61 | Mahindra Composites Limited | MAHC |
| 62 | Mahindra Ugine Steel Company Limited | MAHU |
| 63 | Nestle India Limited | NIL |
| 64 | Nilkamal Industries Limited | NILK |
| 65 | Orissa Sponge Iron &Steel Limited | ORIS |
| 66 | Pearl Polymers Limited | PEARL |
| 67 | PennerSteel Limited | PENN |
| 68 | Pfizer Limited | PFIZ |
| 69 | Philips Carbon Block Limited | PCBL |
| 70 | Prakash Industries Limited | PIL |
| 71 | PTL Enterprises Limited | PTL |
| 72 | Raasi Refractories Limited | RRL |
| 73 | Raymond Limited | RAYM |
| 74 | Reliance Industrial and Infrastructure Limited | RIIL |
| 75 | Reliance Industries Limited | RIL |
| 76 | Shakthi Finance Limited | SFL |
| 77 | Shalimar Paints Limited | SPL |
| 78 | Shriram Transport Finance Limited | STFL |
| 79 | Siemens Ltd | SIEM |
| 80 | Sintex Industries Limited | SINT |
| 81 | Siyaram Silk Mills Limited | SSML |
| 82 | SML Isuzu Limited | SML |

| | | |
|---|---|---|
| 83 | Surya Vamshi Spinning Limited | SVSL |
| 84 | TainWala Chemicals and Plast Limited | TWCP |
| 85 | Tata Chemicals Limited | TATAC |
| 86 | Tata Investment Corporation Limited | TATAI |
| 87 | Tata Steel Limited | TATAS |
| 88 | Tata Global Beverages Limited | TATAG |
| 89 | Tata Motors Limited | TATAM |
| 90 | Tata power Limited | TATAP |
| 91 | Tata Sponge Iron Limited | TATSP |
| 92 | Tayo Rolls Limited | TAYO |
| 93 | Text Maco Limited | TML |
| 94 | Unitech Limited | UNIT |
| 95 | Uttam Galva Steels Limited | UTTA |
| 96 | VIP Industries Limited | VIPIL |
| 97 | Visaka Industries Limited | VISA |
| 98 | Voltas Limited | VOLT |
| 99 | Wall Street Finance Limited | WALL |
| 100 | Wipro Corporation (Wipro) Limited | WIPR |

## 1.9 Pilot Study

A pilot study was carried out to test the questionnaire using 73 respondents to confirm whether the questions were leading to objectives or not. The study identified difficulties in getting some information related to income, investment and savings. This issue was modified, and the respondents were asked to determine their income groups and other information. Some of the investors viewed that the questionnaire was lengthy. The questionnaire was partially changed by adding and deleting few questions and further few questions were rephrased to suit the requirement of the study. Based on the pilot study, a final questionnaire was prepared and confirmed for data collection.

## 1.10 Tools for Analysis

The primary data was collected from the individual investors from the cities of Hyderabad, Gangtok and Mumbai and had been properly classified, edited and tabulated in a proper format and analyzed using appropriate statistical tools. Software such as MS Excel and SPSS (Statistical Packages for Social Sciences) were used for the study. The following statistical tools were used for data analysis:

1. Percentages
2. Graphs
3. Averages

4. Turnover Ratio
5. Standard Deviation
6. Independent sample test
7. Paired sample test

**Stock Liquidity:** It is measured by the Stocks Volume (buying and selling). If the stock has a high daily volume, it is regarded to be liquid.

**Market Capitalisation:** It refers to total rupee value of company's outstanding shares.

Market capitalization is calculated as follows:

$MC_j=N_j*P_j$,

Where $N_j$ is the total number of issued shares, $P_j$ is the price of share j.

**Turnover Ratio:** The relationship between turnover and market capitalization is called turnover ratio.

= (Turnover/Market Capitalization)

**Return:**

Return is the motivating factor that induces the investors to invest money in shares. Return means the profit earned as a result of the rise in share prices. It helps the investor to compare the benefits available in the alternative investment avenues.

The return is calculated using the logarithmic method as follows

**Rt = (logpt-logpt-1) *100**

**Where**

Rt = Market return at period t; Pt = Price at day t;

Pt-1 = Price Index at day t-1 and Log = Natural log

## 1.11 Limitations of the Study

1. The study is based on the companies which have been trading in the stock market from 1991 to 2012.Companies which traded before 1991 were not considered for the study.
2. The study is confined to the sample cities of Hyderabad, Mumbai and Gangtok and the findings may not entirely be applicable to the national level.

## 1.12 Chapterisation of the Study:

The thesis is divided into seven chapters as follows:

**Chapter I: Introduction**

This chapter covers the general introduction of the depository system in India and it also includes the research methodology of the study. In this, sampling, method of analysis, statistical tools, objectives of the study, the hypotheses of the study, research questions, and scope of the study and limitations of the study have been explained.

**Chapter II: Review of Literature**

This chapter covers review of some studies concerning depository system's role in the development of capital market including the impact of depository on the capital market.

**Chapter III: Capital Market**

This chapter presents an overview of history, trends, types and milestone of the capital market in India.

**Chapter IV: Depository System**

This chapter covers the meaning, concepts, history, of depository difference from the bank, depository relationship with the bank, working with thedepository, advantages, and disadvantages of the depository, benefits with the Indian depository system and trends of the Indian depository system both NSDL and CDSL.

**Chapter V: Impact of Depository System in India**

This chapter explains the impact of depository on volatility, liquidity, return, market capitalization, turnover and profitability of select stocks.

**Chapter VI: Impact of dematerialization –Investors' Perception**

This chapter presents the analysis and interpretations of investors' perception of different aspects of depository services in India.

**Chapter VII: Summary of Findings and Conclusions**

This chapter covers summary and suggestions for the study.

# CHAPTER -II

# REVIEW OF LITERTURE

## CHAPTER - II

# REVIEW OF LITERATURE

The review of literatures focuses on the concepts of depository system, liquidity, return and volatility in the capital market. This chapter has been divided into two sections namely depository system and liquidity and volatility of stock in capital market.

## 2.1 Depository System

Depositary system is a financial service. It is providing services like bank, but it doesn't deal with depositing and withdrawal of money instead deals with custodial services of securities. This system was introduced in India in the year 1996. This system has transformed from the physical paper work with electronic system, which as dematerilisation. It provides services such as holding of securities in electronic form, easy transfer of shares, colleting dividend etc.

In this section, literature related to the depository system has been reviewed. This review will help in understanding the essential concepts and definitions, formulating objectives, specifying tests, selecting the relevant analytical tools and evaluating the results of the study.

Previous literature has dealt with issues such as the depository system, implications of the depository's ordinance, internal audit of depository participants, analysis of Depositories Act, role of depositories in capital markets, SEBI guidelines in the depository system and services provided by different depositories in terms of retail investors. However, no study has been undertaken on the impact of the depository system on the Indian capital market. The present study has analysed the opinions of investors on the depository system and how the depository system can impact on liquidity, volatility and return.

Reddy.T.M.(1995) Have examined the dealing methods of clearance corporations and depositories in the US market. The author provided the particulars of security operations in the country and considered the book-entry processing necessities.

Shah, M. (1996) highlighted the purpose of the declaration of single and multiple depositories, immobilisation and dematerialisation and applicability of capital capability norms for the custodians who are prepared to facilitate the rapid growth of the Indian depository system.

Aggarwal,V.K. & Dixit,S.K.(1996) discussed the legal framework pertaining to the Indian depository system. The study further analysed the advantages of paperless trading, duties of the depository system, and the responsibility and eligibile criteria of the depository participants.

Sarkar, A. K. (1996) examined the Indian depository system and its functioning in the capital market in India. The study also discussed the implications of script less trading and share transfer based on a book entry in the light of the Depository Regulation Act, 1995.

Aggarwal, Sanjiv (1996) has examined the problems relating to the back office functioning, trading pre & post introduction of depository system, post-issue work, registration work and settlement for the depository system in India.

George, P. (1996) studied the role of National Securities Depository System Limited (NSDL) in revolutionising the paperless stock settlement system in India. The author analysed the steps taken by the depository system to enhance script less trading system and emphasized the functioning of the supervisory body in this regard.

Gurusamy, S. (1996) have emphasized that the beginning of depository system would facilitate the transfer of shares in the stock market using electronic system instead of mere book entry. The author explained the physical delivery of shares had disadvantages such as delay in transfer, registration, fake certificates, towering cost of transactions, more paperwork and non-availability of depositories. Further the author concluded that all these issues were solved after the introduction of depository system.

Dias, S & Vaidyanathan, A.(1996) explained the troubles faced in the area of depository system, after the setting up of depositories by stock exchanges in India.

David M Weiss (1986) explained the complexities and procedures for processing of securities transactions after a trade is completed. Further, the paper provided insights on how to make a foray into foreign markets, discussed their

methods of trading and settlement of securities, explained in detail the steps involved in settlement of transactions and explained the connection between numbers of entities participating in settlement of a securities transaction.

Jeff Stehm (1996) described the features of securities authorization and settlement procedure for equity, as well as bonds, and discussed a few critical design choices for the policy makers and market participants in the up coming markets. The author provided certain guidelines for assessing the accessibility clearance and settlement measures.

SEBI Report (1996) has stated that the depository participants increased and the percentage of securities dematerialised in the depository have increased. The advantages such as decrease risk and transactions expenditure will be available to the measureless majority of market participants and show the way to enhance investor fortification and service.

Deo, M. (1997) has studied the depository ordinance: a new dimension of reforms in the capital market. The purpose of the research was to examine the operations, functions, and advantages of the depository system. The author concluded that the beginning of the depository system have removed the lacuna found in the current system, making the trading in scripts error free and eventually cover the method for the materialization of an exceedingly well-organized capital market. On the other hand, an enhanced banking method, sufficient infrastructure, and quick information technology will be going to engage in a crucial role in the achievement of the Indian depository system.

Rao, D. M. & Pramannik, A. K. (1998) studied the operation of script less trading, rights, obligations, advantages and disadvantages of the depository system. The study examined the relationships between depository and other agencies, depository and depository participants, depository and the beneficiaries, depository and SEBI, and depository with the Companies Act, 1956.

Agarwal, S. & Vijay, P. K. (1998) discussed a variety of operational and regulatory aspects of the depository system in India. It also provided a meticulous approach to the structure and functioning of the depository system in India.

Santi, S. K. and Verma, A. (1998) conducted a study using a sample of 30 brokers and concluded that the shortcomings in physical delivery could be solved to a great extent by adopting the depository system.

Justice Dhanuka committee (1998) had raised the following issues regarding the Depository Act, 1996:

a) Option to the issuer to come into an agreement with any one of the depositories in India.
b) Nomination facility to the beneficial owner in respect of dematerialization securities.
c) Compulsory dematerialization for new issues of securities exceeding Rs. 10 crores in value.
d) Depository identifies the beneficial owner, only for its negligence and fraud and not of its depository participants.
e) SEBI has the power to specify the securities in respect of which transactions shall be permitted only in dematerialization form.

Chandreasekharan committee (1997) described the need for an early introduction of dematerialisation in capital markets, which was made compulsory in a phased manner for all issues and all IPO's by the year 2001. Dematerialisation brought in benefits like:

a) Higher liquidity due to the pulling out of the necessity of minimum trading lot sizes and condensed no delivery period.
b) No loss or risk on account of mutilator or loss of scrip's.
c) Shorter periods of book closure for corporate actions such as shares allotment in the primary market, dividend payment rights or bonus issues

Reduction of delays in transfers those were intended to withhold transfers so as generate an artificial shortage of scripts in the market.

Raman, V. (1999) conducted a study on the online trading method of securities, dematerialization and rematerialisation, and its features and procedures. Further, the author also explained the techniques for selling and buying of securities.

Hurkat et al (1999) have highlighted the importance of depository system in capital markets in various highly developed. The authors analysed the services to be

provided by NSDL such as dematerialisation, rematerialisation, trading fees or charges, the relationship of a bank and a depository.

Gaba, V.K. (2000) have evaluated the different aspects of depository system related to operations, including the legal and regulatory framework, business process accounting, audit and operational controls. The study recommended guidelines for designing and instituting suitable internal control and internal audit system for the depository participants.

Raja, M.T & Varsha Marathe (2000) have attempted to analysed the transaction cost of equity shares in India. The primary objective of this research was to analyse the equity shares transaction cost in the physical mode and electronic mode. The author brought to notice that the regular cost for the FII in India was lesser than that in the stock markets in Singapore, China, and Thailand. Owing to dematerialization, the transaction costs of FII had come down by 60% and in case of mutual funds by 75%.

Delarosa's, C. (2000) contributed towards the growth of a meticulous regulation for planning trust management system in online communities. The author identified several properties of online communication which are demanding the collective knowledge of our communities on issues like bringing in confidence and the development of new mechanisms and systems.

Chickodka, M.N (2000) discussed in detail the dematerialisation system, meaning, benefits, dematerialisation prices or fees, depository and depository participants in capital market. Moreover, the author pointed that online trading and trading of securities were steps in the right path and that electronic trading would establish a remarkable landmark for the stock market in the years to come.

Verma, J.R. (2001) argued that the key to competition is to trim down switching costs for investors and depository participants and to make certain speedy, trouble-free inter-connectivity for a promising new depository.

Rao, P.M. (2002) discussed dematerialisation and stated that to protect the investors, the capital market regulator (SEBI) had taken up a series of steps. One of the steps was dematerialization of shares and securities of the shareholders/investors, which would give more protection to them. Due to many benefits of the system, it had become very popular in the capital market in India. It is a much better method

when compared to scrip-based system. This system is more flexible in the sense that it can be reconverted into rematerialisation from the automatic process to ordinary certificates at the option of the security holders.

Burton, D. (2002) stated the introduction of depository structure and stated that the process is a feasible model system and further it is being closely monitored and enhanced on an enduring base.

Mehla, S. & Turan, M. S. (2002) have explained that the depository system would eliminate paperwork, as well as maintain the electronic documentation of securities.

Gupta, R. K. (2002) studied the function of SEBI and to enable investors to depository participants to hold their securities in the electronic form and to trade through DEMAT account.

Ravi, Shah (2002) stated that the NSDL and CDSL have changed the scenario of the capital market in India. A changed was observed in terms of account settlement period in paper form to a new T+3 settlement process in purely electronic form. The feat was achieved in a span of a few years in India, whereas it took about 10-20 years for a large number of developed countries.

Cornelia, H & Jens, T (2004) explained that the competition between a custodian bank and central securities depository (CSD) is analysed using the Stackelberg model. The custodian bank follows the prices set by central securities depository (CSD). Presently there are numerous investment banks, which have to make a decision whether to make use of the service of the central securities depository (CSD), or of the custodian bank. This decision depends on the prices and the preferences of the investor banks', preferences for the similar services of the two service providers. This effect has significant policy implications associated with a conversation currently taking place in the securities settlement industry.

Kanko, K. (2004) discussed the subject of Duopoly Model of securities settlement, which showed how pooling payment will be able to facilitate using liquidity economically in relation to Central Securities Depositories to attract global securities.

Sandhu, H.S. & Singh, A. (2006) explained that automated trading is not immediately speeding up the traditional way of doing business, but is exploiting the

power of computers and telecommunications technology to take the trading process nearer to bringing about market liquidity for the investor. The study used primary data from 299 respondents comprising 149 adapters and 150 non-adopters, to analyse their attitudes towards automated stock trading in northern India. The results suggested that adopters perceive variations, handiness, and value-added services as the most significant features of Internet share trading, followed by other features such as flexibility, transparency, quick verification, web site customization, and globalisation, in decreasing order of their importance. Non-adopters regard liquidity and flexibility as the most important characteristics of net trading. Convenience, transparency and quick confirmation are also well thought-out significant features of non-adopters, followed by other features such as value added services, variety, and democratic medium in the declining order of importance. In conclusion, adopters needed to be qualified and guided about net trading through education and guidance material. Non-adopters were required to be made attentive about the benefits of online trading through active support and participation of e-broking firms, SEBI and stock exchanges other than advertising.

Hans, R. Stoll. (2006) explained about the electronic trading in stock market operations. The study examined how electronic trading had altered equity markets and discussed how the stock trading method works and then addressed the following issues relating to the capital market such as:

**a)** How have the jobs of traditional stock market dealers on the NYSE and NASDAQ been affected by online trading?
**b)** How does the online communications system differ from traditional markets?
**c)** What subtle issues arise in electronic trading when the interests of dealers and customers diverge?
**d)** What is the effect of electronic trading on the number and types of securities markets?
**e)** What is the role of regulation system in electronic markets?

Schmiedel et al (2006) analysed the survival mechanisms and economies of scale in settlement and depository system. The research indicated the endurance of important economies of scale. However, they concluded that the degree of economies of scale differs with the nature of the settlement, institutional and the region. the author also investigated the continuing subsistence and the scale of

economies in the depository system and settlement method. Substantiation from 16 settlement institutions, across different regions of the world, for the period 1993–2000 indicates the survival of important economies of scale but degree of such economies, differs with the size of the settlement institution and the region. At the same time, as smaller settlement service providers make know high potential of economies of scale, bigger institutions show a growing tendency of cost-effectiveness. Settlement and clearing systems in European and Asian countries have reported significantly better economies of scale than those of the United States method.

Nishanth et al (2007) have explained the enlargement of dematerialisation in the capital market in India. The study examined the total turnover and the DEMAT segment turnover volume-wise and confirmed that the dematerialization of securities is one of the most important steps which could improve and modernise the levels of fortification of the benefit to the investors along with supplementary safety measures.

Kanan S. (2008) pointed out that dematerialisation has brought a positive developments in the Indian capital market.

Gaganraj (2010) pointed out that during the decade and a half of these reforms, regulators and policy makers have taken various initiatives for modernising and strengthening our capital market. However, the participation of retail investors in the capital market was not found at the same growth rate and the real increase in participation has been from institutional investors. Thus there is, much more potential for the participation of retail investors in the Indian capital markets. This can be achieved by utilising the available infrastructure for further penetration into semi- urban and rural areas, spreading financial literacy among the existing and prospective investors with a focus on semi-urban and rural areas, ensuring adequate liquidity in the market, controlling the volatility, eliminating the possibility of price manipulation and putting in place comprehensive system for protection of interest of investors.

Singh, S & Goyal, S. (2011) have analysed the investor's perception on the Indian depository system. The majority of the respondents indicated the need of lesser settlement period, protection of securities with the depositories, easy

accessibility to staff with the DPs, well-timed services provided by the DPs to the investors, lessening in transaction cost, repatriation of sales proceeds of shares/debentures by NRIs as few of the reasons that affectd their decision-making.

Goyal, P. & Raj S. D. (2011) explained the clearance and settlement process in the capital markets in India, which is at the central point of the securities market communication. This procedure is an essential part of the stock market infrastructure. If this process does not function in a preferred manner, it can lead to an ineffective and inefficient system, as it is evident from the scams in Indian capital markets. The current crisis in the global financial system highlights the importance of this process and explains the pre-redesign shape of the Indian financial markets which were riddled with ineffective processes and regulations that led to the failure of investors' confidence in the capital markets. Infrastructure and regulation are essential for the execution of risk control mechanisms. The incorporation of the global markets and liberalisation of the economy in India have led to various changes in the essential processes. In India, the clearance and settlement process has been redesigned significantly due to different reasons, including the combination of Indian capital markets with the global markets, rising trading volumes, various scams, and the need to improve investor confidence in the capital markets.

Kaushal A. B. & Bhat, K. (2012) explained the tendency of electronic trading, in concern to Dematerialization, which has enabled the Capital Market in India to take the center phase of globally to the extraordinary heights. The Indian capital market has grown-up exponentially in terms of the amount raised in the capital market, stock exchanges and intermediaries, the number of listed stocks, market capitalization, trading volumes, turnover on stock exchanges and investor's population.

Rao & Babu (2013) attempted the study the role of NSDL in Indian depository system and analysis of performance of growth of NSDL for the period of 2006-12.theauthor concluded that there is increase in the number of beneficiaries account number of companies available for DEMAT number of DP service centres and there is a positive annual growth rate of DEMAT custody and DP growth in NSDL.

Gopal & Rao (2014) attempted to make comparative study on ROI of CDSL and NSDL and further study the return on asset of KBSL, IIFL, PCS and NSBL. The sample has been collected from four districts the study understand attempt to understand the attitude of the investor towards depository system, DP and investment with sample of 300 investors has been covered Ananthapur, Kurnool, Kadapa and Chittor it is concluded that there is uniformity in return of invest of CDSL and NSDL. The studied concluded that there is no significant difference in the return of assets of the sample firms.

Dhnada et.l.(2015) attempted to analysis the trends in growth and measure impact of dematerilisation of Indian capital a sample size 50 respondents has been collected from Chhattisgarh and around

## 2.2 Liquidity and Volatility

In general, an investor tends to prefer maximization of expected return, minimization of risk, safety of funds and liquidity of investment. Liquidity can be defined as an investment that can be easily salable without loss of money or time. A well developed secondary market for security increases the liquidity of the investment. Liquidity is one of the preferences for investor's choice while making investments.

Volatility is measured in terms of risk. The volatility of stock indicates the degree of price variation between the share prices during a particular period. Extreme volatility disrupts the smooth functioning of the stock market. The degree of price variation is also called as risk. Return and risk are inversely proportionate in investment. Return is the motivating factor that induces the investor to invest money in shares.

This section deals with the concepts of liquidity and volatility of stocks in capital market.

Lam K., Li W. K. & Wong P. S. (1990) highlighted the association between price changes and trading volume in the stock market in Hong Kong. Authors also examined the correlation between the magnitude of price changes and trading volume, as also the relationship between the variance of trading volume and return.

Naidu G.N & Michael S. R. (1994) explained the impact of automation on volume, volatility, liquidity and efficiency of the Singapore Stock Exchange, before and after automation. The authors also explained an increase in volatility and liquidity, as well as development in efficiency, following the automation of the Singapore Stock Exchange. According to them, due to automation, volatility in prices could increase. They also examined the trading volume, volatility, liquidity market efficiency and bid-ask characteristics of 28 out of the 30 stocks in the Straits Times Industrial Index, before and after the Singapore Stock Exchange became fully automated. They noticed that the following changes were found after implementation of automation of the Singapore Stock Exchange:

a) A significant increase in trading volume of all securities
b) A sizeable increase in volatility for all stocks, with a large percentage-wise increase in the stocks that began with lesser volatility.

Mittal, R.K. (1995) pointed out the relationship between stock trading volume and stock price changes in the stock market in India. Author asserted that a constructive relationship may be practical between stock trading volume and stock price changes and that a lagged relationship between these two variables may also be possible. The study was based on two daily price indices - the BSE Sensitive Index, and the BSE National Index. The author concluded that stock price changes and trading volume are not appreciably correlated.

Pagano & Roll (1996) highlight the liquidity, price structure, processes in any trading method with various degrees of transparency. They also explained that transparency is defined as the prospect to examine the size and the way of the order flow, with the purpose of enabling better transparency in the trading process, improves market liquidity by reducing the opportunities for taking advantage of the less informed participants. It can also spread volatility and pricing error is likely to diminish. On the other hand, in some cases, investors can have preferred a less transparent method to take benefit of their private information.

Raju M.T & Prabhakar R.P. (1998) highlighted that Dematerialization of equity shares were the most important revolutions in the stock markets in India. It also had broad ramifications for a variety of sectors of the stock markets. The writers quantified and analysed the effect of dematerialization on liquidity, volatility and

returned in the stock market in India. Dematerialization of shares has been an essential highlight in the annals of Indian Capital Markets. It is necessary to understand and measure its effect on a variety of segments, given the fact that it has impacted the microstructure of capital markets in India, in general, and stock exchanges, in particular. Demand and supply forces determine the price of a product. Liquidity plays a major role in the relationship of supply and demand forces. The authors found that quality of shares are changed for the betterment owing to dematerialisation, and thus investors are expected to earn higher returns as a natural step, albeit, for some time only. Changes in quality shares are expected to cause changes in demand and supply for shares, which, in turn, could influence the levels in share prices (volatility). All these three issues were studied in the research paper. Liquidity and returns improved substantially in the post-demand period, while the volatility was very much below the daily changes permitted. The authors arrived at the following findings:

a) Volumes traded increased due to the Dematerialization, thus providing high liquidity.
b) More number of shares traded per trade is another sign to point out more liquidity.
c) Dematerialized shares, by and large, provided abnormal returns in the short-run.
d) High volatility sometimes brings great positive reforms.

Lalith P. Samarakoon (1998) examined the measures of market liquidity of equity shares, which could have overcome the problems inherent in the accessible measures of liquidity. Market liquidity refers to the direction of the ability to sell a share quickly at a price close to the current market price, and, hence, has both a time and a price dimension. It is stated that the time dimension is measured through trading intensity, which is calculated by dividing the related trades by the relative volume. The new liquidity measure is called as relative liquidity ratio. It is calculated as the ratio of trading intensity to price volatility of each equity stock.

Henery P.B. (1999) studied the issues of capital market liberalisation, economic reform, and stock market equity prices in emerging markets. According to Henry, “a stock market liberalisation is a decision by a country‘s government to allow foreigners to purchase shares in that country‘s stock market. This result is consistent with the prediction of standard international asset pricing models that

stock market liberalization may reduce the liberalising country‘s cost of equity capital, by allowing for risk sharing between domestic and foreign agents”.

Datar M. K. (2000) focused on stock market liquidity and its dimensions. The author discussed the comparative intrinsic worth of different procedures used for measurement of stock market liquidity, volume/ frequency of trading, turnover ratio, and impact cost. The paper also measured changes in stock market liquidity resting by conventional procedures such as turnover ratio. This paper proposed elasticity of trading as an alternate measure since it was easy to compute and had superior content. The writer also examined the elasticity of trading procedures about changes in prices. The paper analysed liquidity of equity trading on the National Stock Exchange with the help of Coefficient of Elasticity of Trading (CET) during April 1998 to May 2000. A few directions were recommended to assess the true potential of CET. This might be done by using CET designed for measuring liquidity in the individual script.

Chordia,T; Roll, R. & Subrahmanyam, A. (2001) Highlighted the importance of liquidity to the extent of time periods on individual securities. The study considered a comprehensive market spreads, depths, and trading activity for U.S. They established that daily changes in market averages of liquidity and trading activity are highly volatile and negatively serially dependent. Liquidity drops significantly in down markets. Modern market volatility induces a decrease in trading activity and spreads.

Bhanupant (2001) undertook a study to the testing dynamic relationship between returns and trading volume on the National Stock Exchange using linear and nonlinear Granger non-causality hypothesis test. Widely used linear Granger non-causality test was used to investigate the linear relationship, while the non-linear Granger causality had been studied using modified Baek and Brock test proposed by Hiemstra and Jones (1994) for the daily returns on S&P CNX Nifty and the total trading volume at NSE. The results indicate that there was a dynamic relationship between stock index returns and trading volume.

Rose, W. Ngugi (2003) attempted to study how the capital market describes the role of liquidity. It is very important to play a major role in the development by facilitating mobilisation of long-term capital. During the revitalization, many efforts have been made to improve market liquidity by instituting institutional and policy

reforms. This study has seen shifts in the trading system to increase the transparency in the price finding procedure and to make stronger investors' protection to boost investors' assurance in entrusting their securities to the stock market.

Dash, R.K & Sumanjeet (2005) explained that the stock market is a well thought-out, exceptionally fundamental segment of the modern financial system of the economy as it can affect economic growth in many ways. Prior to implemantion of the financial reforms, the Indian stock market was underdeveloped. After implementation of financial reforms in the Indian stock market, the performance of the stock market improved considerably by increasing liquidity, transparency, cost, enhancing efficiency, reducing volatility and trading costs. It was concluded that the market liquidity had improved after implementation of reforms in financial sector in India.

Ata Assaf (2005) studied the impact of computerization on volatility dynamics, along with risk-return relationship in the Toronto Stock Exchange. The study suggests that automation has considerably altered the structure of market volatility. With the onset of automation, new information is being assimilated into the price and, most importantly, leading to an increase in the persistence of volatility. The writer has posted that, in general, automation had a significant impact on the volatility in the pricing of stocks on the Toronto Stock Exchange.

Spiegel, M. (2008) explained that the study on liquidity had paid attention to explaining what can be called within market liquidity. In other words, it seeks to make clear explanation to why one stock is more liquid than another. On the other hand, there has been a significantly smaller amount of attention towards cross-market liquidity. This article focused on the current academic evidence regarding liquidity, across assets and explained why current theories have troubled with one item or another. The challenge, then, is to produce an over arching theory that offers predictions that are closer to what the data seems to imply about cross market liquidity.

Abounoori, E. & Motameni, M. (2007) examined the impact of stock volatility in the Tehran Stock Market (TSE), using the leverage effect theory. According to the theory, the return and variance have a negative relationship. The effect was studied using E-GARCH model and daily time series data during 1992-

2006. The results do not reject the leverage effect in TSE. Also, the effect of good and bad news on volatility was not found to be symmetric.

Ahmad, K. M. & Ashraf, S. (2008) explored the causality and volatility of the firm-level stock returns and volume in India. They examined the co-movement in stock returns and volume changes, using daily NSE data for 21 listed firms from 1996 to 2005. It was experimental that the way of causality between stock return and volume change over different periods, and across firms. The writer found that there is a causal relationship between volume and price over the full period. Once, the three sub-periods are considered, the relationship starts to weaken over the sub-periods for most of the stocks.

Benić, V. & Franić, I. (2008) explained the essentials required to examine liquidity and observe multi-dimensional liquidity from the beginning to the end to ascertain the impact of turnover on the price change, together with several one-dimensional measures. In their research, they applied the liquidity measure to seven different stock markets. They compared the Croatian stock market with their counterparts in the Central and Eastern Europe and Germany. The consequences of the research pointed out a significant level of liquidity in the Croatian and other on the developed markets.

Mahajan S. & Singh B. (2008) examined the pattern of information flow between trading volume and return volatility using daily data of the closing prices and volume of the nifty index for the period from July 2001 to March 2006. It is found that trading volume and return volatility fluctuates in Indian stock market. The appearance of informational well-organized capital markets are an essential facet of any country‘s economic modernization, with far-reaching implications for its macroeconomic stability and performance, and that trading volume conveys crucial information on future stock prices.

Sebastian, S. & Christoph. (2009) clarified that the market liquidity is the case of trading an asset. The risk is the possible loss for the reason that security can only be traded at far above the ground or high-priced costs. Treatment of liquidity risk is still under development. The study has provided a general idea of significant aspects of market liquidity and its risks. The writers, also, examined some of the accessible models to incorporate market liquidity risk into risk frameworks. The

study also gave specific importance to practical usability and spoke about its relevant strengths, weaknesses, and their implications.

Hamaied, D.M. (2010) explained the dynamic behaviour of market liquidity of the Tunisians Stock Exchange and also measured the impact of automation on the Tunisian Stock Exchange, in terms of liquidity, volatility, and stock price behaviour. The writer, who examined 20 stocks, found an improvement in stock liquidity.

Loukil1 N.& Yousfi O. (2010) have explained the relationship between the impact of corporate governance on information asymmetry problems and stock liquidity in the Stock Market in Tunisia. A sample of 49 Tunisian firms listed between 1998 and 2007 was selected. The outcome showed that corporate governance has either directly or indirectly impacted stock liquidity. Expropriation exerted by domestic and foreign shareholders discourages unenthusiastic investors, which decreases stock liquidity. During times of uncertainties, they prefer to invest their capital in state prescribed firms. In practicality, the State is regarded as an effective controller to a certain extent than a shareholder. The State participation in Tunisian firms has been well thought-out as a state guarantee for investors, which can increase stock liquidity. This paper had confirmed that some attributes of corporate governance get better stock liquidity since they decrease information asymmetry.

Geol, K & Gupta, R. (2011) stated that the capital market reforms were started with the aim to develop the stock markets in India. The author studied the significant developments in the economy after liberalisation. All indicators showed improvement in stock market activities in the post-liberalization period like market capitalization ratio, value traded ratio, and turnover ratios have increased. Thus, the stock exchange (primary and secondary) has grown at a time. The effectiveness of the capital market has grown significantly after initiation of the economic reforms in 1991. The stock market has also grown rapidly regarding size and liquidity. At the same time, volatility of the market has declined.

Salehi, M., Talebnia, G., & Ghorbani, B. (2011) explained that liquidity is the ability to translate shares into cash at several times and interest in market price is one of the main functions of capital markets. Financial literature indicates that normal investors think that they hold shares that yield lower returns with a higher

degree of liquidity. In the current study, the relationship between stock returns and their liquidit using a sample of companies listed on the Tehran Stock Exchange. The study used monthly data for the period of 2002-2009. The study found a negative relationship between stock returns and liquidity.

Mishra, S. K. (2011) explained that the capital markets have an important role in a country's social, political and economic environment. To empower capital markets, it is imperative to pay special attention to how systems are framed and how these are implemented by the authorities, on one hand, and respected by the target groups, on the other. Indian experience shows that the development of such an institutional structure will be gradual and cannot be achieved in a speedy manner, and that, without a suitable institutional framework in place; the cost of transition could be very high. Such an understanding would contribute to the better appreciation of the role of stock markets in resource mobilisation and their contribution to economic development.

Arvydas, P, Ona Norkaityte (2011) examined the subject of the communication of a variety of macroeconomic indices up on the liquidity of Lithuanian, Latvian, and Estonian capital markets, and investigated the factors affecting the processes. The analysis of the liquidity in the markets during the period 2001 to 2010 was conducted using indicators based on trading volumes in these markets.

Marc Halilin et al (2011) attempted to understand the daily close relative spreads and daily traded volumes for a sample of 426 from S&P 500 for the period 2004-2006. The benefits of defining market liquidity as dynamic factors is that contrary to other definitions that can be found in the literature. Both relative spread and volume in the data set under study appear to be driven by the same one-dimensional common shocks, which, therefore, naturally qualify as the unobservable market liquidity shocks.

Jelena et al (2011) explained that one of the major requirements for the development of the capital market is to improve the stock market liquidity and its measuring parameters. Liquidity is not easily defined and measured. Liquidity itself is not recognisable. This paper attempted to understand and review different types of one-dimensional liquidity measures. Their explanation of liquidity was about a

market characterised by the ability to buy and sell securities with related cases. The one-dimensional liquidity measures that are discussed in the research paper were the likelihood of informed trading, market capitalization, turnover, and different spread-related liquidity measures.

Jilani,F. & Chebbi, M, R. (2012) has found that companies listed on the Stock Exchange of Tunis ended to act optimistically on the price and the volume of transactions. The writers also sought to explain the strategies adopted by investors in issuing orders confirming that the issues of orders in the limited course were the providers of liquidity in the Tunis Stock Exchange.

## 2.3 Conclusion:

This chapter explained the contribution of literature of scholars in the field of depository system and capital markets. The variables that have been used in the study in depth are to carry on with the objectives framed for this study.

# CHAPTER -III

# CAPITAL MARKETS IN INDIA

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# CAPITAL MARKETS IN INDIA

## 3.1 Introduction

A place where purchase and sale of goods and services happen is known as the market. Financial markets exist to enable the sale and purchase of financial instruments. The word financial market refers to both money market and capital market. The main difference between the capital market and money market is that the former mainly deals with medium and long-term investments (maturity more than a year), whereas the latter deals in short term investments (maturity less than a year).

## 3.2 Money Market

A money market is a market for the borrowing and lending of short term loans in general for less than or equal to a duration of 1 year or 365 days. It is an apparatus to clear short term monetary dealings in a financial system.

According to **Crowther**, "The money market is a name given to the various firms and institutions that deal with the different grades of near money."

According to the **RBI,** "The money market is the centre for dealing mainly with short character, in monetary assets; it meets the short term requirements of borrowers and provides liquidity or cash to the lenders. It is a place where short-term surplus investible funds are at the disposal of financial and other institutions and individuals are paid by borrowers, again comprising institutions and individuals and also by the government."

According to **Nadler and Shipman**, "A money market is a mechanical device through which short-term funds are loaned and borrowed, through which a large part of the financial transactions of a particular country or world are degraded. A money market is distinct from, but supplementary, to the commercial banking system."

## 3.3 Capital Market

Capital Market is one of the main markets in the financial market, where the trade of long-term debts and securities are dealt by brokers. In capital markets the long-term securities include shares, stocks, and bonds. The stock market is a market for financial investments that lay direct or indirect claims to capital (**Gart, 1988**). Broadly; the capital market is a market for financial assets which have a long or indefinite maturity. A capital market involves different types of instruments which can be used for financial transactions. The buyers and sellers can be the general public, middlemen, investors, high net worth investors, domestic institutional investors, foreign institutional investors, companies, and brokers who are attracted to invest their money in order to get more profit in the form of interest or dividend and profit from trading. It embraces all kinds of lending and borrowing, whether or not evidenced using the formation of a negotiable monetary instrument (**Drake, 1980**). The capital market is an important platform for providing long-term finance [long term debt and equity finance] to the government and the corporate sector. It comprises multifaceted institutions and mechanisms through which the intermediary term and the long term funds are collected and made available for business, government, and individuals. The capital market encompasses the progression using which securities already exceptional are transferred (**Dougall, 1986**). The capital market is a long-term source of funds for companies because any company which started its business can sell its shares in the primary market and subsequently in the secondary market. Buyers are also allowed to sell and buy shares at any time. The Indian stock market is one of the most promising emerging markets among the top eight markets of the world. Capital markets can be classified into the primary market [new issue markets] and secondary markets [second-hand markets]. The stock market is acknowledged as a vehicle designed for speedy economic development all the way through mobilisation of available resources in a country (**Ahmed S, 2005**).

**The RBI's Report on Currency and Finance, 1999-2000 made the following remarks about the Indian capital markets:** "Although the Indian capital market witnessed some significant changes during the eighties, both primary and the secondary segments continued to suffer from some serious deficiencies, many unhealthy practices prevailed in the primary market to attract the retail investors. Another disturbing feature was the high cost of new issues. Although over the years,

some agencies came into existence, offering different types of services in connection with the new issues of capital; any regulatory authority did not oversee their activities. The problems were even more serious in the secondary market. The general functioning of the stock exchanges was not satisfactory."

In continuation of the above, **the Report on Currency and Finance, 2001-02** stated, "The reforms in the capital market were aimed at enhancing the efficiency, safety, integrity and transparency of the market. The impact of various reform measures could be seen in the primary, as well as secondary, segments of the capital market."

According to **P.K.Dhar**, "this is not a market for capital goods; rather it is a market for raising and advancing money capital for investment purposes."

According to **Francis Cherunilam**, "the term capital market is used to refer to the market for long-term loanable funds as distinct from the money market which deals in short term funds."

According to **M.Y. Khan**, "it is a market for long-term funds. Its focus is on the financing of fixed instruments in contrast to the money market, which is the institutional source of working capital finance."

According to **V.A.Avadhani**, "capital market is a comprehensive term used to comprise all operations in the new issues and the stockmarket."

According to **H.R.Machiraju**, "the capital market is the market for long-term funds. Financial markets discharge the important function of transfer of savings, especially of the household sector to companies, governments, and public sector bodies."

**H.T.Parikh** described a capital market as "the market for all the financial instruments, short term and long term as also commercial, industrial and government paper."

**Gold Smith** opined, "the capital market of a modern economy has two basic functions: first, the allocation of savings among users and investments; second, the facilitation of the transfer of the existing assets, tangible and intangible, among individual economic units."

**Grant** defines the capital market in a broad sense as, “a series of channels through which the savings of the community are made available for industrial and commercial enterprises and public authorities. It embraces not only the system by which the public takes up long-term securities directly or through intermediaries, but also the elaborate network of institutions responsible for short term and medium term lending.”

The capital market would be able to meet the constant financial needs of business enterprises if there is a congenial atmosphere designed for boosting the confidence of both capital market operators and investors (**Ahmed et al., 1996).**

**Figure 3.1: Trend of SENSEX**


A capital market is also defined as the market for long-term funds where securities such as common stock, preferred stock, and bonds are traded (David L. Scott, 2010). The capital market can be divided into two types, as given below:

- Primary market
- Secondary market

### 3.3.1 Primary Market (New Issue Market)

The primary market deals with the new issues of securities. Primary market can be regarded as a marketplace where new issue securities can be traded. Once a security is underwritten, it is off the market and ready for sale on the secondary market.

Another way of looking at the Primary Market is to consider it as the first sale of a newly issued security. Those securities are purchased in the primary market, and all subsequent trading of those securities is done in the secondary market. The NASDAQ regards the Primary Market as a place where a newly issued security is first offered. All subsequent trading of this security is done in the secondary market [NASDAQ.COM].

### 3.3.2 Secondary Market

This is regarded as a place where the outstanding shares are traded.

## 3.4 Capital Market Structure in India

There are different sub-markets in the capital market in India. The structure has been changing in the recent years to be in line with that of the world market.

The sub-markets of the capital market are as follows:-

- **Government Securities:** This includes the market for T-bills and long-term government debts.
- **Corporate Securities:** This comprises both primary and secondary markets used by corporate to raise funds.
- **Derivatives:** the derivatives market is considered as a separate section of the capital market.
- **Debt Instruments:** This market includes the market for debentures and bonds of the private sector, bonds of PSUs and public financial institutions.
- **Mutual Funds:** One of the recent entrants into the Indian capital markets are the mutual funds. In the past, only UTI was entitled to issue MFs, but now even private enterprises can also enter the mutual funds market.
- **Gold:** The market for gold trading.
- **Currency:** The market for currency trading.

## 3.5 History of Stock Markets in India

Stock Markets in India are among the oldest stock markets in Asia. The history of the Indian capital market dates back to almost 200 years. The earliest records of security dealings in India are meagre and difficult to understand. The East India Company was the leading institution in those days and business in its loan

securities used to be transacted towards the ending of the 18th century. In the 1830s, business on corporate stocks and shares in Banks and Cotton presses established itself in Bombay. The volume of business, including loans as well as corporate stocks, had increased by the 1830s (Sindhawani, 1995). Despite the fact that the trading list was broader in 1839, only six brokers were recognised during 1840 and 1850. By 1860, the number of brokers increased to 60.In 1860-61, due to the American Civil War, cotton supply from the United States of America was clogged. Thus, the 'Share Mania' in India had begun. The number of brokers increased from 200 to 250. However, at the end of the American Civil War in 1865, a disastrous slump began (For example, Bank of Bombay Share price, which had touched Rs 2850, could be sold only at Rs. 87. In 1887, they formally established in Bombay, the "Native Share and Stock Brokers' Association" (which is alternatively known as “The Stock Exchange").

## 3.6 Landmark Events in the History of Capital Markets in India

The Bombay Stock Exchange (BSE) was established in 1840-50 under a Banyan tree near what is now known as “Horniman Circle”. In the year 1856, the Government drafted Securities Contract (Regulation) Act to strengthen the role of government in the Indian Capital Market. In 1860-65, the prevailing shares mania led to the number of brokers rise to about 250 on BSE. However, aftermath of the price crash, the investors found it difficult to find a place to hold their regular meetings. In 1874, the broking community found a place in what is now called Dalal Street to conduct their dealings in securities without hindrance and informal association of sorts comes into being. In July 1875, the Native Share and Stock Broker Association were set up. Its aim was to ‘protect the character, status, and interests of native share and stock brokers.' This Association had 318 members who paid an entrance fee of Rs.1.This obviated the compulsion of doing trade in public. In 1895, the BSE moved into the ‘Stock Exchange Old Building.' The BSE acquired its premises in 1899.After that, in 1921, a clearing house was set up at BSE by the Bank of India. In 1923, K. R.P. Shroff (who is today regarded as the doyen of the Indian stock market), assumed the post of honorary president of the BSE. He held this a position till 1966. Together with Phiroze Jeejeebhoy, who later succeeded him, Shroff steered the exchange through turbulent times and played a major role in raising the status of BSE. The next important event was the enactment of the

Bombay Securities Contract Act in 1925. In 1939, the present building of the BSE was acquired.

During the period from 1943 to 1946, forward trading was banned. At that time, only ready for delivery and hand delivery contracts were permitted. In 1956, the Security Control Regulation (SCR) Act was drafted in the lines of BECCA. In 1957, the BSE became the first stock exchange in India to get permanent government recognition under the SCR Act. The UTI was established in 1964. The year 1966 could be termed as the end of an era when KRP Shroff retired, and Frozen J. Jeejebhoy became the chairman. In 1969, Morarji Desai, the then Deputy Prime Minister and also the Finance Minister, banned forward trading. In 1973, the construction work of a new multi-storied office to house the BSE commenced. It was named after its former president, Phiroze Jeejeebhoy. In January 1986, BSE launched the first stock index with 30 scripts and the base year of 1978-79 with quotations from specified or non-specified group of companies listed on the five major bourses – Bombay, Calcutta, Delhi, Ahmedabad, and Madras. In November 1987, the SBI Mutual Fund launched the Magnum Regular Income Scheme. In April 1988, SEBI was established and in August 1989, the OTCEI.

In 1991, the Government initiated capital market reforms, keeping in mind the liberalisation initiative taken by it. Interest rates on PSU bonds were freed. Indian companies were allowed to borrow money from Indian markets on commercial papers and the foreign markets in the form of GDRs or FCCBs. In March 1992, the Mutual Fund sector was opened up for domestic, as well as international, investors, and SEBI became a legal entity. SEBI, in consultation with the RBI, launched a new system similar to application supported by blocked amount (ASBA) of recent times for companies with huge turnover and high net worth individuals. In May 1992, the SEBI Act was enacted to protect, develop and regulate the securities market and the Capital Issues (Control) Act was repealed. The year also saw the Harshad Mehta securities scam coming to light. Reliance became the first Indian company to make a GDR issue. In June 1992, the Securities Appellate Tribunal (SAT) was established. In September 1992, Foreign Institutional Investors became eligible to invest in the Indian securities market. In October 1992, OTCEI started functioning.

In November 1992, the National Stock Exchange (NSE), India’s first electronic stock exchange, was launched. In 1992-1995, foreign exchange regulation

act (FERA) norms were liberalised to allow the inflow of funds from FIIs and FFIs were permitted to invest in the capital market, and the rupee was allowed to float, with RBI fixes the reference rates. In March 1993, a car bomb exploded in the basement of the multi-story BSE building, killing around 50 people and injuring many others, but still, BSE resumed normal transaction from the very next day. In April 1993, Badla trading was banned in India. In the same year, a new stock exchange was recognized which is known as National Stock Exchange (NSE).

In October 1993, the first private sector mutual fund, Kothari Pioneer Mutual Fund, started operations. In May 1994, the BSE 200 Index, with 1989-90 as the base year, was introduced. On June 1994, the Wholesale Debt market went live on NSE and in November 1994, Capital market (equities), on the NSE. In March 1995, BSE On-Line Trading System BOLT was introduced. In April 1995, the NSE established investors Grievances Cell. In the same month, National Securities Clearing Corporation Limited (NSCCL) was set up as the first clearing corporation. Two months later, i.e., in June 1995, the NSE introduced the centralized insurance cover for all trading members. In July 1995, the NSE established the Investors Protection Fund. In September 1995, the Government accepted the principle of a central depository for immobilization of physical certificates. In October 1995, NSE became the largest stock exchange in the country, regarding the volume of trading. In the same month, bank deposits with a maturity of two years were removed from the purview of regulation and the SEBI issued guidelines disqualifying companies with a paid up capital less than Rs. 5 crores from being listed on regular stock exchanges. It was also stipulated that companies are seeking a listing, with a paid up capital ranging between Rs. 3 Crores to Rs. 5 Crores and without a track record of commercial production of at least two years, should have to appoint a market maker compulsorily.

The year 1996 was indeed a landmark year in the records of stock trading in India. In the same year, the Companies (Amendment) Bill, the month-wise developments were passed. This provided for issuance of non- voting shares. The chronology of the events that year is given below:

**January** - Badla trading was restricted to only a few scripts to 'A' group.

**March** - SEBI formulated guidelines regarding mandatory disclosures for listed companies.

**April** - NSCCL commenced its clearing and settlement operations. Also, the S&P CNX Nifty was launched.

**May** - Mandatory disclosure guidelines came into force.

**June** - BSE established the Settlement Guarantee Fund.

**August** - The first major SENSEX revamp took place.

**November** - The National Securities Depository Limited, the first depository in India (co-promoted by the NSE) was set up. In the same month, the NSE bagged the 'Best IT Usage Award' instituted by the Computer Society of India.

**December** - Trading/settlement in dematerialized securities on NSE was launched. In the same month, BSE was awarded the Dataquest award for the Top IT User. The same month also witnessed the launch of CNX Nifty Junior.

The year 1997 appeared to be more of a 'business as usual' period, because comparatively less number of significant events took place. Still, the following incidents in that year deserve to be mentioned:

**February** - Regional clearing facility went live on NSE and SEBI released norms for takeovers and acquisitions.

**May -**Trade Guarantee Fund (TGF) was introduced on BSE.

**July** - Brokers Contingency Fund (BCF) established on BSE, BSE On-Line Trading (BOLT) system expands nationwide

**November** - NSE bagged the Best IT Usage Award given by the Computer Society of India

The significant events of 1998 were as under:

**May** - The joint venture, India Index Services Limited (IISL), was launched. In the same month, the NSE launched it is site *www.nse.co.in (now www.nseindia.com).*

**July** - *NSE* launched the NSE Certified program in Financial Market (NCFM)

**August** - NSE was declared the 'Cyber Corporate of the Year'.

**November** - SEBI accorded recognition to integrated stock exchanges founded by 16 regional stock exchanges in India.

**The major events of 1999 were as follows:**

**February** - NSE launched the Automated Lending and Borrowing Mechanism (ALBM)

**March** – BSE launched the Central Depository Services Limited (CDSL). In the same month, Infosys Technologies Limited became the first company to be listed on NASDAQ through a public offering of American depository receipts

**April** - NSE received the Chip Web award by Chip magazine.

**June** – BSE allowed Interest Rate Swaps (IRS)/Forward Rate Agreement (FRA).

**July** - CDSL became operational.

**September -** ICICI became the first Indian company to be listed on NYSE,

**October** - SENSEX moved above 5000 points. In the same month, NSE IT was set up.

**December** - The Securities Contracts Regulation Act (SCRA) was amended, to bring Derivatives within the ambit of "Securities."

It would be interesting to note the landmark events in the new millennium. It began with the launch of the NSE Research Initiative in January 2000 and BSE is creating the Z category of scripts in addition to A, $B_1$and $B_2$ comprising scripts that breached or failed to comply with the listing agreement. In February 2000, BSE SENSEX crossed the 6000 mark. In the same month, Internet Trading on NSE commenced. In March 2000, the government rescinded the three decades old Notification which prohibited forward trading in securities. In June 2000, the BSE introduced Equity Derivatives in India. In the same month, Derivative trading on NSE (Index Futures) commenced. In July 2000, BSE 'celebrated' 125 years of existence. In September 2000, the 'Zero Coupon Yield Curve' was launched. Two months later, i.e., in November 2000, Broker Plaza International, a joint venture between NSEIT Ltd. and I-flex Solutions Ltd, was launched by Dotex Internal. The year ended with NSE commencing (wire less application programme) WAP trading.

2001 happened to be another 'busy' year. In February, the BSE Web was launched. In March, the Union Government proposed the Corporatization of Stock Exchanges. A negative 'development' was the surfacing of the Ketan Parekh Scam on 13 March, 2001 and SEBI suspending all the brokers, directors of the BSE. In May 2001, BSE proposed compulsory DEMAT for $B_2$ scripts. The BSE PSU and Indexed options were launched in June. NSE launching Indexed Options followed this. In the month of July the commencement of Options trading on individual securities in NSE option trading on individual securities in BSE was observed. The same month also saw the introduction of the VaR model for margin requirement calculation on BSE. At about the same time, BSE TECk was launched as India's first free float index. In Nov 2001, NSE launched options trading on Individual securities. Also, Stock futures were introduced at BSE, which also allowed 100 per cent book building on BSE. The year concluded with the launch of NSE VaR for Government Securities.

**The year 2002** appeared to be relatively 'quiet.' The major events during the year included:

**January** - ETF was launched on NSE.

**February** - Negotiated Dealing System (NDS) was introduced on BSE. Also, two-way fungibility for ADR/GDR was allowed

**April** - T+3 trading was introduced on BSE.

**October** - NSE government securities Index was launched.

The last year of the then NDA government, naturally, saw lesser activity. Still, the stock market-related events of 2003 were as under:

**January** - Trading in Retail Debt Market commenced; India's first ETF on SENSEX- SPICE was introduced, and BSE allowed retail trading in Government Securities

**April** BSE introduced T+2 Settlement.

**June** - BSE Bankex, as well as Interest Rate Futures, was launched.

**August** - NSE launched futures and options CNXIT index.

**September** - BSE SENSEX shifted to free floating methodology.

**December** – The T Group of Securities was launched on BSE.

Mid 2004 saw the new government resuming office. It would have been unreasonable to expect major developments in the initial stages. One of the biggest challenges before the new government was the second largest fall of all times in SENSEX in May 2004 and the Circuit filtering twice in a day. However, a degree of stability was established in June 2004, when the SENSEX for the first time closed over 6000 points. In August 2004, straight –through processing (STP) Interoperability and electronic interface for listed securities by NSE were launched.

After that, it was a relatively smoother ride. In May 2005, SEBI announced the BSE (Corporatisation and Demutualisation) Scheme, 2005. June saw the launch of Futures & options in BANK Nifty Index by NSE. In August 2005, the Bombay Stock Exchange Limited was incorporated, and BSE now became a corporate entity.

The year 2006 showed a flurry of activities. The Ministry of Finance promulgated the Prevention of Money Laundering Act that called upon all participants in the securities market to comply with "Know Your Client (KYC)" norms. In February, the BSE SENSEX closed above 10,000 points. In November, iShares BSE SENSEX India Tracker was listed on the Hong Kong Stock Exchange. The year ended with NSE being recognised 'Derivative Exchange of the Year,' by Asia Risk Magazine. Also, SEBI mandated all dematerialized account-holders to comply with the PAN requirement by December 31, 2006

The year 2007 witnessed some launchings. These included Launch of the Unified Corporate Bond Reporting platform: Indian Corporate Debt Market (ICDM) in January, IndiaBondWatch.com in March 2007; derivatives on Nifty Junior & CNX 100 in June and derivatives on Nifty Midcap 50 in October 2007.On March 2007, the Singapore Stock Exchange Limited entered into an agreement to invest a 5% stake in BSE. In April 2007, SEBI adopted guidelines for consent orders and considering requests for composition of offenses and published forms and FAQs on consent orders

The trend of launches continued in 2008 as well. Mini Nifty derivative contracts were introduced on 1st January 2008, long-term option contracts on S&P CNX Nifty Index, in March; Securities Lending & Borrowing Scheme by NSE, in April; Currency Derivatives on NSE in August and Currency Derivatives on BSE in

October. In March that year, the BSE SENSEX touched an All-time high of 21206.77 points.

In May 2009, the SENSEX rose to 2110.70 points (17.34%), and the Index-wide upper circuit breaker was applied. In August 2009, BSE-NSE formed an alliance to develop the Currency and Interest Rate Derivatives Market. In the same month, Interest Rate Futures were introduced on NSE and the BSE IPO Index was launched. In October 2009, the BSE introduced a new transaction fee structure for the Cash Equity Segment. In November 2009, NSE launched the Mutual Fund Service System and FASTRADE™ - a new market access platform. In December 2009, BSE Launched the BSE STAR MF – Mutual Fund trading platform and the clearing and settlement mechanism for Corporate Bonds through Indian Clearing Corporation Ltd. In December 2009 itself, BSE announced new derivatives rates to lower transaction costs for all, Commencement of the settlement of corporate bonds on NSE.

On January 2010, the BSE changed its market time to 9.0 a.m. - 3.30 p.m. In February, the BSE PSU website was launched. This was followed by Currency Futures on additional currency pairs. In April 2010, BSE's New DBM framework @ Rs.10 lakhs - 90% reduction in Membership Deposit came into effect. In May 2010, BSE commenced the dissemination of corporate action information via the SWIFT platform. In July 2010, Options were included in the BOLT trading platform of the BSE. In September, for the first time in India, BSE launched Mobile- Based trading. In the same month, Smart Order Routing (SOR) was introduced on BSE. The EUREX-SENSEX future was initiated in October 2010. In the same month, the Fast trade on the Web (FoW) - Exchange hosted platform, and a 15-minute special pre-open trading session (a mechanism under which investors could bid for stocks before the market opens) were launched. November 2010 saw the launch of the Volatility Index on BSE. In December of the same year, the Shariah Index started being adopted by the BSE.

The developments in 2011 included:

**January** – The Co-location facility at BSE – a tie-up with Net magic was established. In the same month, the "Financial Inclusion" Award was conferred on the NSE.

**July** - Trading in 91 Day GOI Treasury bill – Futures commenced.

**August** - Derivatives on Global Indices launched

**September-** Derivatives on CNX PSE and CNX Infrastructure Indices launched

**November** - The Environment Ministers of the State of Maharashtra and the United Kingdom jointly issued a concept note for S&P BSE Carbon index.

**28th December** – The NSCCL was rated "CCR AAA" for fourth consecutive year.

The 'launching spree' can be noticed in the year 2012 as well. The launchings included: S&P BSE-GREENEX to promote investments in Green India in February; BSE - SME Exchange Platform (on 13th March); "EMERGE" - SME Platform by NSE (14th March), the Unique Financial Inclusion Initiative "Jagruti" of NSE and India Post (22th March); trading in BRICSMART indices derivatives (30th March); FUTURES and OPTIONS contracts on FTSE 100 (in 03rd May 2012); financial literacy initiative ' Jagruti' in Mohali, in partnership with India Post (27th June), SME operations (18th September).

The year 2013 continued to be significant for the stock markets in India. On 3rd January, NSCCL was rated CCR AAA for the fifth consecutive year. On 10th January, agreement was reached with the launch of S&P CNX Nifty Futures in Japan. On 19th February, BSE entered into a Strategic Partnership with S&P Dow Jones Indices. On 13th May, the first dedicated Debt Platform on the Exchange was launched by NSE. This was followed by the launch of Currency Derivatives (BSE CDX) on 28th November.

Since early 2014 during polling time for the Lok Sabha, not much activity could have been expected. However, on 21th January, NSE launched 'NSE Bond Futures II.' This was followed by the launch of Interest Rate Futures (BSE –IRF) (on 28th January); Institutional Trading Platform on BSE SME (on 11th February) and NVIX Futures – Futures on India VIX Index (on 26th February). On 24th March, Trading of CNX Nifty Futures on OSE commenced.

## 3.7 Reforms in the Capital Market

During 1991-1992, some securities scams came to light. These forced the government to increase the pace of reforms in the capital market. Since then, several

measures in reforms have been taken in both the primary market and secondary market segments of the equity market.

## 3.8 Post- Reforms Capital Market Scenario

After the initiation of reforms in 1991, the Indian secondary market now has the following four –tier form:

- Regional Stock Exchanges
- The National Stock Exchanges (BSE and NSE)
- The Over the Counter Exchange of India (OTCEI)
- The Interconnected Stock Exchange of India (ISE)

The NSE started in 1994. It is the first modern stock exchange to bring in new technology, new trading practices, new institutions and new products. The OTCEI was set up in 1992 as a stock market, providing small and medium-sized companies with the means to generate capital.

In total, there are, at present, 21 stock exchanges in India, 15 regional stock exchanges, the BSE, the NSE, the OTCEI and the Interconnected Stock Exchange, ISE of India. The ISE is a Stock Exchange of Stock exchanges. They operate under the rules and bylaws and regulations approved by the government and the SEBI.

The MCX Stock Exchange (MCX-SX) was granted recognition on September 16$^{th}$, 2008, by the SEBI as commodity exchange. The United Stock Exchange of India (USE) is the latest entrant in the stock markets. It commenced its operations in July 2010. It is the fourth currency futures exchange, after BSE, NSE, and MCX-SX. All 21 Indian public sector banks, leading private sector banks, public sector undertaking and corporate are shareholders of the exchange.

## 3.9 Conclusion

This chapter elucidated the summary of capital market in India including its meaning, the functions and the history of the capital markets in India. We thus see that the capital markets in India have long existed, and have moved from strength to strength plugging loop holes in the system and surviving quite a few weaknesses and scams.

# CHAPTER -IV

# DEPOISITORY SYSTEM IN INDIA

# CHAPTER - IV

# DEPOSITORY SYSTEM IN INDIA

## 4.1 Introduction

The capital market in India has been ever expanding by leaps and bounds, Post the globalisation, privatisation and liberalisation of the Indian economy, and introduction of financial sector reforms in 1991, India currently has a huge number of shareholders and the largest number of listed companies in the global (**Garg, 1997**). This huge volume of business also adds associated problems of delayed deliveries, forged signatures and certificates, the massive amount of paper work at various levels, to name a few. In addition to these market risks, many foreign investors and the FIIs have objected to the unnecessary impediments during the registration process. And, the FIIs have represented to the government to commence script less trading (**Sarkar, A.K. Indina 1997**).

In India, currently, two depositories are in existence. These are NSDL (National Securities Depository Limited) and CDSL (Central Depository Services Limited). The Depositories Act, 1996, aims at efficient capital market communications, enhanced investor security, lowered risks and greater transparency in the securities market transactions. It has huge advantage to the issuer companies, by ensuring reduced costs and enhancing the confidence levels of the shareholder populace. No other Act has had such insightful all round impact on the stakeholders in the capital markets in India. This legislation envisages multiple depositories in India, to ensure benefits of competition for the users of the Depository System in India. The introduction of the depository system, has led many investors to enjoy many benefits like free and instant transferability in a secured manner at lower costs, free from problems like irregular deliveries, odd-lots, etc. Nowadays, the tradable lot is reduced to “one unit.” Hence, even a common man can invest money in one equity share or bond or debenture. The investor will also be able to save the expenditure on stamp duty on transfer of securities.

## 4.2 Meaning of a Depository

In general “The depository is an organisation where the securities of an investor are held and transferred into electronic form”.

According to the **German Depository Organisation**, “A Depository is a file or a set of records in which data is stored for the purpose of safekeeping or identity authentication.”

According to the Black’s Law Dictionary, the word ‘depository’ is: “the party of the institution (e.g., bank or trust company) receiving a deposit. One with whom anything is lodged in trust, as ‘depository’ is the place where it is put. The obligation upon the depositary is that he keeps the things with reasonable care and upon request, restores it to the depositor.”

As per The Depositories Act, 1996, a depository means "a company formed and registered under the Companies Act, 1956, and which has been granted a certificate of registration under subsection (IA) of Section 12 of the Securities and Exchange Board of India Act, 1992."

The Depository Act defines a “depository as an organisation where securities of shareholders are held in the form of electronic accounts, in the same way as banks hold money”.

The main function of a “depository is to provide a facility for investors hold and transfer securities in dematerialized form and book-entry form. The securities are transferred by debiting the transferor’s depository account and crediting the transferee’s depository account”.

The Bank for International Settlements (BIS) defines a depository as “a facility for holding securities which enables securities transactions to be processed by book entry. The depository or securities may immobilise physical securities may be dematerialized, so that they exist only as electronic records”.

“In the future, wealth will not be held in gold, paper or plastic form, but will be in the form of magnetic dots in a computer” (Alvin Toffler).

The dictionary meaning of depository is a place for keeping things, which may be funds or securities. A depository is very much akin to a bank in some ways. The similarity between depository and the bank, and the difference, between

depository and the bank is shown as under for a better understanding of the depository system.

**Table 4.1: Similarities between a Bank and a Depository**

| Bank | Depository |
|---|---|
| Holds funds in the accounts | Holds securities in accounts |
| Transfer funds between accounts | Transfers securities between accounts |
| Transfers without handling cash | Transfers without handling physical securities |
| Safekeeping of money | Safekeeping of securities |

*Source: NSDL AND CDSL*

In a bank, the intermediate of substitute is money, while a depository deals in securities. In a bank, money is deposited for safekeeping. In a depository, securities are kept safely.

**Table 4.2: Areas of Difference between a Bank and a Depository**

| Bank | Depository |
|---|---|
| Either of holders can sign instructions | All joint holders are required to sign instructions |
| The minimum balance is to be maintained | No minimum balance is required to be maintained |
| Entitled to Interest | Interest can be earned only by participating in the Stock Lending Scheme |
| Uses balances in accounts | Does not move balances on the account without the account holder's authorization |
| The nomination is kept confidential | Signature and photograph of the nominee need to be provided |

*Source: NSDL AND CDSL*

In case of Bank account transactions, any one of the joint holders can sign the instructions, but in depository, all joint holders are required to sign on all the instructions. The securities retained in a depository account by an investor can be moved from the account, only with proper authorization from the account holder.

## 4.3 Legal Framework of Depository System in India

The legal structure for a Indian depository system has been laid down by the Depositories Act, 1996, and is regulated by SEBI. The Indian depository business is governed by the Depositories Act, 1996

- The SEBI (Depositories and Participants) Regulations, 1996
- Bye-laws of Depository
- Business Rules of Depository.

Apart from the above, Depositories are also governed by certain provisions of:

- The Companies Act, 1956
- The Indian Stamp Act, 1899
- Securities and Exchange Board of India Act, 1992
- Securities Contracts (Regulation) Act, 1956
- Benami Transaction (Prohibition) Act, 1988
- Income Tax Act, 1961
- Bankers' Books Evidence Act, 1891

The Depositories Act, 1996, provides for the establishment of single or multiple depositories. Any firm or company is eligible to provide depository services, provided it is registered as a company under the Companies Act, 1956, seeks registration with SEBI and obtains a Certificate of Commencement of Business from SEBI on the fulfilment of the prescribed conditions. Agencies, such as custodians, banks, financial institutions, large corporate brokerage firms and non-banking financial companies, act as participants of depositories.

## 4.4 Features of the Indian Depository System

The essential features of the Indian depository system are:

**I Multi-Depository System**

The Depository Act, 1996, provides for a multi-depository system. In India, currently, we follow two depositories namely,

**i)** NSDL- National Securities Depository System Limited

**ii)** CDSL-Central Depository Services Limited.

**II Dematerialisation**:

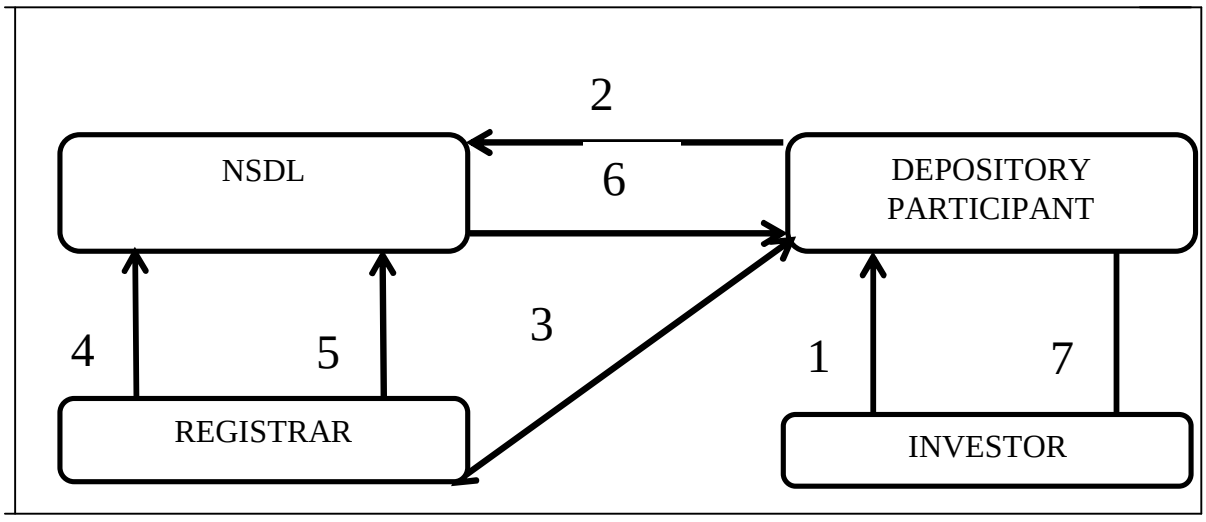
The model adopted in the depository system in India provides for dematerialisation of securities. Dematerialisation means conversion of physical shares in the electronic form. The Depository System in India, enables the investors to gain by way of well-organised settlements, lesser costs and risks of theft, forgery, etc. In the short form, it is known as DEMAT, i.e., the first five letters of dematerialisation.

Dematerialisation is the method through which a beneficial owner can get his physical securities converted into electronic form. Prerequisites for dematerialisation are:

a) An investor should have a Demat account with any DP of NSDL or CDSL.
b) Securities to be dematerialised must have been admitted in NSDL or CDSL, i.e., for the Securities should be available on NSDL or CDSL.
c) The investor should be the registered holder of the securities in the books of the company.

The Beneficiary Owner is required to submit an application to the Depository Participants in the Dematerialisation Request Form (DRF), along with the certificates. The Depository Participant verifies the information on the DRF and the physical certificates and enters the details in the system to set up a request electronically. The method of a DEMAT request is as follows:

**Figure 4.1: Process of Dematerialisation**



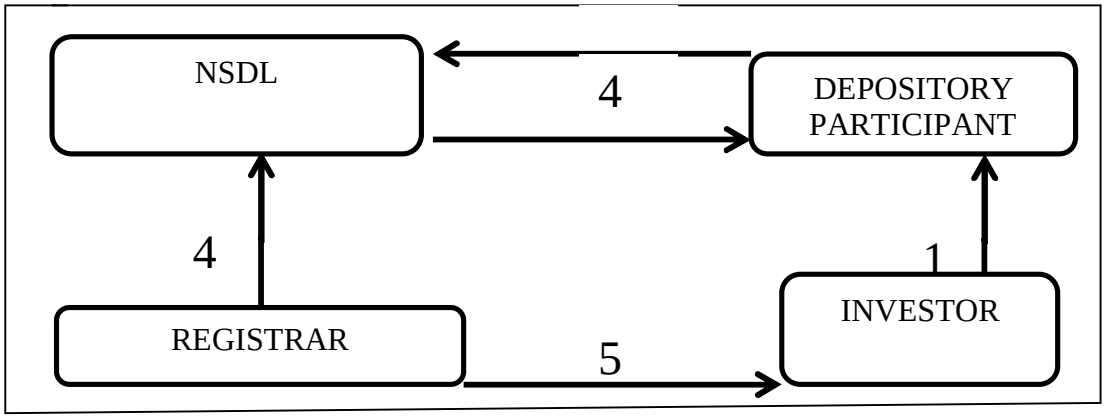

*Source: NSDL and CDSL*

1. Investor surrenders certificates for dematerialisation to DP
2. DP intimates depository of the request through the system
3. DP submits the certificates to the registrar
4. Registrar confirms the dematerialisation request from depository
5. After dematerialisation, registrar updates accounts and informs the depository of the completion of dematerialisation.
6. Depository updates its accounts and informs the DP
7. DP updates its accounts and informs investor.

**III Rematerialisation**:

The Electronic Mode Shares converted into physical mode is called Rematerialisation of Securities. Rematerialisation is the process of converting securities, held in a Demat account (i.e. electronic form), to physical form. A beneficiary owner intending to convert the securities into physical form is required to submit a rematerialisation request to the Depository Participant in a Rematerialisation Request Form (RRF). The Depository Participant verifies the information on the RRF and enters the details in the system to set up a request electronically. The method of a Rematerialisation Request is given below:

**Figure 4.2: Process of Rematerialisation**




*Source: NSDL and CDSL*

1. Beneficial owner requests for rematerialisation
2. DP intimates of the Depository request through the system
3. Depository confirms Rematerialisation request to the registrar. Registrar updates accounts and print certificates
4. Depository updates accounts and downloads details to DP
5. Registrar dispatches certificates to investor

Depository services are provided to investors through depository participants, The Depositories Act, 1996, states that the depositoriesprovide their services to the security holder(s) through their agents, called depository participants.

**IV Fungibility**:

According to the depository system in India, the securities in dematerialised form are not identified by unique numbers and certificate numbers, as in the physical environment. Thus, all securities in the same class are identical and interchangeable.

**V Registered Owner in the Depository System in India**:

The ownership of securities dematerialised is vested to the security holder. After that, the depository is recorded in the books of the issuer as a registered owner

**VI Beneficiary Owner:**

In the records of the depository, the security holder is recorded as the beneficiary owner. However, the ownership rights and liabilities rest with the beneficiary owner. All the rights, duties and liabilities underlying the security belong to the beneficial owner

**VII Free Transferability of shares:**

Transfer of shares in custody in dematerialised form takes a position without restraint in the course of electronic book-entry system.

## 4.5 Depository Structure in India

There are several financial institutions in the Indian financial system, which facilitate the smooth functioning of the depository system. They enable the issuers of securities to work together with the investors in the primary market (new issue market), as well as the secondary market (second-hand market). These institutions are as follows:

### 4.5.1 National Securities Depository System Limited (NSDL)

NSDL is the first and the largest depository in India. It was established in August 1996. NSDL is promoted by the financial institutions and banks of national importance, and accountable for the economic improvement of the country. The NSDL has since established a national infrastructure of international standards that

handles the majority of the securities settled in the dematerialised form in the Indian capital market. The enactment of the Depositories Act in August 1996 lined the approach for the establishment of NSDL, the first depository in India. Its mechanism supports the investors and brokers in the capital market by adopting innovative and flexible technological systems.

NSDL's main aim is to ensure the safety and soundness of Indian marketplaces, by developing settlement solutions that increase efficiency, minimise risk and reduce costs. NSDL helps to develop products and services that will continue to meet the growing needs of the financial services industry.

### 4.5.2 Central Depository Services Limited (CDSL)

This is the second depository organisation in India, and was established in February 1999.CDSL also offers, more or less, similar services as NSDL.CDSL was set up with the purpose of providing convenient, dependable and secure depository services at reasonable cost to all market participants. CDSL is promoted by Bombay Stock Exchange Ltd in collaboration with, leading banks, such as State Bank of India, Bank of India, Bank of Baroda, HDFC Bank, Standard Chartered Bank and Union Bank of India.

## 4.6 Functions of a Depository in India

**a) Account Opening**:

An investor has the option of opening an account with several DPs or opening several accounts with a single Depository participant. The investor, while opening the account, has to enter into an agreement with the Depository Participant.

**b) Dematerialisation**:

The basic function of a depository is to eliminate or minimise the movement of physical securities in the market. Dematerialisation is the process of converting securities held in physical form into holdings in book-entry form or electronic form.

**c) Account Transfer**:

The depository gives effect to all transfers resulting from the settlement of trades and other transactions between various beneficial owners, by recording entries in the accounts of such beneficial owners.

**d) Transfer of Ownership and Registration**:

A transfer is the legal change of ownership of security in the records of the issuer. For implementation a transfer, certain legal steps have to be taken. These include endorsement, execution of a transfer instrument and payment of stamp duty.

**e) Corporate Actions:**

A depository may handle corporate actions in two ways. In the first case, it merely provides information to the issuer about the persons entitled to receive corporate benefits. On the other hand, the depository itself takes the responsibility of distribution of corporate benefits.

**f) Pledge and Hypothecation**:

The securities held with the depository may be used as collateral to secure loans and other credits by the clients. These securities are verified for authenticity and often need to be transferred in the name of the lender. This has a time and money cost by way of transfer fees or stamp duty. The securities pledged or hypothecated are transferred to a segregated or collateral account through book entries in the records of NSDL. In the case of CDSL, the securities pledged/hypothecated are not transferred to a segregated or collateral account through book entries in their records.

**g) Linkages with Clearing System:**

The depository does actual delivery of securities to the clearing system from the selling brokers and delivery of securities (from the clearing system to the buying broker). To achieve this, the depositories and the clearing system should be electronically linked.

## 4.7 Advantages of Indian Depository System

The dematerialisation procedure had advantages for every for all the parties involved in the capital market operations and designed for the capital market in common. It is anticipated that progressive dematerialization of shares through the national depository system will modify the face of the primary and secondary markets and engender greater integration of markets and even-handed treatment of investors (**Bhave, 1998)**. In the depository system, the ownership and transfer of securities take place using electronic book entries. By the side of the onset, this

system rids the capital market of the dangers related to managing of paper. The other benefits of the depository system are:

A. In the depository system environment, once the holdings of an investor are dematerialised, the question of bad delivery does not arise.

B. In the depository system, possible reasons for objecting to the transfer of title, due to deficiencies associated with the transfer deed and share certificates, are eliminated, since both transfer deed and share certificates are dispensedwithin the depository system.

C. Dealing in physical securities has associated security risks of theft of stocks, mutilation or loss of certificates during movements to and from the registrars. These expose the investor to the cost of obtaining duplicate certificates, advertisements, etc. Such problems do not arise in the depository environment.

D. There is no stamp duty for transfer of equity instruments and units of mutual fund in the depository system. However, in the case of physical shares, a stamp duty of 0.5% is payable on the transfer of shares.

E. In the depository environment, once the securities are credited to the investor's account on the payout, he becomes the legal owner of the securities. There is no further need to send it to the company's registrar for transfer of ownership or registration, which is necessary in the case of physical securities. This process normally takes longer than the statutorily prescribed period of two months, thus exposing the investor to the opportunity cost of delay in transfer and the 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 suitable for delivery and the investor would also stand to lose his corporate entitlements.

F. After the introduction of the depository system, and the electronic form of settlement, Indian Capital markets have moved from 15-day long settlement cycle to a T+2 settlement cycle, where the settlement takes place on the 2nd day from the day of trading. This enables faster turnover of stock and enhances liquidity with the investor.

G. In the physical environment, the seller was secured from the sale proceeds had has been fully realisable, but the buyer was not, since it was not certain whether

shares purchased would get transferred or not. The market principle that the buyer is a king does not apply to the capital market. After the introduction of the depository system, both the buyer and seller are secured at the time of the transaction of securities.

H. NSDL and CDSL provide for a direct credit of non-cash corporate entitlements like rights, bonus, etc.

I. After the introduction of the depository system, banks are availing this benefit against pledge of dematerialised securities. Dematerialised securities eliminate hassles risks like getting securities registered in their name at the time of book closure if the pledge defaults in repayment.

J. Since the introduction of the depository system in India and electronic settlement of securities, there has been a significant fall in the brokerage charged by the brokers for effecting and settling trades of investors at the stock exchanges. This benefit is given to investors for dealing in dematerialised securities by reducing their back office cost of handling paper. It also eliminates the risk of being the introducing broker.

K. In the physical environment, every entity involved in the purchase or sale of securities enables to handle papers and pass on these papers to the next entity. The number of papers to handle increased with the volume of transactions. However, in the depository environment, there is no paper movement, except the delivery instruction given by the client or broker.

L. NSDL has recently introduced a popular internet based platform, SPEED-e, for Clients of all DPs so that clients can issue instructions to their DPs through the Internet. Using SPEED-e, the client need not write delivery instructions, or visit its DP, for issuing instructions. Clients can monitor the status of instructions given by them on SPEED-e on the Internet. CDSL is also providing a commonInternet-based platform for the DEMAT account holders in India.

M. In the depository system, the participants need to provide periodic reports to investor on their holdings and dealings. It leads to healthier management control on part of the servicing agency and better information for the investors.

N. In the case of change of address or transmission of DEMAT shares, investors are saved from undergoing the entire process/procedure with each company or

registrar. Investors have to only to inform their DP about the modification, along with all relevant documents. The investor will receive all corporate cash benefit like dividends, interest warrants, redemption money, etc., at the new address with immediate effect.

O. An account holder can get securities in all companies transmitted/transferred to his account by completing formalities with a single entity, i.e., the DP.

P. The Depository System provides the facility for opening Demat accounts in the name of minor and holding their securities in their name. Since, under the Contract Act, 1872, minors are not eligible to enter into contracts on their own. The account in the name of the minor is required to be operated from his/her guardian. The Guardian may be the natural guardian, a guardian appointed by will, or the guardian appointed by order of the court.

Q. For investors who open multiple accounts, each and every one account can be consolidated into one account with open-handed instructions to the DP. In the case of physical certificates, consolidation of folios requires correspondence with all the companies individually.

R. Due to the introduction of the depository system, the transaction cost has reduced many players have increased their dealings. It will directly or indirectly help in improving liquidity.

## 4.8 Safety of Depository System in India

NSDL and CDSL have implemented different checks and procedures in the depository system to ensure the protection of the investors' property. These consist of:

a) Depository Participant can start operations, only after registration using SEBI.

b) The registration procedure is based on the recommendation from NSDL and CDSL after conducting their independent assessment and evaluation.

c) SEBI rules have been prescribed after satisfying some criteria for becoming a Depository Participant.

d) Depository Participants are permitted to affect any debit and credit to an account, only by valid instructions from the customer.

e) The data exchange between NSDL, CDSL and its business partners is protected by standard fortification measures, such as encryption. This is as per the guidelines of the SEBI.

f) There are no direct communication relations between two business partners and all communications between two business partners are routed through NSDL and CDSL. All investors can take delivery of their transaction statement regularly from the DP.

g) Every month, NSDL and CDSL forward a statement of account to a random sample of investors as a counter check.

h) NSDL and CDSL have an absolute record of the client's transactions, in addition to the records of the DP.

i) Depository Participants (DPs) of NSDL and CDSL are mandated to have NCFM Depository Module Examination / NSDL's Certification in Depository Operations (NCDO) qualified persons at their service centres. NSDL and CDSL levy a penalty on DPs if NCFM/NCDO qualified personnel are not appointed in at least 90% of the total service centers of the DPs.

j) All grievances of the investors are to be resolved by the concerned business partner within 30 days.

k) The NSDL and CDSL hardware, software and communication systems are continually reviewed, to make this more secure.

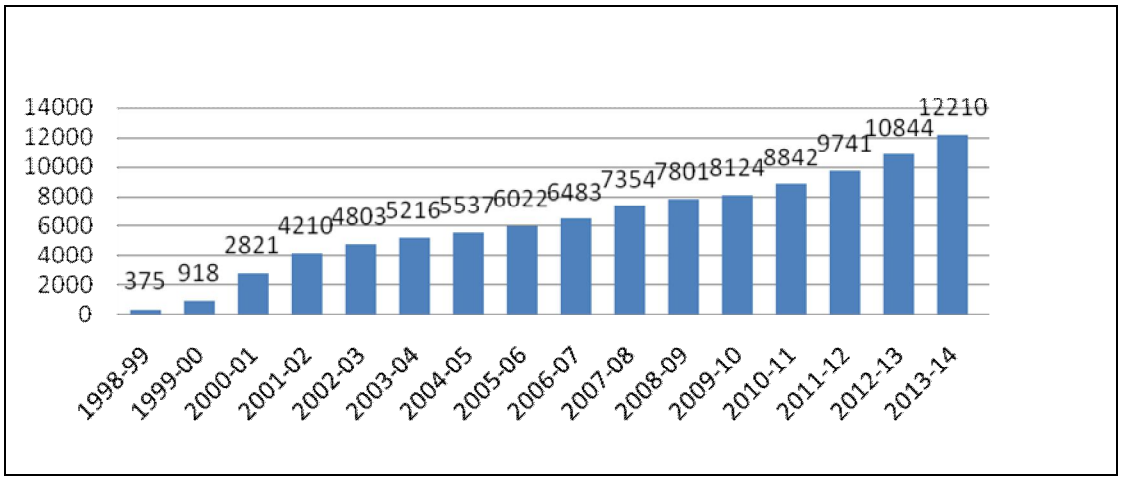
## 4.9 Trends in Indian Depository System at NSDL

Indian Depository System was started in the financial year1996-97. According to the depository act multiple depositorysystems can be established. First depository (NSDL) was established in 1996 and second depository (CDSL) in 1999 consequently. From 1996 the trend of the depository system in India is as follows.

### 4.9.1 Agreement between companies and NSDL for the Dematerialisation of Shares

The figure 4.3 shows the number of agreement signed between companies and NSDL for the dematerilisation of the shares. It indicates that there was no much improvement in the agreement sign from1998 to 2000 but there was drastic improvement during the period from 2001 to 2014. The numbers of agreements recorded were 375 and 12210 in the year 1998 -99 and 2013-14 respectively. According to the facts it can be concluded that the increasing in the agreements indicates both the parties have keen interest in developing the process of dematerialisation of shares.

**Figure 4.3: NSDL agreement with the companies for the Dematerialisation of Shares**

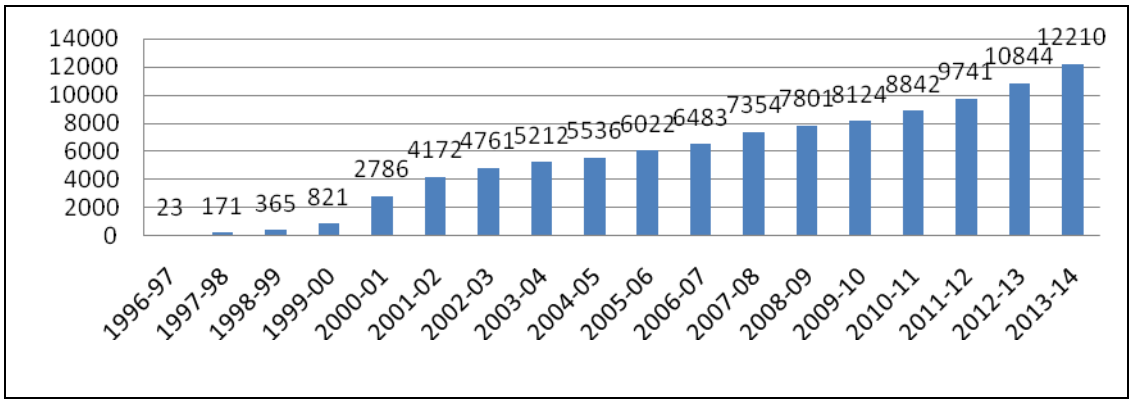



*Source: SEBI handbook of statistics*

### 4.9.2: Companies admitted with NSDL for the Dematerialisation of Shares

The Figure 4.4 indicates the number of companies' admitted with NSDL for dematerilisation of shares. The securities of almost all listed companies have been admitted with NSDL for DEMAT. Further, a significant number of Private Limited and unlisted companies have also been registered with NSDL.

**Figure 4.4: Companies admitted with NSDL for the Dematerialisation of Shares**



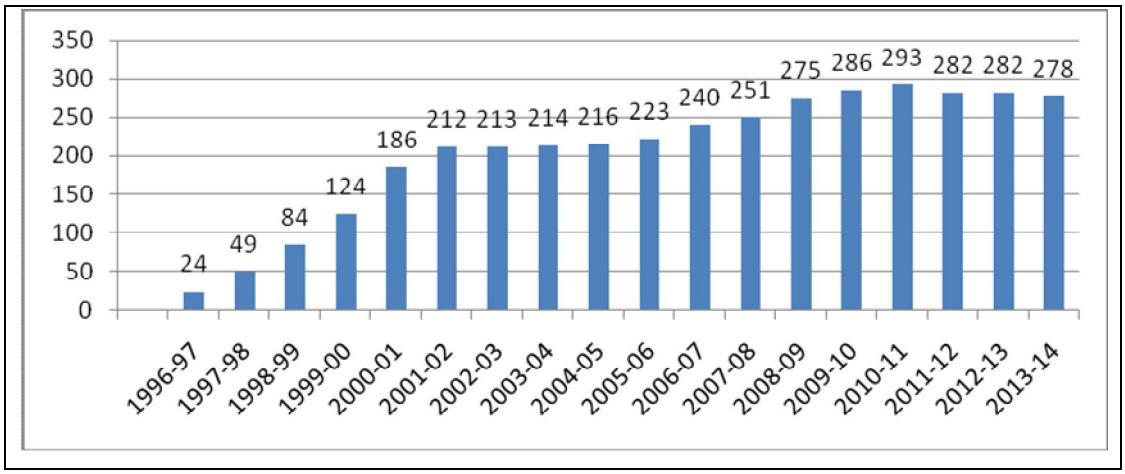
*Source: SEBI handbook of statistics*

During the last 18 years, the number of companies registered with NSDL has increased from 23 to 12210. During the initial period of the dematerilisation, it is found that there is a difference between the number of companies signed agreement and admitted, but in the recent years all the companies which have entered into agreement have also admitted with NSDL for the dematerilisation of shares.

### 4.9.3: Number of Depository Participants Registered with NSDL

The figure 4.5 indicates the number of depository participants registered with NSDL. The depository participants are providing depository services across the country. The depository participants include Banks, NBFCs, Custodians, Clearing Houses Corporations and Regional Stock Exchanges. The graph shows that there is an increase in the number of Depository Participants from 24 to 278 from 1996-1997 to 2013-2014 respectively.

**Figure 4.5: Number of Depository Participants Registered with NSDL**

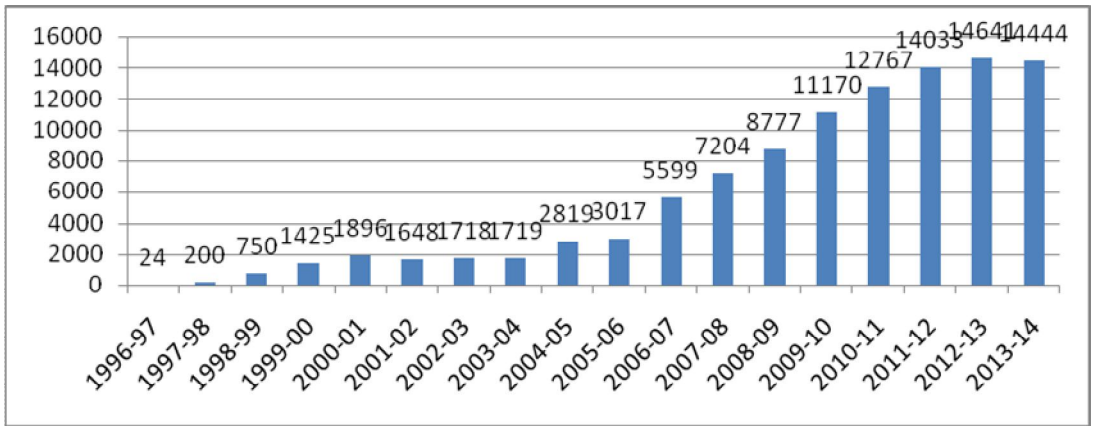



*Source: SEBI handbook of statistics*

### 4.9.4: Number of Depository Participants Locations Registered with NSDL

Figure 4.6 indicates the number of depository participants' locations registered with NSDL. The numbers of depository participant's locations registered were 24 in 1996-97 and increased to 14444 in 2013-14.

**Figure 4.6: Number of Depository Participants Locations Registered with NSDL**

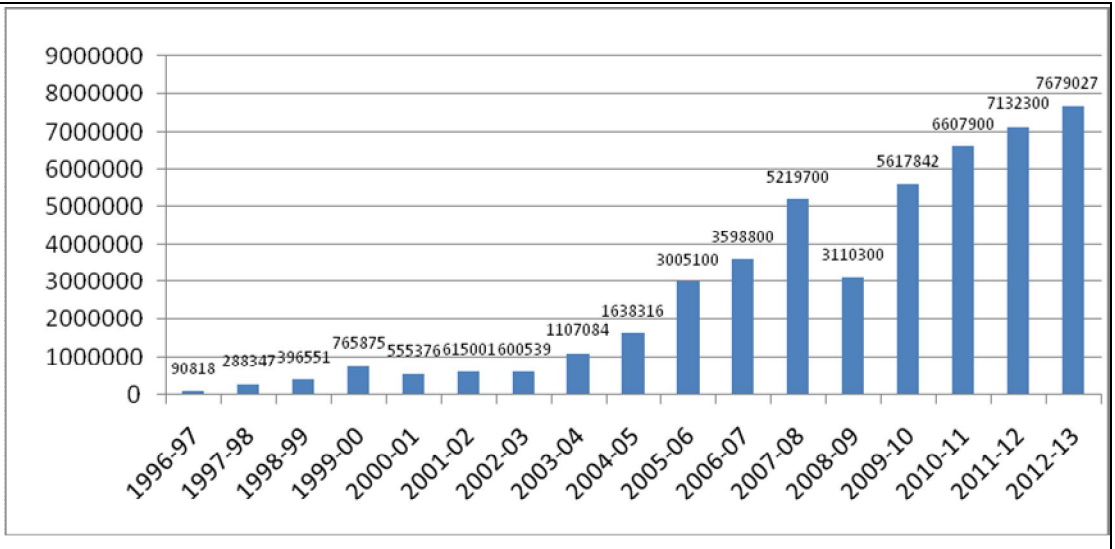



*Source: SEBI handbook of statistics*

**4.9.5: Total Market Capitalisation of Companies which are Registered with NSDL**

Figure 4.7shows the total market capitalization of companies which are registered with NSDL. After registered with the NSDL for dematerilisation shares more the companies' market capitalisation were increased. The market capitalisation of companies increased from Rs 90818 crores in 1996-97, increased to Rs, 8939876 crores in 2013 -2014.

**Figure 4.7: Total Market Capitalisation of Companies Those Companies which are Registered with NSDL (Rs in Crores)**

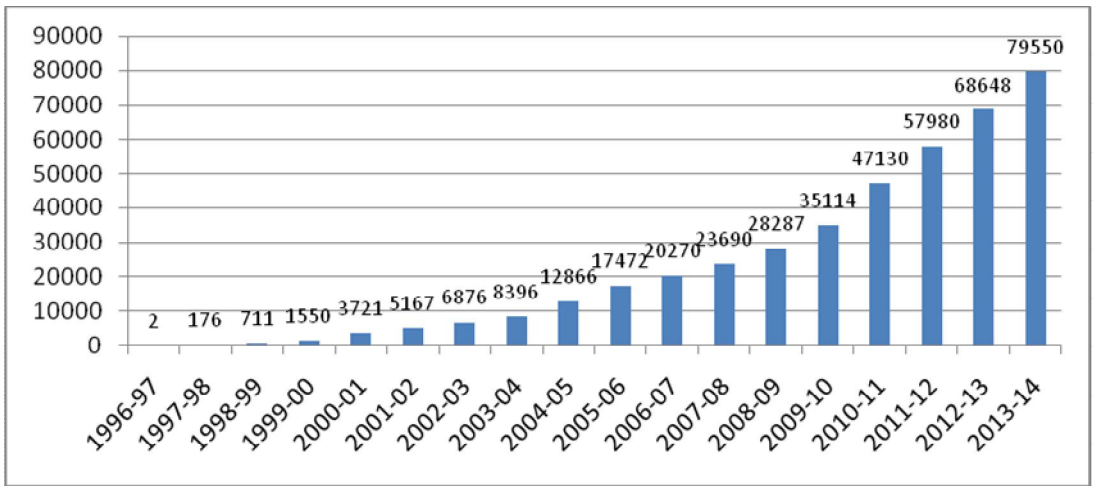



*Source: SEBI handbook of statistics*

### 4.9.6: Dematerialisation of Quantity of Securities companies which are dematerilisation of shares with NSDL

Figure 4.8 graph shows that dematerilisation of quantity of shares with are with NSDL. During the last 18 years, the volume of securities for dematerialisations increased from 2 crores to 79550 crores.

**Figure4.8: Dematerialisation of Quantity of Securities (In Crores)**



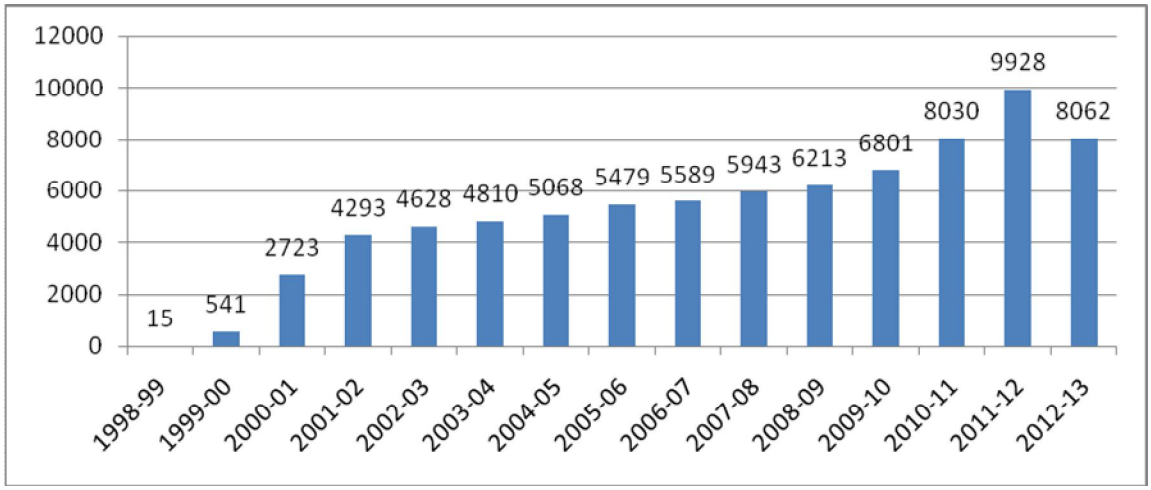

*Source: SEBI handbook of statistics*

### 4.10 Progress of Dematerialisation at CDSL

### 4.10.1: Agreement between companies and CDSL for the Dematerialisation of Shares

Figure 4.9 shows the number of agreement signed between companies and CDSL for the dematerilisation of the shares. It indicates that there was no much improvement in the agreement sign from1998 to 2000 but there was drastical improvement during the period from 2001 to 2014.The number of agreements recorded were 541 and 8062 in the year 1999 -00 and 2013-14 respectively. According to the facts it can be concluded that the increase in the agreements indicates both the parties have keen interest in developing the process of dematerialisation of shares. The number of company agreements signed with CDSL for dematerialisation of shared increase from 1 in 1998-99 to 8630 in 2013-14.

**Figure 4.9: Company Agreements Signed with CDSL for the Dematerialisation of Shares**

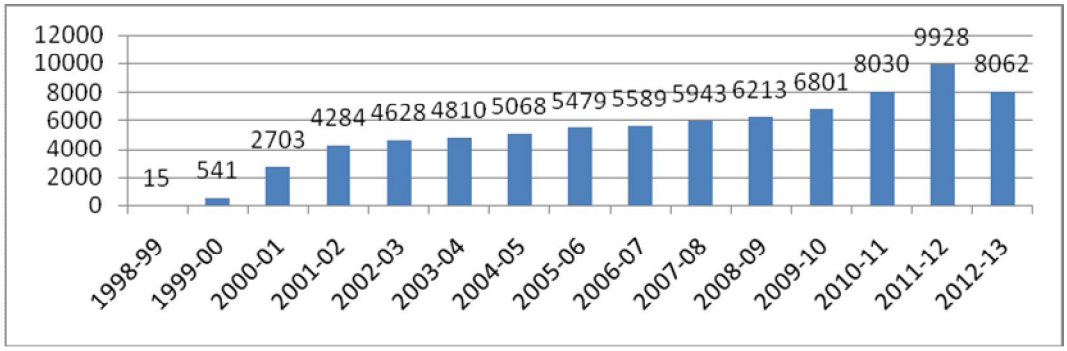



*Source: SEBI handbook of statistics*

### 4.10.2: Companies admitted with CDSL for the Dematerialisation of Shares

Figure 4.10 indicates the number of companies' admitted with CDSL for dematerilisation of shares. The securities of almost all listed companies have been admitted with CDSL for DEMAT. Further, a significant number of Private Limited and unlisted companies have also been registered with CDSL. During the last 18 years, the number of companies registered with CDSL has increased from 15 to 8630.During the initial period of the dematerilisation, it is found that there is a difference between the number of companies signed agreement and admitted, but in the recent years all the companies which have entered into agreement have also admitted with NSDL for the dematerilisation of shares. CDSL is the second depository in India.

**Figure 4.10: Companies Admitted with CDSL for the Dematerialisation of Shares**

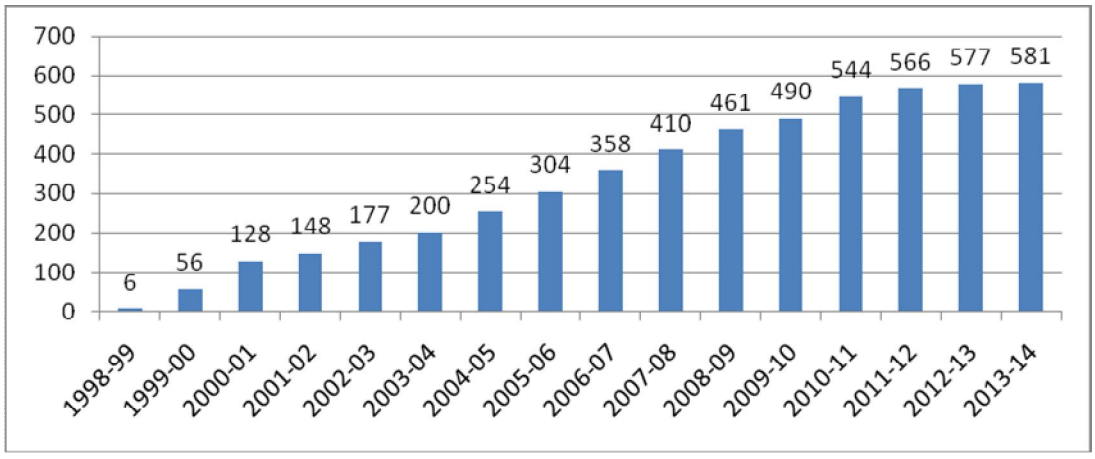



*Source: SEBI handbook of statistics*

### 4.10.3: Number of Depository Participants Registered with CDSL

Figure 4.11 indicates the number of depository participants registered with CDSL. The depository participants are providing depository services across the country. The depository participants include Banks, NBFCs, Custodians, Clearing Houses Corporations and Regional Stock Exchanges. The graph shows that there is an increase in the number of Depository Participants from 56 to 581 from 1999-00 to 2013-14.

**Figure 4.11: Number of Depository Participants Registered with CDSL**

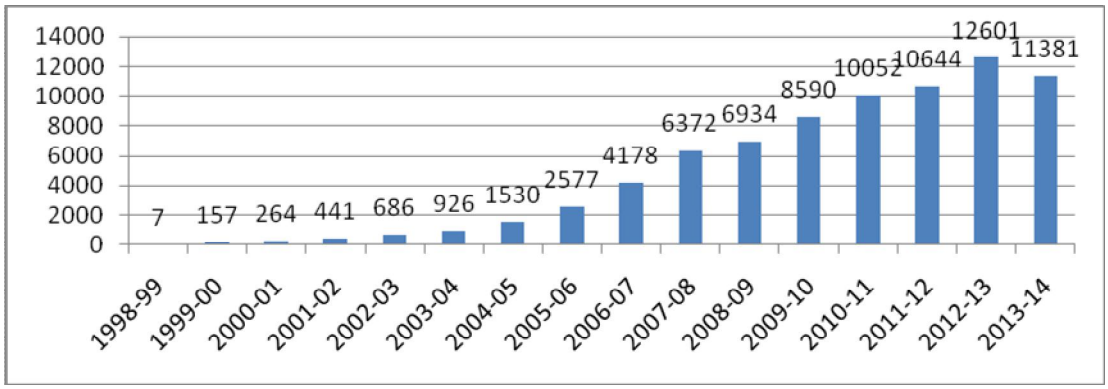



*Source: SEBI handbook of statistics*

### 4.10.4: Number of Depository Participants Locations registered with CDSL

Figure 4.12 indicates the number of depository participants' locations registered with CDSL. The numbers of depository participant's locations registered were 7 in 1998-99 and increased to 11381 in 2013-14. Depository participants are located in almost all the corners of the country.

**Figure 4.12: Number of Depository Participants Locations Registered with CDSL**

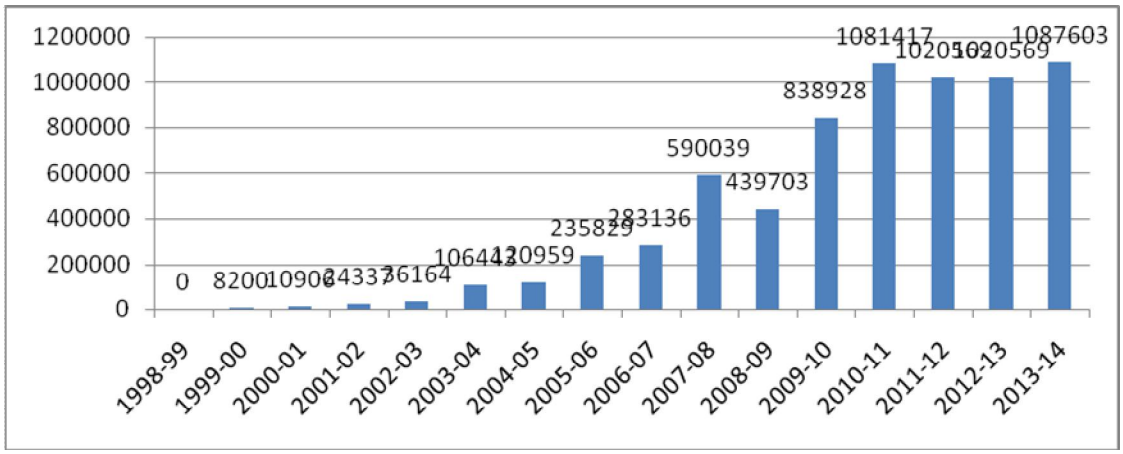



*Source: SEBI handbook of statistics*

### 4.10.5: Total Market Capitalisation of Companies registered with CDSL

Figure 4.13 shows the total market capitalization of companies which are registered with CDSL. After registered with the CDSL for dematerilisation shares more the companies' market capitalisation were increased. The market capitalization of companies increased from Rs 82001 crores in 1999-00, increased to Rs, 1087603 crores in 2013 -2014.

**Figure 4.13: Total Market Capitalisation of Companies Registered with CDSL (Rs in crores)**

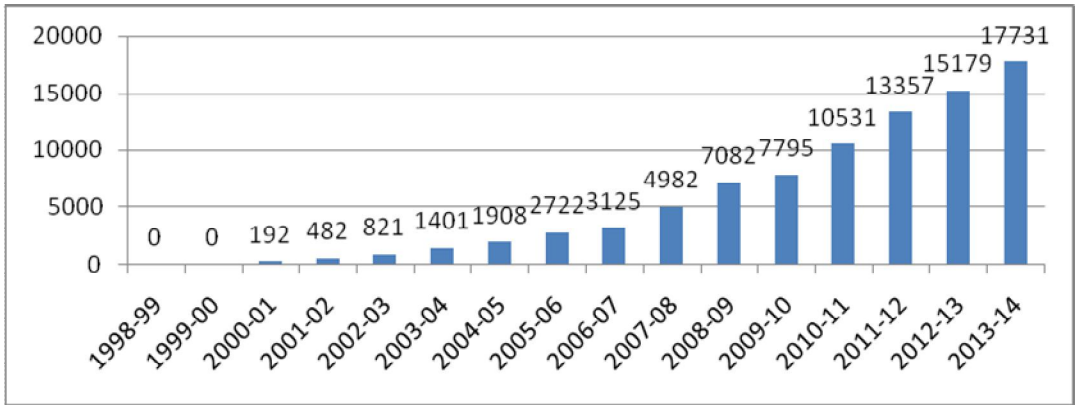



*Source: SEBI handbook of statistics*

### 4.10.6: Dematerialisation of Equity Shares with CDSL

Figure 4.14 graph shows that dematerialisation of quantity of shares with are with CDSL. During the last 18 years, the volume of securities for dematerialisations increased. Dematerialisation of securities, which was Nil in 1988-99 and 1999-00, rose to Rs. 192 crores in 2000-01. In 2013-14, it became Rs. 17731 crores

**Figure 4.14: Dematerialisation of Equity Shares with CDSL**




*Source: SEBI handbook of statistics*

## 4.11 Conclusion

It may thus be seen that there is exponential growth in the number of companies admitted for dematerilisation, depository participants as well as their locations.

# CHAPTER -V

# IMPACT OF DEPOSITORY SYSTEM IN INDIA

# CHAPTER V

# IMPACT OF DEPOSITORY SYSTEM IN INDIA

## 5.1 Introduction

This chapter explains the impact of the depository system in the capital market, after the introduction of the depository system in India. Further, it analyses the impact of depository system on liquidity, volatility and returns in the capital market, Paired sample T-test has been used to understand the impact of depository on liquidity, return and volatility. Here this chapter is divided into three sections. Section-**I**: explains the introduction of liquidity, return and volatility; section **II**: explains the trend of stock exchanges (SENSEX) from 1991 to 2012 and impact of depository system in India and finally section **III:** explains the impact of depository system on liquidity, return and volatility on selected 100 stocks on capital market in India.

## SECTION I

### Introduction to Liquidity, Return and Volatility

### 5.1.1 Liquidity

For the measurement of liquidity the study considered the number of trades, turnover of stocks, the number of shares, highest and lowest prices of stocks and opening and closing stock prices.

The ability to sell or buy securities in the capital market is termed as liquidity. According to Agarwal, R, N, (2000), liquidity is measured in two ways. The first one, market capitalisation and the second measure is turnover ratio. Market capitalisation shows the total size of the market. Transaction cost bears relation with turnover ratio; low turnover ratio is connected with high transaction cost and high turnover ratio relation with low transaction cost. Turnover ratio is also concerned with the degree of action in a stock market. The market sizes, total value of shares traded are known by the turnover ratio. Monetary liquidity, which would depend on the accessibility of cash and near cash about the general demand for assets.

In the framework of capital markets, the frequency of trading and volume of transactions are associated with the market depth. Market liquidity is measured as the

capability of the capital markets to take in provisional fluctuations in supply and supply without too much dislocation in prices.

The idea of liquidity has been associated in view of the fact that an increase in monetary liquidity possibly will lead to top demand designed for securities and would reproduce in advanced shares prices. At the same time, as the development in monetary liquidity would result in lesser interest rates, it is all the way through the developmentin shares prices the yield would be brought into arrangement with interest rates. However, market liquidity should be considered as a significant indicator of the state of the market. An enhanced measure of liquidity transversely diverse markets would facilitate in the proportional analysis of different market segments. An effort has been made to measure market liquidity on the subject of volume and frequency of trading; the volume of the turnover is an uncomplicated measure of market liquidity in order to determine the frequency of trading.

Further frequent trading would undoubtedly denote enhanced liquidity, but by means of such a pointer, one can measure the extent of liquidity among frequently traded securities. The volume of trading (the number of shares traded) possibly will also be well thought-out as a measure of liquidity. Gupta (1992) has used this measure to identify "extreme" or speculative trading. On the other hand, it would assess the liquidity concerning theentire volume of shares traded. A comparative measure could be the ratio of trade volume to a total number of shares issued, which enables evaluation across dissimilar shares. On the other hand, the number of shares accessible for trading is dissimilar as of the number of shares issued, for the reason that of promoter and government investment, which are usually not traded. At the same time as a result, the volatile security will be lesser than the entire issued securities. The change would, consequently, be essential to account intended for this factor at the same time as exactly measuring the liquidity of different securities. Though, such adjustments would be a company- specific, as well as it would be difficult to build such adjustments at the aggregate level. Therefore, an ideal measure of liquidity should combine price and volume. One way to merge this is to consider turnover as a measure of liquidity. In actuality, liquidity has frequently been analysedconcerning turnover information. On the collective level, trends in annual turnover (price*the number of shares traded) become a measure of market liquidity. Along the line of times, total turnover about market capitalization (market price of

listed shares) is considered as a comparative measure which can be applied for evaluation across different markets.

Defining liquidity is not easy, and there is no universal definition of liquidity (Wyss, 2004). Liquidity is easier to identify than to define (Crockett, 2008). Liquidity denotes the capability to trade huge quantities speedily, at a near to the ground cost, and without affecting the price. Liquidity is a market characterised by the capability to buy and sell securities by means of relative effortlessness (Clark, 2008). Market liquidity refers to the capability to take on transactions in such a way as to fine-tune portfolios and risk profiles with no disturbing underlying prices. Liquidity is one of the favourable independence necessary by the investors. Liquidity in the capital market is generated by the so-called market makers (Campbell et al., 1997). Speculative investors and market makers are the important players to in bring market or asset liquidity (Hubermanand Halka, 2001). Certainly, liquidity is the situation for investors to get returns from the expected changes in prices. They, on the other hand, generate supply and demand, which enables liquidity. Liquidity has a number of aspects and cannot be described by one indicator only. The magnitudes of capital market liquidity consist of:

- ✓ **Market depth**, or the ability to execute large transactions without influencing prices unduly;
- ✓ **Immediacy,** or the speed with which transactions can be performed; and
- ✓ **Resilience**, or the speed with which underlying prices is restored after a disturbance (Crockett, 2008).

Each investor, whether individual or institutional, invests in the shares with the expectation of in receipt of a constructive return in the future. Sooner than investing in any shares, the shareholder takes into account a variety of macro and micro financially viable factors which also make a decision the extent of market return as well. These factors possibly will be political strength, financial ground rules, government policies, corporate outcome and clearness in the share market. The liquidity is also estimated to have an effect on the market return to greater extents. Liquidity is a significant part of the capital market. The development and steadiness of a financial market depend on the accessibility of sufficient liquidity. Liquidity is the lubricating agent which facilitates a frictionless and smooth execution in the capital markets. Liquidity is necessary as much as efficiency in capital markets. At the

same time as competence refers to the speed with which the prices in the market move about to reflect the information flows, liquidity refers to the effortlessness with which the buyers and sellers punctually manage with least impact on the price of stock (**L. Sharma**). Liquidity, in the case of the stock market, means the frequency of trading of shares. Speedy carrying out of orders, with no incurring high additional charges, is the symbol of high liquidity in the market. Liquidity has accurately been defined by **Darst (1975)** as the marketability of shares. This is made up of two elements - the volume of securities which can be bought or sold at one time without extensively affecting its price and the amount of time required completing the preferred transaction. Even though there are some studies connecting to the liquidity position in the Indian stock market, there is insignificant research regarding the effect of liquidity on market return. Thus, this study is expected to be helpful in understanding the recent liquidity position of 100 stocks which are being traded from 1991 continuously. It is anticipated that the liquidity positively affects the return on the market. The higher the liquidity ratio, the higher will be market return. Keeping this assumption in mind, the present study is an attempt to analyse the liquidity position of SENSEX and individual stocks for 100.

### 5.1.2 Return

Return is the motivating factor that induces the investors to invest money in shares. Return means the profit earned as a result of a rise in share prices. Returns help the investors to compare the benefits available in the alternative investment avenue. Descriptive statistics has been used to analyse the return of the SENSEX and individual stocks for 100 which have been traded from 1991 onwards.

### 5.1.3 Volatility

The price of stocks changes every day in the capital market. Buyers and sellers cause prices to change as they decide how valuable each stock is. Share prices alter because of supply and demand. If more people want to buy a stock than sell it, the price moves up. Conversely, if more people want to sell a stock, there would be more supply (sellers) than demand (buyers); the price would start to fall. Volatility is an indication of a highly liquid stock market. Pricing of securities depends on the volatility of each security. Enhance in stock market volatility brings an important stock price change of advances or declines. Investors are interpreting a rise in stock

market volatility as an increase in the risk of equity investment, and as a result, they shift their funds to less risky assets. It has an impact on business investment spending and economic expansion through some channels. Changes in domestic or world economic and political environment influence the share price actions and show the state of the capital market to the general public. Capital markets give an idea about signs of dramatic movements, and stock prices may emerge too volatile to be necessary to changes in fundamentals. Such observable facts have been under scrutiny over the years and are still being studied vigorously (Le Roy & Porter, 1981; Shiller, 1981; Zhong et al., 2003).

## SECTION II

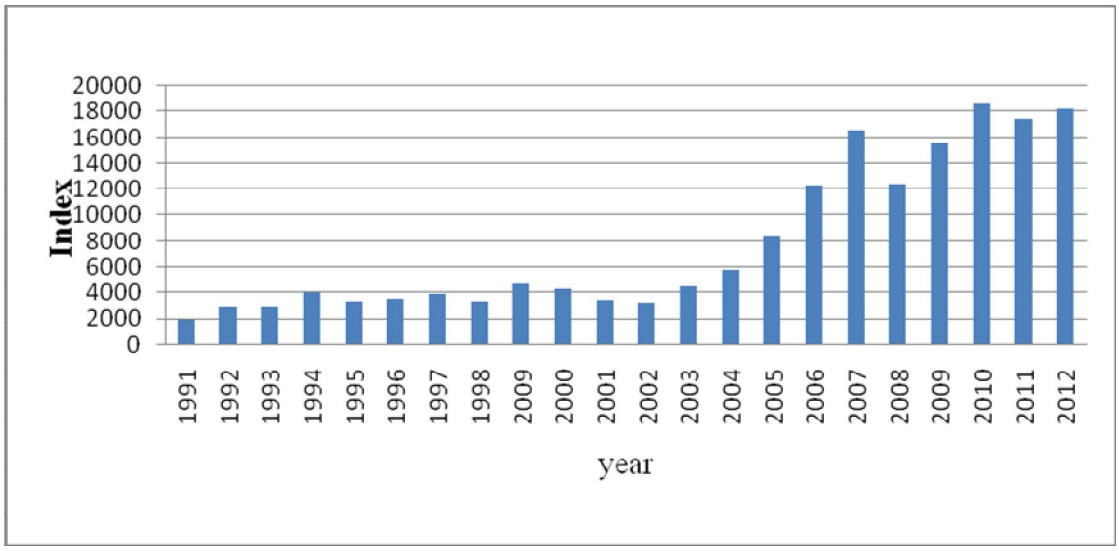
This section explains the trend of stock exchange (SENSEX) from 1991 to 2012 and impact of depository system on capital market

## 5.2 Trends in stock exchange (SENSEX) from 1991to 2012

### 5.2.1 SENSEX

The index is the main key point for the measurement of liquidity, volatility and return. Index movement is very low then there is the chance for the low liquidity of the security, and if index movement is high, then there is more chance for the liquidity of the security.

**Figure 5.2.1: SENSEX**



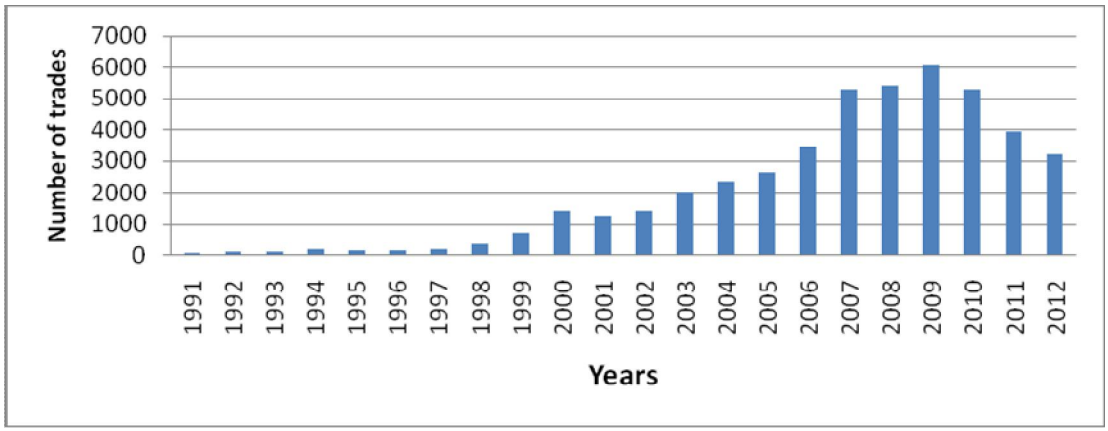

*Source: BSE*

The above table showing that from 1991 to 2001 there were the slight increase in the SENSEX after that, i.e., from 2002 onwards gradually increase the SENSEX, so here the evidence is that more liquidity of the security after 2002, the SENSEX gradually increased.

### 5.2.2 Number of Trades

Number of trades are used as indicator to measure liquidity of the security as well as liquidity of the SENSEX. If trades are more, it indicates that there is high liquidity of security. The chart below charts explains the number of trades from 1991 to 2012.

**Figure 5.2.2: Number of Trades in the SENSEX**



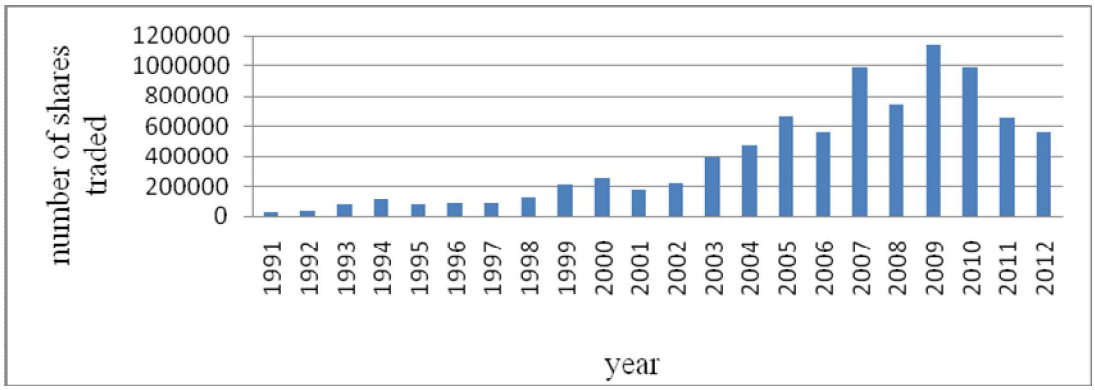

*Source: BSE*

Here in 1991, the number of trades was very low, but slowly they have increased since the year 2000, it continuously increased and in 2009 it touched a peak level then it decreased. The conclusion is that the number of trades has increased after the introduction of depository system in India, so there is more liquidity in the SENSEX.

### 5.2.3 Volume of Shares Traded

When we talk about liquidity volume of shares traded is also one of the measurements for the liquidity, which is one of the steps in checking of liquidity. If the stock is not trading, then there is no question of liquidity. If the stock is trading more number, there is a chance for more liquidity. Some shares traded considered in the table below:

**Figure 5.2.3: Volume of Shares Traded in the SENSEX**



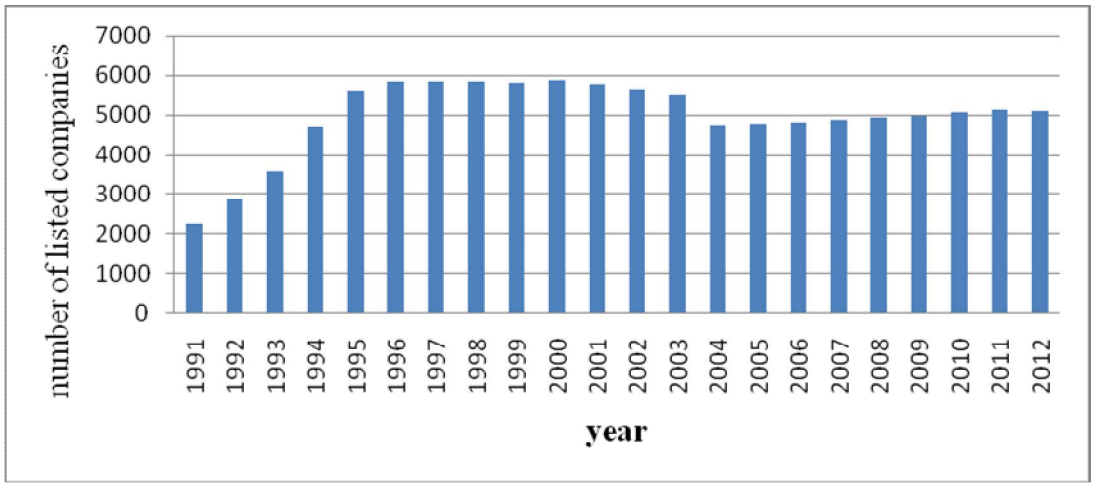

*Source: BSE*

As per the above table, in 1991 the number of shares trade were very low. From that of year onwards, the number of shares traded in SENSEX were increasing but from 2001 onwards it increased a lot, but towards 2008, slowed down, and in 2009, it was increased to the highest level then it decreased. After 2001, shares' trading was continuously increasing thus creating more chance for liquidity.

### 5.2.4 Number of Listed Companies

The following table provides the year-wise break-up of the number of companies listed in the SENSEX for trading. All the listed companies were trading. From the trading point of view, all companies are liquid.

**Figure 5.2.4: Number of Listed Companies in the SENSEX**



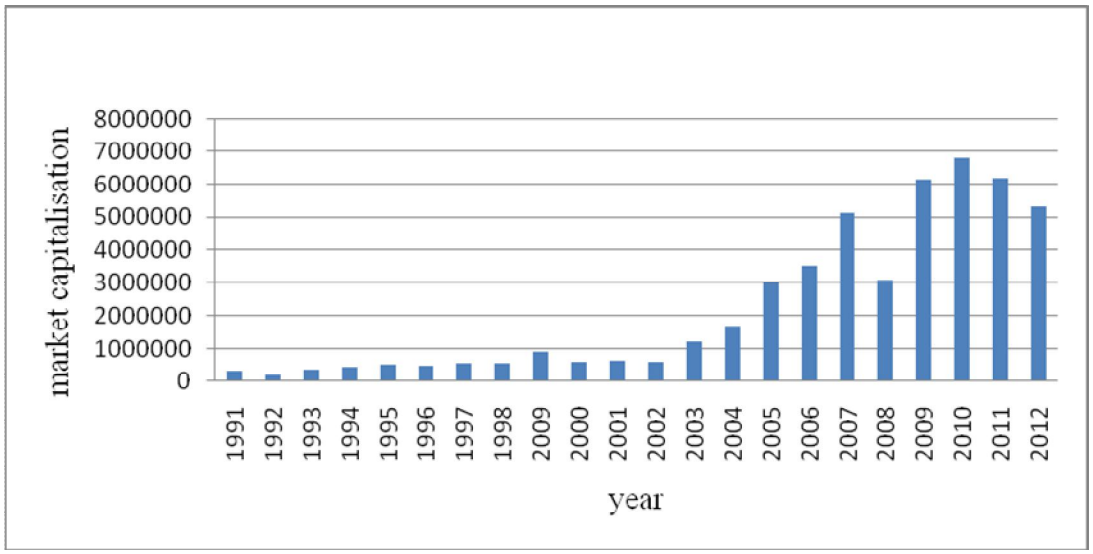

*Source: BSE*

As per the table, listed companies were gradually increasing almost all the years from 1991 to 2001, but 2002 onwards; there is a consistent increase in the number of listed companies in the SENSEX.

### 5.2.5 Market Capitalisation

Turnover ratio is considered as one of the measures of liquidity. This may be calculated as the percentage of turnover in the market capitalisation of the stock market. Market capitalisation is also one of the indicators for the finding of liquidity in the stock market. Generally when market capitalisation was more, there is a possibility for more liquidity. The following table explains the trend of market capitalisation from 1991 to 2012.

**Figure 5.2.5: Market Capitalisation in SENSEX**

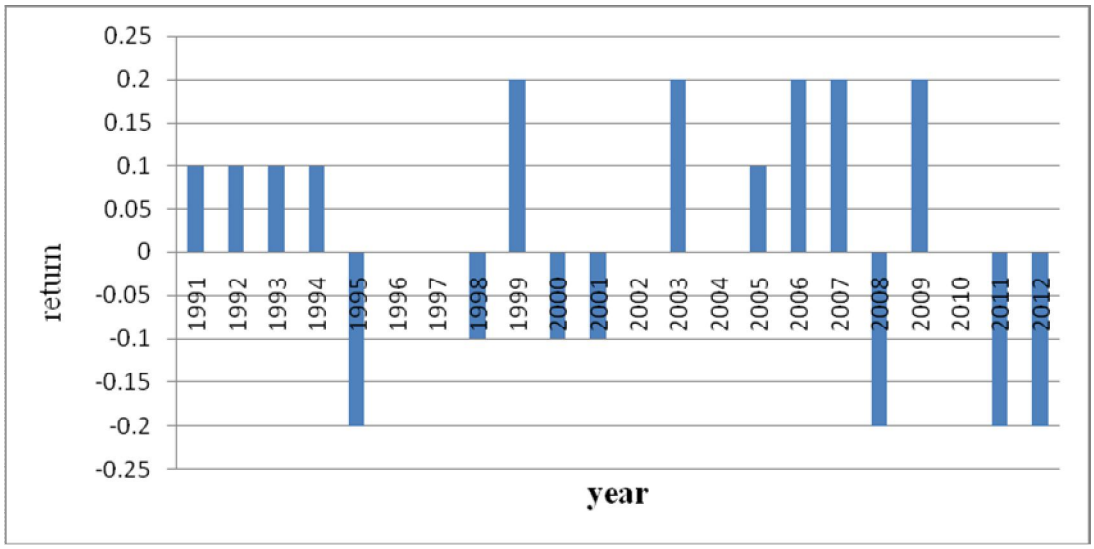



*Source: BSE*

### 5.2.6 Return

Return is one of the important aspects from the investment point of view. Return is calculated a daily basis of the return of the SENSEX average price.

**Figure 5.2.6: SENSEX Return**



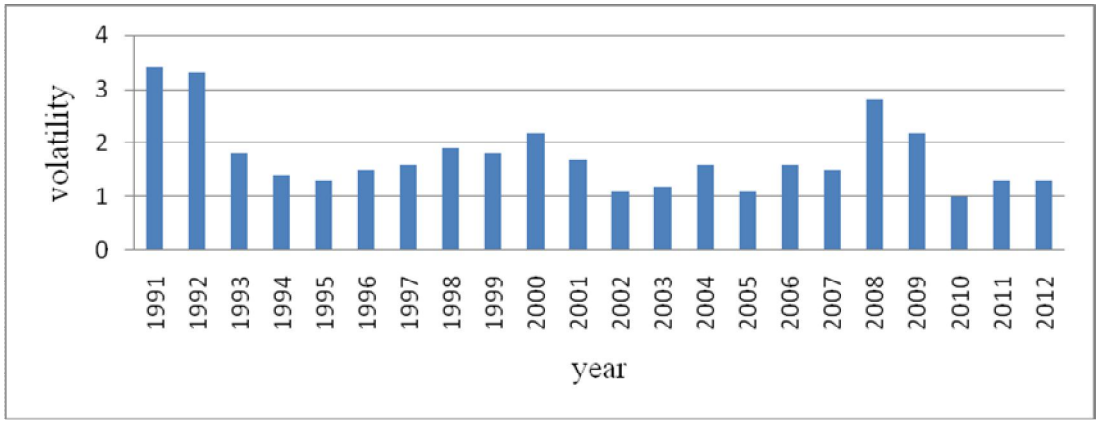

*Source: BSE*

Here it can be noticed that, returns from 1991 to 1994 were constant but 1995 it decreased again in 1999 increased: then in the years 2000,2001and 2002 decreased, again in 2003, increased and decreased in 2008, then increased in 2009 again in 2010,2011 and 2012 decreased. Here daily returns were fluctuating, neither continuously increasing nor continually decreasing.

### 5.2.7 Volatility

Volatility is one of the important features of measurement of risk. It measures the total risk of the index. Here volatility is calculated from 1991 to 2002.The table below shows the trend of volatility.

**Figure 5.2.7: SENSEX Volatility**




*Source: BSE*

In the beginning of 1991, volatility was very so high. From 1991 onwards, volatility is gradually decreasing then slightly increased in 2000 and again gradually decreased from 2000 to 2007: then it highly increased in 2008 and again decreased from 2008 onwards.

## Impact on the Sensitivity index (SENSEX)

There is a significant difference in the SENSEX before and after the introduction of the depository system.

**Table 5.2.1 SENSEX**

| Mean | Std. Deviation | Std. Error | t | df | Sig. (2-tailed) | Outcome of paired sample t-test |
|---|---|---|---|---|---|---|
| -8633.8 | 5255.297 | 1584.53 | -5.449 | 10 | 0 | Accepted |

The test results show a t-statistic of -5.449 with 10 degrees of freedom, the two –tailed p-value is 000, which is less than the conventional 5% level of significance. Therefore, research hypothesis can be accepted at 5% significant level, which means that the index of the SENSEX has changed after the introduction of the depository system.

There is a significant difference in the number of trades in the SENSEX before and after the introduction of the depository system

**Table 5.2.2 Number of Trades**

| Mean | Std. Deviation | Std.Error | t | df | Sig. (2-tailed) | Outcome of paired sample t-test |
|---|---|---|---|---|---|---|
| -3298.63 | 1566.204 | 472.228 | -6.98 | 10 | .000 | Accepted |

The test results show a t-statistic of -6.98 with 10 degrees of freedom, the two –tailed p-value is .000, which is less than the conventional 5% level of significance. Research hypothesis can be accepted at 5% significant level, which means that the number of trades of SENSEX has changed after the introduction of depository system

There is a significant difference in the volume of shares traded of the SENSEX before and after the introduction of the depository system

**Table 5.2.3 Volume of Shares Traded**

| Mean | Std. Deviation | Std.Error | t | df | Sig. (2-tailed) | Outcome of paired sample t-test |
|---|---|---|---|---|---|---|
| -556371.72 | 252982.06 | 76276.96 | -7.294 | 10 | .00 | Accepted |

The test results show a t-statistic of -7.294 with 10 degrees of freedom, the two –tailed p-value is .000, which is less than the conventional 5% level of significance. Therefore, research hypothesis can be accepted at 5% significant level, which means that the volume of shares traded in SENSEX has changed after the introduction of depository system.

There is a significant difference in the number of listed companies of the SENSEX before and after introduction of the depository system

**Table 5.2.4 Number of Listed Companies**

| Mean | Std. Deviation | Std.Error | t | df | Sig. (2-tailed) | Outcome of paired sample t-test |
|---|---|---|---|---|---|---|
| -145.363 | 1560.30191 | 470.448 | -.309 | 10 | .764 | Rejected |

The test results show a t-statistic of -.309 with 10 degrees of freedom, the two –tailed p-value is .764, which is more than the conventional 5% level of significance. Therefore, research hypothesis can be rejected at 5% significant level, which means that the number listed companies in SENSEX, has not changed after the introduction of depository system.

There is a significant difference in the market capitalisation of the SENSEX before and after introduction of the depository system

**Table 5.2.5 Market Capitalisation**

| Mean | Std. Deviation | Std.Error | t | df | Sig. (2-tailed) | Outcome of paired sample t-test |
|---|---|---|---|---|---|---|
| -3393062.36 | 2030641 | 612261.38 | -5.5 | 10 | .000 | Accepted |

The test results show a t-statistic of -5.5 with 10 degrees of freedom, the two –tailed p-value is .000, which is more than the conventional 5% level of significance. Therefore, research hypothesis can be accepted at 5% significance level, which means that there is significant change in the market capitalisation of shares in SENSEX after the introduction of depository system.

There is a significant difference in the return of the SENSEX before and after introduction of the depository system.

**Table 5.2.6 Return**

| Mean | Std. Deviation | Std.Error | t | df | Sig. (2-tailed) | Outcome of paired sample t-test |
|---|---|---|---|---|---|---|
| -.01818 | .20405 | .06152 | -.296 | 10 | .774 | Rejected |

The test results show a t-statistic of -.296 with 10 degrees of freedom, the two –tailed p-value is .774, which is more than the conventional 5% level of significance. Therefore, the research hypothesis is not accepted at 5% significant level, which means that the return of SENSEX has not changed after the introduction of the depository system.

There is a significant difference in the volatility of the SENSEX before and after the introduction of the depository system.

**Table: 5.2.7 Volatility**

| Mean | Std. Deviation | Std.Error | t | df | Sig. (2-tailed) | Outcome of paired sample t-test |
|---|---|---|---|---|---|---|
| .47273 | 1.02965 | .31045 | 1.523 | 10 | .159 | Rejected |

The test results show a t-statistic of 1.523 with 10 degrees of freedom, the two –tailed p-value is .159, which is more than the conventional 5% level of significance. Therefore, the research hypothesis is not accepted at 5% significant level, which means that the volatility of SENSEX has not changed after the introduction of the depository system.

## SECTION III

This section explains the impact of the depository system on liquidity, return and volatility on the Indian capital market.

## 5.3 Liquidity

Liquidity is measured in terms of number of trades, turnover of stock, number of stocks, spread I & spread II.

### 5.3.1 Number of Trades

Numbers of trades taken are based on the average daily trades. Trades are also one of the indicators for the measurement of liquidity.More number of trades means more liquidity and less number of trades indicates less liquidity.

**$H_8$: There is a significant difference between the number of trades of stocks before and after introduction of the depository system**

To test this hypothesis, the number of trades of stocks in 100 companies, before and after the introduction of the depository system was considered. For this purpose, the paired sample 'T' test was applied at the 5 % level of significance. The detailed analysis is given in the table 5.3.1. In brief, the following conclusions emerged:

**Table 5.3.1: Number of Trades of Stocks as a Result of the Depository System**

| Company | Paired Samples Test | | | t | df | Sig. (2-tailed) | Outcome of paired sample 't' test |
|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | | | | |
| 3MIL | -10397.29 | 4141.83 | 1565.46 | -6.64 | 10 | .001 | Accepted |
| ABAN | -338590.14 | 582148.43 | 220031.43 | -1.54 | 10 | .175 | Rejected |
| ABCB | -26744.43 | 14545.93 | 5497.84 | -4.87 | 10 | .003 | Accepted |
| ACCL | -402867.29 | 720704.52 | 272400.71 | -1.48 | 10 | .190 | Rejected |
| ADIT | -107013.00 | 111515.41 | 42148.86 | -2.54 | 10 | .044 | Accepted |
| AKZG | 427.43 | 36303.69 | 13721.51 | 0.03 | 10 | .976 | Rejected |
| AMBU | -497844.86 | 376165.16 | 142177.07 | -3.50 | 10 | .013 | Accepted |
| AMTEK | -135187.43 | 56864.91 | 21492.92 | -6.29 | 10 | .001 | Accepted |
| ANANT | -25943.43 | 28338.70 | 10711.02 | -2.42 | 10 | .052 | Rejected |
| APOLT | -201120.29 | 253653.93 | 95872.18 | -2.10 | 10 | .081 | Rejected |
| APOLH | -159281.86 | 104343.65 | 39438.19 | -4.04 | 10 | .007 | Accepted |
| ASHOK | -520041.00 | 247086.25 | 93389.83 | -5.57 | 10 | .001 | Accepted |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ASIAN | -23079.57 | 20154.54 | 7617.70 | -3.03 | 10 | .023 | Accepted |
| ASTRA | -9754.71 | 5984.16 | 2261.80 | -4.31 | 10 | .005 | Accepted |
| ATLAS | -14346.14 | 10707.65 | 4047.11 | -3.55 | 10 | .012 | Accepted |
| AMAL | -19646.29 | 14197.73 | 5366.24 | -3.66 | 10 | .011 | Accepted |
| BHIL | -192628.86 | 185391.20 | 70071.29 | -2.75 | 10 | .033 | Accepted |
| BSIL | -4990.57 | 5346.82 | 2020.91 | -2.47 | 10 | .048 | Accepted |
| BKIL | -22109.57 | 13486.39 | 5097.38 | -4.34 | 10 | .005 | Accepted |
| BATL | -53768.00 | 53705.35 | 20298.72 | -2.65 | 10 | .038 | Accepted |
| BCSL | -93234.71 | 87575.09 | 33100.27 | -2.82 | 10 | .030 | Accepted |
| BERG | -80222.00 | 64062.49 | 24213.34 | -3.31 | 10 | .016 | Accepted |
| BHARB | -76177.86 | 67539.12 | 25527.39 | -2.98 | 10 | .025 | Accepted |
| BHARG | -24282.86 | 14605.62 | 5520.41 | -4.40 | 10 | .005 | Accepted |
| BOMB | -809992.71 | 853311.29 | 322521.35 | -2.51 | 10 | .046 | Accepted |
| BOSCH | -40039.86 | 31672.25 | 11970.99 | -3.35 | 10 | .016 | Accepted |
| BRIT | 3734.00 | 28142.95 | 10637.04 | 0.35 | 10 | .738 | Rejected |
| CAST | 24894.14 | 207126.54 | 78286.47 | 0.32 | 10 | .761 | Rejected |
| CEAT | -252810.57 | 194620.93 | 73559.80 | -3.44 | 10 | .014 | Accepted |
| CHOL | -39962.14 | 41104.13 | 15535.90 | -2.57 | 10 | .042 | Accepted |
| CDIL | -53812.43 | 48517.47 | 18337.88 | -2.93 | 10 | .026 | Accepted |
| CORO | -55664.00 | 53640.17 | 20274.08 | -2.75 | 10 | .033 | Accepted |
| COSM | -92151.14 | 40405.81 | 15271.96 | -6.03 | 9 | .001 | Accepted |
| CUMM | -210577.29 | 171145.44 | 64686.90 | -3.26 | 10 | .017 | Accepted |
| DCML | -30448.00 | 24249.04 | 9165.27 | -3.32 | 10 | .016 | Accepted |
| DCL | -24151.86 | 16851.14 | 6369.13 | -3.79 | 10 | .009 | Accepted |
| DHFL | -212602.57 | 310087.83 | 117202.18 | -1.81 | 10 | .120 | Rejected |
| DAL | -6496.71 | 6626.31 | 2504.51 | -2.59 | 10 | .041 | Accepted |
| DIGJ | -94910.29 | 85778.26 | 32421.14 | -2.93 | 10 | .026 | Accepted |
| EICH | -76574.57 | 60084.95 | 22709.98 | -3.37 | 10 | .015 | Accepted |
| ELEC | -138822.14 | 147579.66 | 55779.87 | -2.49 | 10 | .047 | Accepted |
| ELGI | -76940.14 | 38455.00 | 14534.62 | -5.29 | 10 | .002 | Accepted |
| ESSA | -431291.86 | 250516.04 | 94686.16 | -4.56 | 10 | .004 | Accepted |
| EVER | -27897.00 | 19946.35 | 7539.01 | -3.70 | 10 | .010 | Accepted |
| FIL | -4818.57 | 3996.73 | 1510.62 | -3.19 | 10 | .019 | Accepted |
| GAMM | -124902.57 | 105487.80 | 39870.64 | -3.13 | 10 | .020 | Accepted |
| GESH | -382218.00 | 161156.48 | 60911.43 | -6.28 | 10 | .001 | Accepted |
| GLAXP | 53331.86 | 167614.83 | 63352.45 | 0.84 | 10 | .432 | Rejected |
| GLAXS | 1395.00 | 33806.34 | 12777.60 | 0.11 | 10 | .917 | Rejected |
| GRAS | -187002.43 | 364147.74 | 137634.91 | -1.36 | 10 | .223 | Rejected |
| GREA | -92850.43 | 50674.83 | 19153.28 | -4.85 | 10 | .003 | Accepted |
| HINDM | -627970.71 | 314594.17 | 118905.42 | -5.28 | 10 | .002 | Accepted |
| HINDA | -958986.00 | 822633.33 | 310926.17 | -3.08 | 10 | .022 | Accepted |
| HUL | -490061.71 | 716557.23 | 270833.17 | -1.81 | 10 | .120 | Rejected |
| INGER | -48523.14 | 10735.60 | 4057.67 | -11.9 | 10 | .000 | Accepted |
| ITC | -119749.43 | 809728.89 | 306048.75 | -0.39 | 10 | .709 | Rejected |
| KIL | -142047.43 | 134050.52 | 50666.33 | -2.80 | 10 | .031 | Accepted |
| KLRF | -8413.43 | 7081.55 | 2676.57 | -3.14 | 10 | .020 | Accepted |
| LAT | -1244033.71 | 1916593.13 | 724404.11 | -1.72 | 10 | .137 | Rejected |
| MAM | -492732.00 | 475544.73 | 179739.01 | -2.74 | 10 | .034 | Accepted |
| MAHC | -7937.86 | 8848.69 | 3344.49 | -2.37 | 10 | .055 | Rejected |
| MAHU | -78117.86 | 45772.89 | 17300.53 | -4.52 | 10 | .004 | Accepted |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NIL | 55676.43 | 124222.47 | 46951.68 | 1.19 | 10 | .281 | Rejected |
| NILK | -18752.43 | 20433.94 | 7723.30 | -2.43 | 10 | .051 | Rejected |
| ORIS | -28817.14 | 23853.77 | 9015.88 | -3.20 | 10 | .019 | Accepted |
| PEARL | -8890.00 | 5962.21 | 2253.50 | -3.95 | 10 | .008 | Accepted |
| PENN | -59302.57 | 49121.95 | 18566.35 | -3.19 | 10 | .019 | Accepted |
| PFIZ | -34574.86 | 69122.37 | 26125.80 | -1.32 | 10 | .234 | Rejected |
| PCBL | -66821.29 | 57062.53 | 21567.61 | -3.10 | 10 | .021 | Accepted |
| PIL | -93955.00 | 100373.75 | 37937.71 | -2.48 | 10 | .048 | Accepted |
| PTL | -10733.57 | 8473.51 | 3202.69 | -3.35 | 10 | .015 | Accepted |
| RRL | -2499.00 | 2619.82 | 990.20 | -2.52 | 10 | .045 | Accepted |
| RAYM | 119564.57 | 291321.02 | 110109.00 | 1.09 | 10 | .319 | Rejected |
| RIIL | -447503.57 | 455315.55 | 172093.10 | -2.60 | 10 | .041 | Accepted |
| RIL | -3930823.43 | 3102689.02 | 1172706.22 | -3.35 | 10 | .015 | Accepted |
| SFL | -3468.00 | 3014.53 | 1139.39 | -3.04 | 10 | .023 | Accepted |
| SPL | -6898.71 | 6220.84 | 2351.26 | -2.93 | 10 | .026 | Accepted |
| STFL | -58955.00 | 34313.02 | 12969.10 | -4.55 | 10 | .004 | Accepted |
| SIEM | -411920.71 | 436705.29 | 165059.08 | -2.50 | 10 | .047 | Accepted |
| SINT | -176206.14 | 143489.27 | 54233.85 | -3.25 | 10 | .017 | Accepted |
| SSML | -21349.43 | 12900.93 | 4876.09 | -4.38 | 10 | .005 | Accepted |
| SML | -1987.57 | 5053.33 | 1909.98 | -1.04 | 10 | .338 | Rejected |
| SVSL | -8546.00 | 8781.75 | 3319.19 | -2.58 | 10 | .042 | Accepted |
| TWCP | -5580.14 | 5465.51 | 2065.77 | -2.70 | 10 | .036 | Accepted |
| TATAC | -333326.57 | 218171.18 | 82460.96 | -4.04 | 10 | .007 | Accepted |
| TATAI | -50968.86 | 27182.38 | 10273.97 | -4.96 | 10 | .003 | Accepted |
| TATAS | -3678032.86 | 1992425.55 | 753066.07 | -4.88 | 10 | .003 | Accepted |
| TATAG | 197408.86 | 373072.17 | 141008.03 | 1.40 | 10 | .211 | Rejected |
| TATAM | -1178808.00 | 1176507.30 | 444677.96 | -2.65 | 10 | .038 | Accepted |
| TATAP | -837482.71 | 740676.15 | 279949.27 | -2.99 | 10 | .024 | Accepted |
| TATSP | -110661.43 | 45702.84 | 17274.05 | -6.41 | 10 | .001 | Accepted |
| TAYO | -29232.57 | 19649.19 | 7426.70 | -3.94 | 10 | .008 | Accepted |
| TML | -36905.29 | 19726.33 | 7455.85 | -4.95 | 10 | .003 | Accepted |
| UNIT | -1844226.86 | 2803918.36 | 1059781.53 | -1.74 | 10 | .132 | Rejected |
| UTTA | -244518.71 | 129621.69 | 48992.39 | -4.99 | 10 | .002 | Accepted |
| VIPIL | -40015.00 | 28089.96 | 10617.01 | -3.77 | 10 | .009 | Accepted |
| VISA | -70353.14 | 55127.00 | 20836.05 | -3.38 | 10 | .015 | Accepted |
| VOLT | -360544.71 | 341107.36 | 128926.46 | -2.80 | 10 | .031 | Accepted |
| WALL | -2768739.29 | 3436137.25 | 1298737.80 | -2.13 | 10 | .077 | Rejected |
| WIPR | -635222.86 | 2512990.54 | 949821.14 | -0.67 | 10 | .529 | Rejected |

The test results shows that a t-statistic with 10 degrees of freedom, the two-tailed p-values is more than the conventional 5% level of significance therefore, alternative hypothesis is not accepted at 5% significant level, The following companies number of trades do not change after the introduction of the Depository system. ABAN, ACCL, AKZG, ANANT, APOLT, BRIT, CAST, DHFL, GESH, GLAXS, KIL, MAHE, NIL, NILK, PFIZ, RAYM, SML, TATAG, UNIT, WALL AND WIPR. The test result shows that a t-statistic with 10 degrees of freedom, the two-tailed p-values is less than the conventional 5% level of significance. Therefore,

the study accepts the alternative hypotheses at 5% level of significant level. The number of trades have changed after the introduction of the Depository system in the following companies namely 3MIL,ABCB, ADIT, AMBU, AMTEK, APOLH, ASHOK,ASIAN, ASTRA, ATLAS, AMAL, BHIL, BSIL, BKIL, BATL, BCSL, BERG, BHARB ,BHARG, BOMB, BOSCH, CEAT, CHOL, CDIL, CORO, COSM, CUMM, DCML, DCL, DAL, DIGJ, EICH, ELEC, ELGI, ESSA, EVER, FIL, GAMM, GLAXS, GRAS, GREA, HINDM, HINDA, HUL, INGER, ITC, KLRF, LAT, MAM, MAHU, ORIS, PEARL, PENN, PCBL, PIL, PTL, RRL, RIIL, RIL, SFL, SPL, STFL, SIEM, SINT, SSML, SVSL, TWCP, TATAC, TATAI, TATAS, TATAM, TATAP, TATSP, TAYO, TML, UTTA, VIPIL, VISA, and VOLT.

Since the hypotheses were accepted in respect of 79 companies, it can be concluded that the hypothesis in majority was acceptable. Based on the hypothesis, it can be seen that there is significant trade in the number of trades after the introduction of the depository system. The hypotheses were accepted in respect of 79 companies; it can be concluded that the hypothesis was accepted in 79 companies. It means there is a significant difference between the number of trades of stocks before and after the introduction of the depository system and there are 21 companies where there is no significance between the number of trades of stocks before and after the introduction of the depository system.

This means that due to the introduction of the depository system (Dematerialization), the number of trades has grown. The conclusion is that there is greater liquidity after the introduction of dematerilisation.

### 5.3.2 Turnover of Stocks

Higher turnover is considered as a measured of more liquidity because liquidity is based on the turnover of the stock. Turnover has been examined on the daily basis for calculations.

**$H_9$: There is a significant difference in the turnover of stocks before and after the introduction of the depository system**

To test this hypothesis, the turnover of stocks in 100 companies, before and after the introduction of the depository system was considered. For this purpose, the paired sample ‘T’ test was applied at the 5 % level of significance. Turnover is also

one of the indicators for the liquidity; hence this parameter has been chosen for measuring the liquidity. The detailed analysis is given in table 5.3.2.

**Table 5.3.2: Turnover of Stocks as a Result of the Depository System**

| Company | Paired Samples Test | | | t | df | Sig. (2-tailed) | Outcome of paired sample 't' test |
|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | | | | |
| 3MIL | 552426303.14 | 589593864.61 | 222845534.33 | 2.48 | 10 | .048 | Accepted |
| ABAN | 11962537476.0 | 17827319252.0 | 6738093326.26 | 1.78 | 10 | .126 | Rejected |
| ABCB | -300994309.00 | 249592398.27 | 94337059.28 | 3.19 | 10 | .019 | Accepted |
| ACCL | -345481701.71 | 24821878324.9 | 9381788160.17 | 0.04 | 10 | .972 | Rejected |
| ADIT | 4824333219.00 | 5611941281.24 | 2121114428.92 | 2.27 | 10 | .063 | Rejected |
| AKZG | 158806234.00 | 1003620690.09 | 379332965.23 | 0.42 | 10 | .690 | Rejected |
| AMBU | 16921492278.8 | 15881196026.8 | 6002527887.05 | 2.82 | 10 | .030 | Accepted |
| AMTEK | 6882137001.57 | 3799107794.47 | 1435927775.44 | 4.79 | 10 | .003 | Accepted |
| ANANT | 1615095814.43 | 1722720316.33 | 651127076.50 | 2.48 | 10 | .048 | Accepted |
| APOLT | 1254612275.29 | 5745958148.84 | 2171768043.66 | 0.58 | 10 | .584 | Rejected |
| APOLH | 3057714925.57 | 861899328.16 | 325767325.36 | 9.39 | 10 | .000 | Accepted |
| ASHOK | 8572561543.86 | 4593425213.88 | 1736151540.27 | 4.94 | 10 | .003 | Accepted |
| ASIAN | 2803287898.71 | 2543369300.09 | 961303237.18 | 2.92 | 10 | .027 | Accepted |
| ASTRA | -116986192.00 | 86584652.99 | 32725922.74 | 3.58 | 10 | .012 | Accepted |
| ATLAS | -120264587.43 | 137639941.32 | 52023007.89 | 2.31 | 10 | .060 | Rejected |
| AMAL | -557078047.29 | 443019178.15 | 167445510.20 | 3.33 | 10 | .016 | Accepted |
| BHIL | 3977494934.00 | 16172704670.9 | 6112707798.10 | 0.65 | 10 | .539 | Rejected |
| BSIL | -63415700.00 | 100388655.90 | 37943345.42 | 1.67 | 10 | .146 | Rejected |
| BKIL | 1461282463.43 | 1702883104.89 | 643629315.34 | 2.27 | 10 | .064 | Rejected |
| BATL | -550474730.71 | 611240493.82 | 231027191.13 | 2.38 | 10 | .055 | Rejected |
| BCSL | 2120611927.57 | 2176329039.81 | 822575058.63 | 2.58 | 10 | .042 | Accepted |
| BERG | -710521412.29 | 688661189.88 | 260289463.72 | 2.73 | 10 | .034 | Accepted |
| BHARB | 2218148113.86 | 2190791125.41 | 828041213.19 | 2.68 | 10 | .037 | Accepted |
| BHARG | -177818382.14 | 132002475.02 | 49892245.91 | 3.56 | 10 | .012 | Accepted |
| BOMB | 23318623410.5 | 29957768544.9 | 11322972200.63 | 2.06 | 10 | .085 | Rejected |
| BOSCH | 3091503816.29 | 3042651465.88 | 1150014157.85 | 2.69 | 10 | .036 | Accepted |
| BRIT | 327046038.43 | 1849127643.38 | 698904555.26 | 0.47 | 10 | .656 | Rejected |
| CAST | 22218650446.1 | 34620007310.9 | 13085132818.86 | 1.70 | 10 | .140 | Rejected |
| CEAT | 2904165041.00 | 3049507955.86 | 1152605667.48 | 2.52 | 10 | .045 | Accepted |
| CHOL | -607315035.14 | 770792696.72 | 291332255.41 | 2.09 | 10 | .082 | Rejected |
| CDIL | 1099595756.00 | 1546900070.28 | 584673269.86 | 1.88 | 10 | .109 | Rejected |
| CORO | -780933053.00 | 734450744.44 | 277596288.57 | 2.81 | 10 | .031 | Accepted |
| COSM | -846746111.43 | 361875698.96 | 136776157.85 | 6.19 | 9 | .001 | Accepted |
| CUMM | 5230886309.71 | 5050949473.73 | 1909079456.04 | 2.74 | 10 | .034 | Accepted |
| DCML | -280546551.57 | 244490535.19 | 92408736.29 | 3.04 | 10 | .023 | Accepted |
| DCL | -312803904.86 | 282432654.72 | 106749509.50 | 2.93 | 10 | .026 | Accepted |
| DHFL | 2844450308.57 | 4059821246.15 | 1534468197.81 | 1.85 | 10 | .113 | Rejected |
| DAL | -194543481.14 | 279535300.07 | 105654412.38 | 1.84 | 10 | .115 | Rejected |
| DIGJ | -815424665.71 | 1335637011.13 | 504823339.04 | 1.62 | 10 | .157 | Rejected |
| EICH | 1506076551.71 | 1474912080.39 | 557464367.20 | 2.70 | 10 | .035 | Accepted |
| ELEC | 2900004743.29 | 3162618039.31 | 1195357260.56 | 2.43 | 10 | .051 | Rejected |
| ELGI | -633532752.29 | 390326887.22 | 147529696.23 | 4.29 | 10 | .005 | Accepted |
| ESSA | 7450782105.29 | 4452827130.91 | 1683010459.93 | 4.43 | 10 | .004 | Accepted |
| EVER | -393398236.14 | 361474065.11 | 136624354.53 | 2.88 | 10 | .028 | Accepted |
| FIL | -44617732.29 | 38189737.05 | 14434363.84 | 3.09 | 10 | .021 | Accepted |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GAMM | 4608322758.57 | 4365293793.20 | 1649925968.08 | 2.79 | 10 | .031 | Accepted |
| GESH | 9885707546.71 | 7663646869.20 | 2896586250.25 | 3.41 | 10 | .014 | Accepted |
| GLAXP | 5219070379.71 | 9596134518.34 | 3626997926.15 | 1.44 | 10 | .200 | Rejected |
| GLAXS | 286327647.00 | 1680515564.74 | 635175179.81 | 0.45 | 10 | .668 | Rejected |
| GRAS | 9966377509.00 | 13000161405.6 | 4913599154.73 | 2.03 | 10 | .089 | Rejected |
| GREA | 1695217496.43 | 1413347216.27 | 534195035.78 | 3.17 | 10 | .019 | Accepted |
| HINDM | 9105143878.57 | 6397777276.22 | 2418132516.64 | 3.77 | 10 | .009 | Accepted |
| HINDA | 21848275026.8 | 17585714467.8 | 6646775301.34 | 3.29 | 10 | .017 | Accepted |
| HUL | 111487947.00 | 29077786256.6 | 10990370158.77 | 0.01 | 10 | .992 | Rejected |
| INGER | -602937939.57 | 316823655.29 | 119748085.91 | 5.04 | 10 | .002 | Accepted |
| ITC | 164399456524. | 206163124413. | 77922336672.71 | 2.11 | 10 | .079 | Rejected |
| KIL | 2643264057.86 | 3042735696.40 | 1150045993.99 | 2.30 | 10 | .061 | Rejected |
| KLRF | -84445736.43 | 100872887.32 | 38126367.70 | 2.22 | 10 | .069 | Rejected |
| LAT | 36487182575.2 | 72385205128.6 | 27359035910.13 | 1.33 | 10 | .231 | Rejected |
| MAM | 20450324542.4 | 17952350422.6 | 6785350666.76 | 3.01 | 10 | .024 | Accepted |
| MAHC | -92371043.14 | 112714691.84 | 42602149.10 | 2.17 | 10 | .073 | Rejected |
| MAHU | -768647508.57 | 629429070.06 | 237901826.76 | 3.23 | 10 | .018 | Accepted |
| NIL | 1660676514.00 | 5640883878.84 | 2132053702.57 | 0.78 | 10 | .466 | Rejected |
| NILK | -210917489.86 | 349690133.66 | 132170447.08 | 1.60 | 10 | .162 | Rejected |
| ORIS | -553970563.43 | 597856218.26 | 225968410.47 | 2.45 | 10 | .050 | Accepted |
| PEARL | -47197259.14 | 54443524.17 | 20577717.92 | 2.29 | 10 | .062 | Rejected |
| PENN | -732557750.71 | 865542542.39 | 327144330.90 | 2.24 | 10 | .066 | Rejected |
| PFIZ | 785966027.14 | 2550715599.86 | 964079877.50 | 0.82 | 10 | .446 | Rejected |
| PCBL | -906753549.43 | 992352199.22 | 375073876.02 | 2.42 | 9 | .052 | Rejected |
| PIL | 1827299791.43 | 2607506589.13 | 985544853.83 | 1.85 | 10 | .113 | Rejected |
| PTL | -184066874.14 | 187126765.70 | 70727269.39 | 2.60 | 10 | .041 | Accepted |
| RRL | -12246541.86 | 17828303.66 | 6738465.40 | 1.82 | 10 | .119 | Rejected |
| RAYM | 4984423438.71 | 7396411667.38 | 2795580838.02 | 1.78 | 10 | .125 | Rejected |
| RIIL | 12634083432.8 | 14584782791.2 | 5512529741.64 | 2.29 | 10 | .062 | Rejected |
| RIL | 156731843521. | 182832534567. | 69104202576.58 | 2.27 | 10 | .064 | Rejected |
| SFL | -12238166.14 | 14291717.74 | 5401761.56 | 2.27 | 10 | .064 | Rejected |
| SPL | 11570250.71 | 13161809.20 | 4974696.28 | 2.33 | 10 | .059 | Rejected |
| STFL | 119939948.00 | 117324681.62 | 44344561.46 | 2.71 | 10 | .035 | Accepted |
| SIEM | 3015235982.29 | 6662549577.53 | 2518207039.97 | 1.20 | 10 | .276 | Rejected |
| SINT | 19830623638.4 | 21765467462.7 | 8226573439.34 | 2.41 | 10 | .053 | Rejected |
| SSML | -447932302.0 | 577005406.55 | 218087544.41 | 2.05 | 10 | .086 | Rejected |
| SML | 119013087.9 | 145720891.36 | 55077319.91 | 2.16 | 10 | .074 | Rejected |
| SVSL | -64462505.0 | 88550184.25 | 33468823.72 | 1.93 | 10 | .102 | Rejected |
| TWCP | -24214465.1 | 30161921.76 | 11400134.86 | 2.12 | 10 | .078 | Rejected |
| TATAC | -6629536718.4 | 3020299624.16 | 1141565955.77 | 5.81 | 10 | .001 | Accepted |
| TATAI | -1480904174.1 | 1115362292.48 | 421567321.09 | 3.51 | 10 | .013 | Accepted |
| TATAS | 125294872360. | 71703836445.5 | 27101502754.88 | 4.62 | 10 | .004 | Accepted |
| TATAG | 40542466749.0 | 50159554723.7 | 18958529667.55 | 2.14 | 10 | .076 | Rejected |
| TATAM | 47466979077.1 | 59442445154.4 | 22467132457.17 | 2.11 | 10 | .079 | Rejected |
| TATAP | 28307258176.0 | 23850413423.9 | 9014608940.83 | 3.14 | 10 | .020 | Accepted |
| TATSP | -1247700079.7 | 611815326.15 | 231244457.33 | 5.40 | 10 | .002 | Accepted |
| TAYO | -372656896.6 | 342359900.48 | 129399879.37 | 2.88 | 10 | .028 | Accepted |
| TML | -1138903935.3 | 1063584909.10 | 401997309.67 | 2.83 | 10 | .030 | Accepted |
| UNIT | 43102839489.1 | 57955491471.2 | 21905116791.93 | 1.97 | 10 | .097 | Rejected |
| UTTA | -2467708125.9 | 1934236096.50 | 731072526.89 | 3.38 | 10 | .015 | Accepted |
| VIPIL | -394013351.7 | 335993342.42 | 126993546.60 | 3.10 | 10 | .021 | Accepted |
| VISA | -958598620.0 | 1044746113.28 | 394876914.14 | 2.43 | 10 | .051 | Rejected |
| VOLT | -7348299147.1 | 7473867452.56 | 2824856373.05 | 2.60 | 10 | .041 | Accepted |
| WALL | -6770.3 | 7084.79 | 2677.80 | 2.53 | 10 | .045 | Accepted |
| WIPR | 9272057401.0 | 136219262908. | 51486041918.93 | 0.18 | 10 | .863 | Rejected |

In the case of following Companies alternate hypothesis was not accepted because t-statistic with 10 degree of freedom, the two-tailed p-value is more than the conventional 5% level of significance .which means the following companies' turnover of stock did not change after the introduction of the Depository system. ABAN, ACCL, ADIT, AKZG, APOLT, ATLAS, BHIL, BSIL, BKIL, BATL, BOMB, BRIT, CAST, CHOL, CDIL, HUL, ITC, KIL, KLRF, LAT, MAHC, NIL, NILK, PEARL, PENN, PFIZ, PCBL, PIL, RRL, RAYM, RIIL, RIL, SFL, SPL, SIEM, SINT, SSML, DHFL, DAL, DIGJ, ELEC, GLAXP, GLAXS, GRAS, SML,SVSL,TWCP,TATAG,TATAM,UNIT,VISA and WIPR.

In case of the following Companies,' alternative hypothesis was accepted because t- statistic with 10 degrees of freedom, the two-tailed p- value is less than the conventional 5% level of significance. Which means the following companies' turnover of stock has changed after the introduction of the Depository system 3MIL, ABCB, AMBU, AMTEK, ANANT, APOLH, ASOK, ASIAN, ASTRA, AMAL, BCSL, BERG, BHARB, BHARG, BOSCH, CEAT, CORO, COSM, CUMM, DCML, DCL, EICH, ELGI, ESSA, EVER, FIL, GAMM, GESH, GREA, HINDM, HINDA, INGER, MAM, MAHU, ORIS, PTL, STFL, TATAC, TATAI, TATAS, TATAP, TATSP, TAYO, TML, UTTA, VIPIL, VOLT, and WALL.

Alternate hypothesis was accepted in respect of 48 companies, it indicates that there is a significant difference in the turnover of stocks before, and after the introduction of the depository system and in 52 companies there is no significant difference in the turnover of stocks before and after the introduction of the depository system. Therefore, it may be said that there was a significant difference in the liquidity in terms of turnover for some stocks, whereas the same is not true in case of other cases.

### 5.3.3 Volume of Shares traded

For examining the impact on liquidity, the third variable was taken based on the volume of shares traded on daily basis has been considered.

**$H_{10}$: There is a significant difference existing in the volume of shares traded before and after the introduction of the depository system**

To test this hypothesis, the volume of shares traded in 100 companies, before and after the introduction of the depository system was considered. For this purpose,

the paired sample 'T' test was applied at the 5 % level of significance. The detailed analysis is given in the table 5.3.3. In brief, the following conclusions emerged:

**Table 5.3.3: Volume of Shares Traded as a Result of the Depository System**

| Company | Paired Samples Test | | | t | df | Sig. (2-tailed) | Outcome of paired sample 't' test |
|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | | | | |
| 3MIL | -241822.29 | 258750.63 | 97798.54 | 2.47 | 10 | .048 | Accepted |
| ABAN | -6658481.14 | 8273379.77 | 3127043.63 | -2.13 | 10 | .077 | Rejected |
| ABCB | -3700813.00 | 2063509.89 | 779933.43 | -4.75 | 10 | .003 | Accepted |
| ACCL | 71827610.71 | 287156171.28 | 108534830.95 | 0.66 | 10 | .533 | Rejected |
| ADIT | 2382596.43 | 22577886.30 | 8533638.90 | 0.28 | 10 | .789 | Rejected |
| AKZG | 1985952.14 | 5031719.27 | 1901811.12 | 1.04 | 10 | .337 | Rejected |
| AMBU | -158217743.0 | 162284980.14 | 61337957.00 | -2.58 | 10 | .042 | Accepted |
| AMTEK | -25298978.00 | 17391728.60 | 6573455.54 | -3.85 | 10 | .008 | Accepted |
| ANANT | -5920315.86 | 7545119.81 | 2851787.23 | -2.08 | 10 | .083 | Rejected |
| APOLT | -34746003.14 | 86464401.27 | 32680471.86 | -1.06 | 10 | .329 | Rejected |
| APOLH | -10598224.86 | 8344641.05 | 3153977.86 | -3.36 | 10 | .015 | Accepted |
| ASHOK | -231220054.4 | 150470281.81 | 56872420.77 | -4.07 | 10 | .007 | Accepted |
| ASIAN | 4015403.71 | 2348466.59 | 887636.94 | 4.52 | 10 | .004 | Accepted |
| ASTRA | 177093.29 | 346643.71 | 131019.01 | 1.35 | 10 | .225 | Rejected |
| ATLAS | -802285.14 | 820492.22 | 310116.91 | -2.59 | 10 | .041 | Accepted |
| AMAL | -1163459.57 | 1255261.54 | 474444.27 | -2.45 | 10 | .050 | Accepted |
| BHIL | 19098343.71 | 28055998.94 | 10604170.85 | 1.80 | 10 | .122 | Rejected |
| BSIL | -599446.14 | 648502.45 | 245110.89 | -2.45 | 10 | .050 | Accepted |
| BKIL | -2254517.86 | 1543163.08 | 583260.82 | -3.87 | 10 | .008 | Accepted |
| BATL | -5165630.86 | 4477536.87 | 1692349.86 | -3.05 | 10 | .022 | Accepted |
| BCSL | -8520755.43 | 8255440.37 | 3120263.17 | -2.73 | 10 | .034 | Accepted |
| BERG | -12685120.29 | 12527031.47 | 4734772.85 | -2.68 | 10 | .037 | Accepted |
| BHARB | -1535085.29 | 1608833.86 | 608082.04 | -2.52 | 10 | .045 | Accepted |
| BHARG | -2855539.00 | 1540726.42 | 582339.85 | -4.90 | 10 | .003 | Accepted |
| BOMB | -23877650.71 | 21540559.71 | 8141566.30 | -2.93 | 10 | .026 | Accepted |
| BOSCH | -994988.71 | 905922.44 | 342406.50 | -2.91 | 10 | .027 | Accepted |
| BRIT | 828669.57 | 2283471.08 | 863070.94 | 0.96 | 10 | .374 | Rejected |
| CAST | 26297083.43 | 47899891.43 | 18104457.22 | 1.45 | 10 | .197 | Rejected |
| CEAT | -22953245.00 | 17016233.36 | 6431531.68 | -3.57 | 10 | .012 | Accepted |
| CHOL | -4664005.86 | 6035639.72 | 2281257.39 | -2.04 | 10 | .087 | Rejected |
| CDIL | -4954386.86 | 4428940.26 | 1673982.07 | -2.96 | 10 | .025 | Accepted |
| CORO | -7349196.00 | 8503586.93 | 3214053.75 | -2.29 | 10 | .062 | Rejected |
| COSM | -8281376.57 | 4106909.73 | 1552265.97 | -5.34 | 9 | .002 | Accepted |
| CUMM | -29603999.29 | 26196842.35 | 9901475.72 | -2.99 | 10 | .024 | Accepted |
| DCML | -4417324.29 | 2898202.40 | 1095417.54 | -4.03 | 10 | .007 | Accepted |
| DCL | -2425822.00 | 1917050.99 | 724577.17 | -3.35 | 10 | .015 | Accepted |
| DHFL | -34971457.86 | 51728831.31 | 19551660.47 | -1.79 | 10 | .124 | Rejected |
| DAL | -1094618.71 | 1437946.47 | 543492.68 | -2.01 | 10 | .091 | Rejected |
| DIGJ | -20625240.43 | 16408276.48 | 6201745.57 | -3.33 | 10 | .016 | Accepted |
| EICH | -4091477.71 | 3436526.00 | 1298884.74 | -3.15 | 10 | .020 | Accepted |
| ELEC | -10169619.86 | 10297020.69 | 3891908.00 | -2.61 | 10 | .040 | Accepted |
| ELGI | -12908622.14 | 7258456.15 | 2743438.55 | -4.71 | 10 | .003 | Accepted |
| ESSA | -184333439.7 | 109356367.98 | 41332821.99 | -4.46 | 10 | .004 | Accepted |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| EVER | -2902111.43 | 1940012.76 | 733255.90 | -3.96 | 10 | .007 | Accepted |
| FIL | -325631.43 | 300179.99 | 113457.37 | -2.87 | 10 | .028 | Accepted |
| GAMM | -13475450.86 | 12360249.07 | 4671735.03 | -2.88 | 10 | .028 | Accepted |
| GESH | 34253108.43 | 59973832.48 | 22667977.99 | 1.51 | 10 | .182 | Rejected |
| GLAXP | 12855931.14 | 17370820.40 | 6565552.98 | 1.96 | 10 | .098 | Rejected |
| GLAXS | 95636.43 | 2961944.04 | 1119509.62 | 0.09 | 10 | .935 | Rejected |
| GRAS | 19800842.71 | 46554533.39 | 17595959.68 | 1.13 | 10 | .303 | Rejected |
| GREA | -11007990.86 | 6994115.05 | 2643527.01 | -4.16 | 10 | .006 | Accepted |
| HINDM | -252882806.0 | 118330632.91 | 44724775.31 | -5.65 | 10 | .001 | Accepted |
| HINDA | -162921764.8 | 178013413.86 | 67282746.16 | -2.42 | 10 | .052 | Rejected |
| HUL | -121568956.1 | 124770976.20 | 47158996.27 | -2.58 | 10 | .042 | Accepted |
| INGER | -2192832.14 | 212263.79 | 80228.17 | 27.33 | 10 | .000 | Accepted |
| ITC | 158169437.43 | 399951943.60 | 151167625.59 | 1.05 | 10 | .336 | Rejected |
| KIL | 12598328.57 | 31222705.45 | 11801073.41 | 1.07 | 10 | .327 | Rejected |
| KLRF | -1275117.14 | 1371629.32 | 518427.15 | -2.46 | 10 | .049 | Accepted |
| LAT | 149342831.14 | 198448579.11 | 75006512.62 | 1.99 | 10 | .094 | Rejected |
| MAM | -29457171.71 | 69080640.84 | 26110028.01 | -1.13 | 10 | .302 | Rejected |
| MAHC | -1127510.86 | 1597765.47 | 603898.58 | -1.87 | 10 | .111 | Rejected |
| MAHU | -9242070.71 | 5572277.00 | 2106122.74 | -4.39 | 10 | .005 | Accepted |
| NIL | 5540205.57 | 11818438.76 | 4466949.98 | 1.24 | 10 | .261 | Rejected |
| NILK | -1001626.43 | 3425599.62 | 1294754.95 | -0.77 | 10 | .469 | Rejected |
| ORIS | -4976333.71 | 4065775.13 | 1536718.56 | -3.24 | 10 | .018 | Accepted |
| PEARL | -2617034.57 | 2385485.09 | 901628.61 | -2.90 | 10 | .027 | Accepted |
| PENN | -32404761.29 | 27521443.60 | 10402127.93 | -3.12 | 10 | .021 | Accepted |
| PFIZ | 617734.43 | 3118236.25 | 1178582.52 | 0.52 | 10 | .619 | Rejected |
| PCBL | -7361382.86 | 6232011.20 | 2355478.83 | -3.13 | 10 | .020 | Accepted |
| PIL | -16978143.57 | 15322710.37 | 5791440.15 | -2.93 | 10 | .026 | Accepted |
| PTL | -5126357.43 | 5771035.56 | 2181246.41 | 2.35 | 10 | .057 | Rejected |
| RRL | -429362.71 | 479434.85 | 181209.34 | -2.37 | 10 | .056 | Rejected |
| RAYM | 81562451.71 | 102832973.31 | 38867210.57 | 2.10 | 10 | .081 | Rejected |
| RIIL | -18153612.86 | 16466419.15 | 6223721.44 | -2.92 | 10 | .027 | Accepted |
| RIL | 516741863.71 | 517151967.74 | 195465070.95 | 2.64 | 10 | .038 | Accepted |
| SFL | -851060.43 | 813355.15 | 307419.35 | -2.77 | 10 | .032 | Accepted |
| SPL | -873984.29 | 839279.56 | 317217.86 | -2.76 | 10 | .033 | Accepted |
| STFL | -13888139.43 | 7744216.39 | 2927038.67 | -4.75 | 10 | .003 | Accepted |
| SIEM | -1726385.57 | 17900444.06 | 6765731.91 | -0.26 | 10 | .807 | Rejected |
| SINT | -20639389.71 | 21678103.10 | 8193552.81 | -2.52 | 10 | .045 | Accepted |
| SSML | -1887873.00 | 1350949.85 | 510611.05 | 3.70 | 10 | .010 | Accepted |
| SML | 702552.29 | 1069358.65 | 404179.58 | 1.74 | 10 | .133 | Rejected |
| SVSL | -1172411.00 | 1114866.55 | 421379.95 | -2.78 | 10 | .032 | Accepted |
| TWCP | -1337176.86 | 1591075.15 | 601369.88 | -2.22 | 10 | .068 | Rejected |
| TATAC | -12336036.86 | 53690552.77 | 20293121.48 | -0.61 | 10 | .566 | Rejected |
| TATAI | -3773611.57 | 1570205.53 | 593481.91 | -6.36 | 10 | .001 | Accepted |
| TATAS | -102049958.8 | 182251057.34 | 68884424.84 | -1.48 | 10 | .189 | Rejected |
| TATAG | 109702248.86 | 130008353.55 | 49138538.84 | 2.23 | 10 | .067 | Rejected |
| TATAM | 8518864.71 | 276254298.38 | 104414310.30 | 0.08 | 10 | .938 | Rejected |
| TATAP | -32071841.86 | 97593583.76 | 36886907.46 | -0.87 | 10 | .418 | Rejected |
| TATSP | -8893173.86 | 4172552.80 | 1577076.72 | -5.64 | 10 | .001 | Accepted |
| TAYO | -2654668.00 | 1672343.11 | 632086.28 | -4.20 | 10 | .006 | Accepted |
| TML | -2302715.14 | 1427381.46 | 539499.48 | -4.27 | 10 | .005 | Accepted |
| UNIT | -240912424.7 | 463882813.91 | 175331223.30 | -1.37 | 10 | .219 | Rejected |
| UTTA | -61378367.29 | 29629639.29 | 11198951.00 | -5.48 | 10 | .002 | Accepted |
| VIPIL | -3778653.86 | 3091854.87 | 1168611.30 | -3.23 | 10 | .018 | Accepted |
| VISA | -7565448.71 | 6867090.96 | 2595516.42 | -2.92 | 10 | .027 | Accepted |
| VOLT | -35120138.86 | 53174704.15 | 20098149.03 | -1.75 | 10 | .131 | Rejected |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| WALL | -2768739.29 | 3436137.25 | 1298737.80 | -2.13 | 10 | .077 | Rejected |
| WIPR | -37968640.86 | 50363877.84 | 19035756.55 | -2.00 | 10 | .093 | Rejected |

Since the hypothesis were not accepted by the following companies because t-statistic with 10 degree of freedom, the two- tailed p- values is more than the conventional 5% level of significance. This means the following companies volume of shares did not change after the introduction of the Depository system. ABAN, ACCL, ADIT, AKZG, ANANT, APOLT, ASTRA, BHIL, BRIT, CAST, CHOL, CORO, DHFL, DAL, GESH, GLAXP, GLAXS, GRAS, HIND, ITC, KIL, LAT, MAM, MAHC, NIL, NILK, PFIZ, PTL, RRL, RAYM, SIEM, SML, TWCPTATAC, TATAS, TATAG, TATAM, TATAP, UNIT, VOLT, WALL and WIPR.

The following companies' hypotheses were accepted because t-statistic with 10 degree of freedom, the two-tailed p-value is less than the conventional 5% level of significance. This means the following companies volume of shares had changed after the introduction of the Depository system. 3MIL, ABCB, AMBU, AMTEK, APOLH, ASOK, ASIAN, ATLAS, AMAL, BSIL, BKIL, BATL, BCSL, BERG, BHARB, BHARG, BOMB, BOSCH, CEAT, CDIL, COSM, CUMM, DCML, DCL, DIGJ, EICH, ELEC, ELGI, ESSA, EVER, FIL, GAMM, GREA, HINDM, HUL, INGER, KLRF, MAHU, ORIS, PEARL, PENN, PCBL, PIL, RIIL, RIL, SFL, SPL, STFL, SINT, SSML, SVSL, TATAI, TATSP, TAYO,TML,UTTA,VIPIL and VISA.

The hypothesis was accepted in respect of 58 companies, it can be concluded that the hypothesis in 42 companies was rejected. It could be seen that with the introduction of the depository system, the number of trades had increased. The hypothesis was accepted in respect of 58 companies, it means that these companies have significant difference in the volume of shares before, and after the introduction of the depository system and there were 42 companies where there was no significant difference in the volume of shares before and after the introduction of depository system This has, in turn, resulted in greater liquidity of some of the firms concerned.

**5.3.4 Spread –I**

Here for the measurement of liquidity daily opening and closing prices are considered. If there is a substantial gap between opening and beginning price, it will indicate that there is low liquidity and if the gap is very normal then it will be considered as high liquidity.

**$H_{11}$: There is a significant difference existing in the spread I of stocks before and after the introduction of the depository system**

To test this hypothesis, the liquidity of stocks in 100 companies, before and after the introduction of the depository system was considered. For this purpose, the paired sample 'T' test was applied at the 5 % level of significance. The detailed analysis is given in the table 5.3.4. In brief, the following conclusions emerged:

**Table 5.3.4: Spread I of Stocks as a Result of the Depository System**

| Company | Paired Samples Test | | | t | df | Sig. (2-tailed) | Outcome of paired sample 't' test |
|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | | | | |
| 3MIL | -849.20 | 704.24 | 212.34 | -4.00 | 10 | .003 | Accepted |
| ABAN | -1360.46 | 1593.41 | 480.43 | -2.83 | 10 | .018 | Accepted |
| ABCB | -0.33 | 72.90 | 21.98 | -0.02 | 10 | .988 | Rejected |
| ACCL | 1721.96 | 2432.46 | 733.41 | 2.35 | 10 | .041 | Accepted |
| ADIT | -385.95 | 553.69 | 166.94 | -2.31 | 10 | .043 | Accepted |
| AKZG | -109.49 | 105.12 | 31.70 | -3.45 | 10 | .006 | Accepted |
| AMBU | 135.06 | 109.55 | 33.03 | 4.09 | 10 | .002 | Accepted |
| AMTEK | -158.46 | 219.64 | 66.22 | -2.39 | 10 | .038 | Accepted |
| ANANT | -315.05 | 487.28 | 146.92 | -2.14 | 10 | .058 | Rejected |
| APOLT | -169.84 | 119.15 | 35.92 | -4.73 | 10 | .001 | Accepted |
| APOLH | 22.83 | 138.81 | 41.85 | 0.55 | 10 | .597 | Rejected |
| ASHOK | 18.05 | 76.38 | 23.03 | 0.78 | 10 | .451 | Rejected |
| ASIAN | -453.76 | 646.38 | 194.89 | -2.33 | 10 | .042 | Accepted |
| ASTRA | 6.05 | 148.73 | 44.85 | 0.14 | 10 | .895 | Rejected |
| ATLAS | -830.12 | 1111.20 | 335.04 | -2.48 | 10 | .033 | Accepted |
| AMAL | -239.68 | 151.57 | 45.70 | -5.24 | 10 | .000 | Accepted |
| BHIL | -358.63 | 621.30 | 187.33 | -1.91 | 10 | .085 | Rejected |
| BSIL | -55.79 | 88.70 | 26.74 | -2.09 | 10 | .064 | Rejected |
| BKIL | -363.06 | 316.16 | 95.33 | -3.81 | 10 | .003 | Accepted |
| BATL | -17.49 | 75.48 | 22.76 | -0.77 | 10 | .460 | Rejected |
| BCSL | 902.88 | 739.91 | 223.09 | 4.05 | 10 | .002 | Accepted |
| BERG | 1.75 | 74.54 | 22.47 | 0.08 | 10 | .939 | Rejected |
| BHARB | -11.17 | 40.08 | 12.08 | -0.92 | 10 | .377 | Rejected |
| BHARG | -170.90 | 332.43 | 100.23 | -1.71 | 10 | .119 | Rejected |
| BOMB | -2047.11 | 5190.91 | 1565.12 | -1.31 | 10 | .220 | Rejected |
| BOSCH | -332.58 | 428.17 | 129.10 | -2.58 | 10 | .028 | Accepted |
| BRIT | 417.61 | 651.30 | 196.37 | 2.13 | 10 | .059 | Rejected |
| CAST | -6.02 | 75.79 | 22.85 | -0.26 | 10 | .797 | Rejected |
| CEAT | -81.07 | 122.96 | 37.07 | -2.19 | 10 | .054 | Rejected |
| CHOL | -94.15 | 194.16 | 58.54 | -1.61 | 10 | .139 | Rejected |
| CDIL | -100.74 | 136.08 | 41.03 | -2.46 | 10 | .034 | Accepted |
| CORO | -21.17 | 46.66 | 14.07 | -1.51 | 10 | .163 | Rejected |
| COSM | 30.72 | 131.45 | 41.57 | 0.74 | 10 | .479 | Rejected |
| CUMM | -4.10 | 128.36 | 38.70 | -0.11 | 10 | .918 | Rejected |
| DCML | -68.36 | 156.93 | 47.32 | -1.45 | 10 | .179 | Rejected |
| DCL | -92.59 | 126.34 | 38.09 | -2.43 | 10 | .035 | Accepted |
| DHFL | -87.90 | 82.16 | 24.77 | -3.55 | 10 | .005 | Accepted |
| DAL | 11.84 | 59.35 | 17.89 | 0.66 | 10 | .523 | Rejected |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DIGJ | -452.10 | 517.99 | 156.18 | -2.90 | 10 | .016 | Accepted |
| EICH | -247.74 | 397.33 | 119.80 | -2.07 | 10 | .066 | Rejected |
| ELEC | 204.89 | 186.92 | 56.36 | 3.64 | 10 | .005 | Accepted |
| ELGI | -26.25 | 84.85 | 25.58 | -1.03 | 10 | .329 | Rejected |
| ESSA | 24.14 | 117.10 | 35.31 | 0.68 | 10 | .510 | Rejected |
| EVER | -54.55 | 170.29 | 51.34 | -1.06 | 10 | .313 | Rejected |
| FIL | -204.99 | 300.41 | 90.58 | -2.26 | 10 | .047 | Accepted |
| GAMM | -125.35 | 145.96 | 44.01 | -2.85 | 10 | .017 | Accepted |
| GESH | -310.88 | 613.23 | 184.90 | -1.68 | 10 | .124 | Rejected |
| GLAXP | -274.39 | 227.68 | 68.65 | -4.00 | 10 | .003 | Accepted |
| GLAXS | -949.80 | 886.84 | 267.39 | -3.55 | 10 | .005 | Accepted |
| GRAS | -118.96 | 172.13 | 51.90 | -2.29 | 10 | .045 | Accepted |
| GREA | 0.69 | 34.90 | 10.52 | 0.07 | 10 | .949 | Rejected |
| HINDM | 55.56 | 497.17 | 149.90 | 0.37 | 10 | .719 | Rejected |
| HINDA | 316.80 | 305.46 | 92.10 | 3.44 | 10 | .006 | Accepted |
| HUL | 83.17 | 181.31 | 54.67 | 1.52 | 10 | .159 | Rejected |
| INGER | -29.60 | 470.24 | 141.78 | -0.21 | 10 | .839 | Rejected |
| ITC | -112.39 | 226.51 | 68.29 | -1.65 | 10 | .131 | Rejected |
| KIL | 57.53 | 174.08 | 52.49 | 1.10 | 10 | .299 | Rejected |
| KLRF | 6.58 | 124.70 | 37.60 | 0.18 | 10 | .865 | Rejected |
| LAT | -1114.78 | 1228.17 | 370.31 | -3.01 | 10 | .013 | Accepted |
| MAM | -16.80 | 51.99 | 15.68 | -1.07 | 10 | .309 | Rejected |
| MAHC | -25.43 | 22.75 | 6.86 | -3.71 | 10 | .004 | Accepted |
| MAHU | -238.53 | 238.92 | 72.04 | -3.31 | 10 | .008 | Accepted |
| NIL | -621.89 | 551.93 | 166.41 | -3.74 | 10 | .004 | Accepted |
| NILK | -106.78 | 105.67 | 31.86 | -3.35 | 10 | .007 | Accepted |
| ORIS | -185.84 | 282.46 | 85.16 | -2.18 | 10 | .054 | Rejected |
| PEARL | 22.21 | 34.14 | 10.29 | 2.16 | 10 | .056 | Rejected |
| PENN | 14.73 | 39.10 | 11.79 | 1.25 | 10 | .240 | Rejected |
| PFIZ | -83.89 | 150.43 | 45.36 | -1.85 | 10 | .094 | Rejected |
| PCBL | -75.22 | 70.05 | 22.15 | -3.40 | 9 | .008 | Accepted |
| PIL | -41.54 | 132.95 | 40.09 | -1.04 | 10 | .324 | Rejected |
| PTL | 273.38 | 395.38 | 119.21 | 2.29 | 10 | .045 | Accepted |
| RRL | 21.25 | 29.44 | 8.88 | 2.39 | 10 | .038 | Accepted |
| RAYM | -87.36 | 138.53 | 41.77 | -2.09 | 10 | .063 | Rejected |
| RIIL | -752.73 | 1020.43 | 307.67 | -2.45 | 10 | .034 | Accepted |
| RIL | -611.19 | 771.37 | 232.58 | -2.63 | 10 | .025 | Accepted |
| SFL | 16.57 | 42.53 | 12.82 | 1.29 | 10 | .225 | Rejected |
| SPL | -174.32 | 300.91 | 90.73 | -1.92 | 10 | .084 | Rejected |
| STFL | -201.25 | 192.91 | 58.16 | -3.46 | 10 | .006 | Accepted |
| SIEM | -1001.91 | 1620.37 | 488.56 | -2.05 | 10 | .067 | Rejected |
| SINT | 88.76 | 849.87 | 256.25 | 0.35 | 10 | .736 | Rejected |
| SSML | -139.21 | 130.11 | 39.23 | -3.55 | 10 | .005 | Accepted |
| SML | -136.01 | 50.43 | 15.21 | -8.94 | 10 | .000 | Accepted |
| SVSL | 43.56 | 67.95 | 20.49 | 2.13 | 10 | .059 | Rejected |
| TWCP | 20.22 | 46.59 | 14.05 | 1.44 | 10 | .181 | Rejected |
| TATAC | 7.97 | 158.15 | 47.68 | 0.17 | 10 | .871 | Rejected |
| TATAI | -94.60 | 406.83 | 122.66 | -0.77 | 10 | .458 | Rejected |
| TATAS | -23.90 | 348.24 | 105.00 | -0.23 | 10 | .825 | Rejected |
| TATAG | -234.45 | 394.08 | 118.82 | -1.97 | 10 | .077 | Rejected |
| TATAM | 308.76 | 1090.07 | 328.67 | 0.94 | 10 | .370 | Rejected |
| TATAP | -94.06 | 91.67 | 27.64 | -3.40 | 10 | .007 | Accepted |
| TATSP | -212.83 | 264.68 | 79.80 | -2.67 | 10 | .024 | Accepted |
| TAYO | -77.90 | 159.38 | 48.05 | -1.62 | 10 | .136 | Rejected |
| TML | -322.31 | 447.62 | 134.96 | -2.39 | 10 | .038 | Accepted |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| UNIT | -1492.74 | 4348.36 | 1311.08 | -1.14 | 10 | .281 | Rejected |
| UTTA | -32.58 | 48.20 | 14.53 | -2.24 | 10 | .049 | Accepted |
| VIPIL | -137.82 | 345.21 | 104.09 | -1.32 | 10 | .215 | Rejected |
| VISA | -64.42 | 36.72 | 11.07 | -5.82 | 10 | .000 | Accepted |
| VOLT | -169.90 | 296.25 | 89.32 | -1.90 | 10 | .086 | Rejected |
| WALL | 8.75 | 56.05 | 16.90 | 0.52 | 10 | .616 | Rejected |
| WIPR | 1274.28 | 2986.05 | 900.33 | 1.42 | 10 | .187 | Rejected |

In case of the following companies the hypothesis is not accepted at 5% level of significance because significance value is more than the conventional value. The spread did not change much after the introduction of the Depository system for the following companies. ABCB, ANANT, APOLH, ASOK, ASTRA, BHIL, BSIL, BATL, BERG, BHARG, BHARB, BOMB, BRIT, CAST, CEAT, CHOL, CORO, COSM, CUMM, DCL, DAL, EICH, ELGI, ESSA, EVER, GESH, GREA, HINDM, HUL, INGER, ITC, KIL, KLRF, MAM, ORIS, PEARL, PENN, PFIZ, PIL, RAYM, SFL, SPL, SIEM, SINT, SVSL, TWCP, TATAC, TATAI, TATAS, TATAG, TATAM, TAYO, UNIT, VIPIL, VOLT, WALL and WIPR.

Whereas for the following companies, the hypothesis is accepted at 5% level of significance because significance values are less than the conventional value. The spread had changed after the introduction of the Depository system for the following companies. 3MIL, ABAN, ACCL, ADIT, AKZG, AMBU, AMTEK, APOLT, ASIAN, ATLAS, AMAL, BKIL, BCSL, BOSCH, CDIL, DCL, DHFL, DIGJ, ELEC, FIL, GAMM, GLAXP, GLAXS, GRAS, HINDA, LAT, MAHC, MAHU, NIL, NILK, PCBL, PTL, RRL, RIIL, RIL, STFL, SSML,SML,TATAP,TATSP,TML,UTTA and VISA.

Since the hypothesis was accepted in respect of 43 companies, it can be concluded that the hypothesis in 43 companies was acceptable. It means in 43 companies were there is significant difference in the liquidity I of stocks before and after the introduction of the depository system and in 57 companies, there is no significant difference in the liquidity I of stocks before and after the introduction of the depository system.

### 5.3.5 Spread II

Here for the calculation of liquidity,we considered daily highest and lowest price of the stock, and the difference between highest and lowest price. It indicates the

liquidity level is low and if the difference between the highest and lowest price is low, it indicates high liquidity of stocks.

**$H_{12}$: There is a significant difference in the spread II of stocks before and after the introduction of depository system**

To test this hypothesis, the liquidity of stocks in 100 companies, before and after the introduction of the depository system was considered. For this purpose, the paired sample 'T' test was applied at the 5 % level of significance. The detailed analysis is given in the table 5.3.5. In brief, the following conclusions emerged:

**Table 5.3.5: Spread II of Stocks as a Result of the Depository System**

| Company | Paired Samples Test | | | t | df | Sig. (2-tailed) | Outcome of paired sample 't' test |
|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | | | | |
| 3MIL | -268.92 | 1055.21 | 318.16 | -0.85 | 10 | .418 | Rejected |
| ABAN | -78.25 | 818.13 | 246.67 | -0.32 | 10 | .758 | Rejected |
| ABCB | 19.51 | 137.79 | 41.54 | 0.47 | 10 | .649 | Rejected |
| ACCL | -33.72 | 272.85 | 82.27 | -0.41 | 10 | .691 | Rejected |
| ADIT | -108.98 | 588.36 | 177.40 | -0.61 | 10 | .553 | Rejected |
| AKZG | -1.98 | 112.87 | 34.03 | -0.06 | 10 | .955 | Rejected |
| AMBU | -405.73 | 636.04 | 191.77 | -2.12 | 10 | .060 | Rejected |
| AMTEK | -9.45 | 136.33 | 41.10 | -0.23 | 10 | .823 | Rejected |
| ANANT | -58.99 | 188.27 | 56.76 | -1.04 | 10 | .323 | Rejected |
| APOLT | -26.57 | 1846.06 | 556.61 | -0.05 | 10 | .963 | Rejected |
| APOLH | 67.90 | 480.17 | 144.78 | 0.47 | 10 | .649 | Rejected |
| ASHOK | -738.84 | 6328.69 | 1908.17 | -0.39 | 10 | .707 | Rejected |
| ASIAN | -80.08 | 136.85 | 41.26 | -1.94 | 10 | .081 | Rejected |
| ASTRA | -3.88 | 851.40 | 256.71 | -0.02 | 10 | .988 | Rejected |
| ATLAS | 1.75 | 74.54 | 22.47 | 0.08 | 10 | .939 | Rejected |
| AMAL | -294.33 | 717.52 | 216.34 | -1.36 | 10 | .204 | Rejected |
| BHIL | -16.36 | 118.23 | 35.65 | -0.46 | 10 | .656 | Rejected |
| BSIL | -43.97 | 707.05 | 213.18 | -0.21 | 10 | .841 | Rejected |
| BKIL | 76.50 | 202.87 | 61.17 | 1.25 | 10 | .239 | Rejected |
| BATL | -27.78 | 221.78 | 66.87 | -0.42 | 10 | .687 | Rejected |
| BCSL | -10.96 | 64.11 | 19.33 | -0.57 | 10 | .583 | Rejected |
| BERG | -28.90 | 389.28 | 117.37 | -0.25 | 10 | .811 | Rejected |
| BHARB | -5.97 | 31.86 | 9.61 | -0.62 | 10 | .548 | Rejected |
| BHARG | -5.09 | 493.41 | 148.77 | -0.03 | 10 | .973 | Rejected |
| BOMB | -9.49 | 71.88 | 21.67 | -0.44 | 10 | .671 | Rejected |
| BOSCH | 96.70 | 312.10 | 94.10 | 1.03 | 10 | .328 | Rejected |
| BRIT | 229.69 | 206.19 | 62.17 | 3.70 | 10 | .004 | Accepted |
| CAST | 25.41 | 595.50 | 179.55 | 0.14 | 10 | .890 | Rejected |
| CEAT | -258.37 | 1060.91 | 319.88 | -0.81 | 10 | .438 | Rejected |
| CHOL | -19.44 | 339.33 | 102.31 | -0.19 | 10 | .853 | Rejected |
| CDIL | -55.17 | 274.14 | 82.66 | -0.67 | 10 | .520 | Rejected |
| CORO | -18.16 | 189.40 | 57.10 | -0.32 | 10 | .757 | Rejected |
| COSM | -11.87 | 73.29 | 22.10 | -0.54 | 10 | .603 | Rejected |
| CUMM | -305.44 | 496.00 | 149.55 | -2.04 | 10 | .068 | Rejected |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DCML | -25.50 | 73.18 | 22.06 | -1.16 | 10 | .275 | Rejected |
| DCL | -2.14 | 23.91 | 7.21 | -0.30 | 10 | .773 | Rejected |
| DHFL | -12.97 | 314.75 | 94.90 | -0.14 | 10 | .894 | Rejected |
| DAL | 7.57 | 198.08 | 59.72 | 0.13 | 10 | .902 | Rejected |
| DIGJ | -13.31 | 143.04 | 43.13 | -0.31 | 10 | .764 | Rejected |
| EICH | -262.90 | 437.66 | 131.96 | -1.99 | 10 | .074 | Rejected |
| ELEC | -1.96 | 76.51 | 23.07 | -0.09 | 10 | .934 | Rejected |
| ELGI | -39.14 | 136.79 | 41.24 | -0.95 | 10 | .365 | Rejected |
| ESSA | -3.91 | 19.11 | 5.76 | -0.68 | 10 | .512 | Rejected |
| EVER | -26.30 | 106.86 | 32.22 | -0.82 | 10 | .433 | Rejected |
| FIL | -12.68 | 84.62 | 25.51 | -0.50 | 10 | .630 | Rejected |
| GAMM | -3.99 | 277.64 | 83.71 | -0.05 | 10 | .963 | Rejected |
| GESH | 3.75 | 207.35 | 62.52 | 0.06 | 10 | .953 | Rejected |
| GLAXP | -21.77 | 126.47 | 38.13 | -0.57 | 10 | .581 | Rejected |
| GLAXS | -42.81 | 82.82 | 24.97 | -1.72 | 10 | .117 | Rejected |
| GRAS | -22.91 | 145.40 | 43.84 | -0.52 | 10 | .613 | Rejected |
| GREA | 5.82 | 294.66 | 88.84 | 0.07 | 10 | .949 | Rejected |
| HINDM | -11.53 | 42.39 | 12.78 | -0.90 | 10 | .388 | Rejected |
| HINDA | -23.75 | 130.59 | 39.37 | -0.60 | 10 | .560 | Rejected |
| HUL | -10.45 | 77.81 | 23.46 | -0.45 | 10 | .665 | Rejected |
| INGER | -43.69 | 775.07 | 233.69 | -0.19 | 10 | .855 | Rejected |
| ITC | -80.15 | 1511.27 | 455.66 | -0.18 | 10 | .864 | Rejected |
| KIL | -37.13 | 338.96 | 102.20 | -0.36 | 10 | .724 | Rejected |
| KLRF | -11.68 | 533.03 | 160.71 | -0.07 | 10 | .944 | Rejected |
| LAT | -29.15 | 371.94 | 112.15 | -0.26 | 10 | .800 | Rejected |
| MAM | -192.15 | 1078.36 | 325.14 | -0.59 | 10 | .568 | Rejected |
| MAHC | 5.70 | 461.30 | 139.09 | 0.04 | 10 | .968 | Rejected |
| MAHU | -37.29 | 150.10 | 45.26 | -0.82 | 10 | .429 | Rejected |
| NIL | -23.94 | 1191.55 | 359.26 | -0.07 | 10 | .948 | Rejected |
| NILK | -35.32 | 134.76 | 40.63 | -0.87 | 10 | .405 | Rejected |
| ORIS | -374.30 | 444.28 | 133.95 | -2.79 | 10 | .019 | Accepted |
| PEARL | -55.07 | 295.94 | 89.23 | -0.62 | 10 | .551 | Rejected |
| PENN | -15.64 | 228.07 | 68.77 | -0.23 | 10 | .825 | Rejected |
| PFIZ | -30.11 | 844.99 | 254.78 | -0.12 | 10 | .908 | Rejected |
| PCBL | -25.57 | 116.11 | 35.01 | -0.73 | 10 | .482 | Rejected |
| PIL | -20.52 | 156.43 | 47.17 | -0.44 | 10 | .673 | Rejected |
| PTL | -8.18 | 33.01 | 9.95 | -0.82 | 10 | .430 | Rejected |
| RRL | -38.70 | 76.13 | 22.96 | -1.69 | 10 | .123 | Rejected |
| RAYM | -69.14 | 224.35 | 67.64 | -1.02 | 10 | .331 | Rejected |
| RIIL | -63.49 | 408.17 | 123.07 | -0.52 | 10 | .617 | Rejected |
| RIL | -35.59 | 224.83 | 67.79 | -0.53 | 10 | .611 | Rejected |
| SFL | -21.30 | 132.91 | 40.07 | -0.53 | 10 | .607 | Rejected |
| SPL | -18.95 | 190.49 | 57.43 | -0.33 | 10 | .748 | Rejected |
| STFL | -9.53 | 103.65 | 31.25 | -0.31 | 10 | .767 | Rejected |
| SIEM | -2.92 | 166.39 | 50.17 | -0.06 | 10 | .955 | Rejected |
| SINT | -5.18 | 17.55 | 5.29 | -0.98 | 10 | .351 | Rejected |
| SSML | -4.81 | 18.58 | 5.60 | -0.86 | 10 | .411 | Rejected |
| SML | -3.06 | 17.80 | 5.37 | -0.57 | 10 | .581 | Rejected |
| SVSL | -2.34 | 36.12 | 10.89 | -0.22 | 10 | .834 | Rejected |
| TWCP | -9.99 | 266.33 | 80.30 | -0.12 | 10 | .903 | Rejected |
| TATAC | -80.72 | 496.89 | 149.82 | -0.54 | 10 | .602 | Rejected |
| TATAI | -7.38 | 50.45 | 15.21 | -0.49 | 10 | .638 | Rejected |
| TATAS | 0.96 | 129.90 | 39.17 | 0.02 | 10 | .981 | Rejected |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| TATAG | 7.57 | 259.59 | 78.27 | 0.10 | 10 | .925 | Rejected |
| TATAM | -7.11 | 120.10 | 36.21 | -0.20 | 10 | .848 | Rejected |
| TATAP | -5.55 | 159.21 | 48.00 | -0.12 | 10 | .910 | Rejected |
| TATSP | -2.98 | 14.85 | 4.48 | -0.67 | 10 | .520 | Rejected |
| TAYO | -4.50 | 33.02 | 9.96 | -0.45 | 10 | .661 | Rejected |
| TML | -13.17 | 219.37 | 66.14 | -0.20 | 10 | .846 | Rejected |
| UNIT | 292.10 | 519.23 | 156.55 | 1.87 | 10 | .092 | Rejected |
| UTTA | -8.89 | 48.83 | 14.72 | -0.60 | 10 | .560 | Rejected |
| VIPIL | -8.82 | 252.35 | 76.09 | -0.12 | 10 | .910 | Rejected |
| VISA | -1.06 | 297.51 | 89.70 | -0.01 | 10 | .991 | Rejected |
| VOLT | -9.15 | 55.26 | 16.66 | -0.55 | 10 | .595 | Rejected |
| WALL | -2.25 | 19.65 | 5.92 | -0.38 | 10 | .712 | Rejected |
| WIPR | -3.50 | 38.85 | 11.71 | -0.30 | 10 | .771 | Rejected |

The test results shows that a t-statistic with 10 degrees of freedom, the two-tailed p-values are more than the conventional 5% level of significance therefore we cannot accept the hypothesis at 5% significant level, the spread of the following companies did not change after the introduction of Depository system. 3MIL, ABAN, ABCB, ACCL, ADIT, AKZG, AMBU, AMTEK, ANANT, APOLT, APOLH, ASOK, ASIAN, ASTRA, ATLAS, AMAL, BHIL, BSIL, BKIL, BATL, BCSL, BERG, BHARB, BHARG, BOMB, BOSCH, CAST, CEAT, CHOL, CDIL, CORO, COSM, CUMM, DCML, DCL, DHFL, DAL, DIGJ, EICH, ELEC, ELGI, ESSA, EVER, FIL, GAMM, GESH, GLAXP, GLAXS, GRAS, GREA, HINDM, HINDA, HUL, INGER ,ITC,KIL, KLRF, LAT, MAM, MAHC, MAHU, NIL, NILK, PEARL, PENN, PFIZ, PCBL ,PIL, PTL, RRL, RAYM, RIIL, RIL, SFL, SPL, STFL, SIEM, SINT, SSML, SML, SVSL, TWCP, TATAC, TATAI, TATAS, TATAG, TATAM, TATAP, TATSP, TAYO, TML, UNIT, UTTA, VIPIL, VISA,VOLT, WALL and WIPR.

The result shows that a t-statistic with 10 degrees of freedom, the two-tailed p-value is less than the conventional 5% level of significance. Therefore the study accepts the alternate hypothesis at 5% significant level. The following companies namely ORIS and BRIT in terms of spread has changed after the introduction of depository system.

Since the hypothesis was accepted in respect of 2 companies, it indicates that there is a significant difference in the liquidity of stocks before, and after the introduction of the depository system and there are 98 companies where there is no significant difference in the spread (II) of stocks before and after the introduction of the depository system.

## 5.4 Return

Here daily return is calculated for the stocks .For the calculation of return daily stock prices is considered.

**$H_{13}$: There is a significant difference in the return on stocks before and after the introduction of the depository system**

To test this hypothesis, the return of stocks in 100 companies, before and after the introduction of the depository system was considered. For this purpose, the paired sample 'T' test was applied at the 5% level of significance. The detailed analysis is given in the table 5.3.6. In brief, the following conclusions emerged:

**Table 5.3.6: Return of Stocks as a Result of the Depository System**

| Company | Paired Samples Test | | | t | Df | Sig. (2-tailed) | Outcome of paired sample 't' test |
|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | | | | |
| 3MIL | 0.000 | 0.004 | 0.001 | 0.003 | 10 | .876 | Rejected |
| ABAN | 0.000 | 0.006 | 0.002 | -0.186 | 10 | .857 | Rejected |
| ABCB | 0.003 | 0.004 | 0.001 | -2.588 | 10 | .027 | Accepted |
| ACCL | 0.002 | 0.003 | 0.001 | -1.719 | 10 | .116 | Rejected |
| ADIT | 0.001 | 0.004 | 0.001 | -0.993 | 10 | .344 | Rejected |
| AKZG | 0.000 | 0.004 | 0.001 | -0.287 | 10 | .780 | Rejected |
| AMBU | 0.001 | 0.005 | 0.001 | -1.015 | 10 | .334 | Rejected |
| AMTEK | 0.002 | 0.007 | 0.002 | 1.031 | 10 | .327 | Rejected |
| ANANT | 0.003 | 0.039 | 0.012 | -0.298 | 10 | .772 | Rejected |
| APOLT | 0.000 | 0.006 | 0.002 | 0.062 | 10 | .952 | Rejected |
| APOLH | 0.000 | 0.004 | 0.001 | 0.146 | 10 | .887 | Rejected |
| ASHOK | 0.000 | 0.005 | 0.002 | 0.149 | 10 | .885 | Rejected |
| ASIAN | 0.001 | 0.002 | 0.001 | -1.221 | 10 | .250 | Rejected |
| ASTRA | 0.000 | 0.005 | 0.001 | 0.277 | 10 | .787 | Rejected |
| ATLAS | 0.001 | 0.004 | 0.001 | -1.221 | 10 | .250 | Rejected |
| AMAL | 0.001 | 0.003 | 0.001 | -0.643 | 10 | .535 | Rejected |
| BHIL | 0.001 | 0.004 | 0.001 | -0.422 | 10 | .682 | Rejected |
| BSIL | 0.021 | 0.052 | 0.016 | -1.343 | 10 | .209 | Rejected |
| BKIL | -0.002 | 0.006 | 0.002 | -0.952 | 10 | .363 | Rejected |
| BATL | -0.003 | 0.004 | 0.001 | -2.491 | 10 | .032 | Accepted |
| BCSL | 0.000 | 0.003 | 0.001 | 0.123 | 10 | .904 | Rejected |
| BERG | 0.000 | 0.004 | 0.001 | -0.193 | 10 | .851 | Rejected |
| BHARB | -0.002 | 0.005 | 0.001 | -1.227 | 10 | .248 | Rejected |
| BHARG | -0.002 | 0.003 | 0.001 | -2.029 | 10 | .070 | Rejected |
| BOMB | -0.001 | 0.006 | 0.002 | -0.530 | 10 | .608 | Rejected |
| BOSCH | -0.002 | 0.003 | 0.001 | -1.787 | 10 | .104 | Rejected |
| BRIT | 0.001 | 0.003 | 0.001 | 0.711 | 10 | .493 | Rejected |
| CAST | -0.001 | 0.002 | 0.001 | -2.492 | 10 | .032 | Accepted |
| CEAT | -0.001 | 0.004 | 0.001 | -0.754 | 10 | .468 | Rejected |
| CHOL | 0.004 | 0.025 | 0.007 | 0.521 | 10 | .614 | Rejected |
| CDIL | 0.000 | 0.005 | 0.002 | 0.064 | 10 | .950 | Rejected |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CORO | -0.001 | 0.006 | 0.002 | -0.510 | 10 | .621 | Rejected |
| COSM | 0.000 | 0.003 | 0.001 | -0.457 | 10 | .658 | Rejected |
| CUMM | -0.001 | 0.003 | 0.001 | -1.027 | 10 | .329 | Rejected |
| DCML | -0.010 | 0.032 | 0.010 | -1.009 | 10 | .337 | Rejected |
| DCL | -0.001 | 0.004 | 0.001 | -0.899 | 10 | .390 | Rejected |
| DHFL | 0.000 | 0.006 | 0.002 | -0.098 | 10 | .924 | Rejected |
| DAL | -0.006 | 0.013 | 0.004 | -1.431 | 10 | .183 | Rejected |
| DIGJ | -0.002 | 0.004 | 0.001 | -1.542 | 10 | .154 | Rejected |
| EICH | -0.003 | 0.004 | 0.001 | -2.255 | 10 | .048 | Accepted |
| ELEC | -0.002 | 0.006 | 0.002 | -0.964 | 10 | .358 | Rejected |
| ELGI | -0.002 | 0.004 | 0.001 | -1.506 | 10 | .163 | Rejected |
| ESSA | -0.002 | 0.006 | 0.002 | -0.893 | 10 | .393 | Rejected |
| EVER | -0.002 | 0.004 | 0.001 | -1.495 | 10 | .166 | Rejected |
| FIL | -0.002 | 0.004 | 0.001 | -2.159 | 10 | .056 | Rejected |
| GAMM | -0.001 | 0.006 | 0.002 | -0.268 | 10 | .794 | Rejected |
| GESH | -0.001 | 0.005 | 0.001 | -0.634 | 10 | .540 | Rejected |
| GLAXP | -0.012 | 0.036 | 0.011 | -1.072 | 10 | .309 | Rejected |
| GLAXS | -0.001 | 0.003 | 0.001 | -1.066 | 10 | .312 | Rejected |
| GRAS | -0.001 | 0.003 | 0.001 | -0.683 | 10 | .510 | Rejected |
| GREA | -0.002 | 0.005 | 0.002 | -1.299 | 10 | .223 | Rejected |
| HINDM | -0.001 | 0.003 | 0.001 | -0.765 | 10 | .462 | Rejected |
| HINDA | 0.001 | 0.004 | 0.001 | 1.011 | 10 | .336 | Rejected |
| HUL | 0.000 | 0.004 | 0.001 | -0.009 | 10 | .993 | Rejected |
| INGER | 0.003 | 0.014 | 0.004 | 0.640 | 10 | .536 | Rejected |
| ITC | 0.001 | 0.004 | 0.001 | 0.784 | 10 | .451 | Rejected |
| KIL | -0.001 | 0.005 | 0.001 | -0.775 | 10 | .456 | Rejected |
| KLRF | -0.003 | 0.007 | 0.002 | -1.311 | 10 | .219 | Rejected |
| LAT | 0.000 | 0.004 | 0.001 | -0.372 | 10 | .718 | Rejected |
| MAM | 0.000 | 0.003 | 0.001 | -0.494 | 10 | .632 | Rejected |
| MAHC | -0.003 | 0.006 | 0.002 | -1.723 | 10 | .116 | Rejected |
| MAHU | -0.002 | 0.005 | 0.001 | -1.558 | 10 | .150 | Rejected |
| NIL | 0.000 | 0.002 | 0.001 | -0.338 | 10 | .742 | Rejected |
| NILK | 0.000 | 0.004 | 0.001 | -0.250 | 10 | .808 | Rejected |
| ORIS | -0.004 | 0.008 | 0.002 | -1.758 | 10 | .109 | Rejected |
| PEARL | 0.007 | 0.031 | 0.009 | 0.769 | 10 | .460 | Rejected |
| PENN | -0.005 | 0.006 | 0.002 | -2.906 | 10 | .016 | Accepted |
| PFIZ | 0.000 | 0.004 | 0.001 | 0.323 | 10 | .753 | Rejected |
| PCBL | -0.001 | 0.004 | 0.001 | -0.969 | 10 | .355 | Rejected |
| PIL | -0.003 | 0.006 | 0.002 | -1.611 | 10 | .138 | Rejected |
| PTL | 0.001 | 0.017 | 0.005 | 0.179 | 10 | .862 | Rejected |
| RRL | 0.006 | 0.039 | 0.012 | 0.556 | 10 | .590 | Rejected |
| RAYM | 0.000 | 0.004 | 0.001 | -0.429 | 10 | .677 | Rejected |
| RIIL | 0.000 | 0.006 | 0.002 | -0.009 | 10 | .993 | Rejected |
| RIL | 0.000 | 0.004 | 0.001 | -0.031 | 10 | .976 | Rejected |
| SFL | -0.008 | 0.011 | 0.003 | -2.220 | 10 | .051 | Rejected |
| SPL | 0.000 | 0.026 | 0.008 | -0.015 | 10 | .988 | Rejected |
| STFL | -0.002 | 0.003 | 0.001 | -2.034 | 10 | .069 | Rejected |
| SIEM | 0.000 | 0.004 | 0.001 | 0.059 | 10 | .954 | Rejected |
| SINT | -0.002 | 0.009 | 0.003 | -0.802 | 10 | .441 | Rejected |
| SSML | -0.002 | 0.005 | 0.002 | -1.233 | 10 | .246 | Rejected |
| SML | -0.001 | 0.002 | 0.001 | -1.186 | 10 | .263 | Rejected |
| SVSL | -0.003 | 0.006 | 0.002 | -1.559 | 10 | .150 | Rejected |
| TWCP | -0.003 | 0.004 | 0.001 | -2.978 | 10 | .014 | Accepted |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| TATAC | -0.001 | 0.004 | 0.001 | -0.702 | 10 | .499 | Rejected |
| TATAI | 0.000 | 0.005 | 0.001 | -0.292 | 10 | .776 | Rejected |
| TATAS | -0.001 | 0.005 | 0.002 | -0.483 | 10 | .639 | Rejected |
| TATAG | 0.000 | 0.004 | 0.001 | -0.028 | 10 | .978 | Rejected |
| TATAM | 0.000 | 0.005 | 0.001 | -0.225 | 10 | .827 | Rejected |
| TATAP | -0.001 | 0.006 | 0.002 | -0.532 | 10 | .606 | Rejected |
| TATSP | -0.001 | 0.004 | 0.001 | -1.068 | 10 | .311 | Rejected |
| TAYO | -0.001 | 0.004 | 0.001 | -0.679 | 10 | .512 | Rejected |
| TML | 0.026 | 0.061 | 0.018 | 1.391 | 10 | .194 | Rejected |
| UNIT | 0.000 | 0.005 | 0.001 | 0.249 | 10 | .808 | Rejected |
| UTTA | -0.002 | 0.003 | 0.001 | -2.262 | 10 | .047 | Accepted |
| VIPIL | -0.001 | 0.004 | 0.001 | -0.811 | 10 | .436 | Rejected |
| VISA | -0.001 | 0.006 | 0.002 | -0.738 | 10 | .477 | Rejected |
| VOLT | -0.001 | 0.004 | 0.001 | -0.441 | 10 | .668 | Rejected |
| WALL | -0.001 | 0.010 | 0.003 | -0.185 | 10 | .857 | Rejected |
| WIPR | 0.001 | 0.005 | 0.002 | 0.686 | 10 | .508 | Rejected |

The test results show that a t-statistic with 10 degrees of freedom, the two-tailed p-values are more than the conventional 5% level of significant therefore, we cannot accept the hypothesis at 5% significant level. The return of the following companies did not change after the introduction of the Depository system. 3MIL, ABAN, ACCL, ADIT, AKZG, AMBU, AMTEK, ANANT, APOLT, APOLH, ASHOK, ASIAN, ASTRA, ATLAS, AMAL, BHIL, BSIL, BKIL, BCSL, BERG, BHARB, BHARG, BOMB, BOSCH, BRIT, CEAT, CHOL, CDIL, CORO, COSM, CUMM, DCML, DCL, DHFL, DAL, DIGJ, ELEC, ELGI, ESSA, EVER, FIL, GAMM, GESH, GLAXP, GLAXS, GRAS, GREA, HINDM, HINDA, HUL, INGER, ITC,KIL, KLRF, LAT, MAM, MAHC, MAHU, NIL, NILK, ORIS, PEARL, PFIZ, PCBL, PIL, PTL, RRL, RAYM, RIIL, RIL, SFL, SPL, STFL, SIEM, SINT, SSML, SML, SVSL TATAC, TATAI, TATAS, TATAG, TATAM, TATAP, TATSP, TAYO, TML, UNIT, VIPIL, VISA, VOLT, WALL and WIPR.

The results show that a t-statistic with 10 degrees of freedom, the two-tailed p-value is less than the conventional 5% level of significant. Therefore we can accept the hypothesis at 5% significant level. The return of the following companies had changed after the introduction of the depository system. ABCB, BATL, CAST, PENN, EICH, TWCP, and UTTA.

Since the hypothesis was accepted in respect of 07 companies, it can be concluded that the hypothesis in was acceptable in 07companies. It means there were seven companies where there was significant difference in the return of stocks before and after the introduction of the depository system and there were 93 companies

where there was no significant difference in the return of stocks before and after the introduction of the depository system. This suggests that the introduction of the Depository System has not significantly impacted the return on stocks.

## 5.5 Volatility

The volatility of the stocks is considered based on the standard deviation of the individual stocks. For the calculation of stocksvolatility, average daily price is considered.

**$H_{14}$: There is a significant difference in the volatility of stocks before and after the introduction of the depository system**

To test this hypothesis, the volatility of stocks in 100 companies, before and after the introduction of the depository system was considered. For this purpose, the paired sample 'T' test was applied at the 5 % level of significance. The detailed analysis is given in the table 5.3.7. In brief, the following conclusions emerged:

**Table 5.3.7: Volatility of Stocks as a Result of the Depository System**

| Company | Paired Samples Test | | | t | df | Sig. (2-tailed) | Outcome of paired sample 't' test |
|---|---|---|---|---|---|---|---|
| | Mean | Std. Deviation | Std. Error Mean | | | | |
| 3MIL | 0.023 | 0.026 | 0.008 | 2.892 | 10 | .016 | Accepted |
| ABAN | 0.001 | 0.025 | 0.007 | 0.162 | 10 | .874 | Rejected |
| ABCB | 0.023 | 0.041 | 0.012 | 1.827 | 10 | .098 | Rejected |
| ACCL | 0.024 | 0.042 | 0.013 | 1.926 | 10 | .083 | Rejected |
| ADIT | 0.008 | 0.017 | 0.005 | 1.476 | 10 | .171 | Rejected |
| AKZG | 0.016 | 0.007 | 0.002 | 7.725 | 10 | .000 | Accepted |
| AMBU | 0.003 | 0.030 | 0.009 | 0.318 | 10 | .757 | Rejected |
| AMTEK | 0.027 | 0.022 | 0.007 | 4.125 | 10 | .002 | Accepted |
| ANANT | 0.063 | 0.081 | 0.024 | 2.582 | 10 | .027 | Accepted |
| APOLT | 0.004 | 0.036 | 0.011 | 0.402 | 10 | .696 | Rejected |
| APOLH | 0.019 | 0.020 | 0.006 | 3.227 | 10 | .009 | Accepted |
| ASHOK | -0.001 | 0.041 | 0.012 | -0.098 | 10 | .924 | Rejected |
| ASIAN | 0.014 | 0.015 | 0.005 | 3.097 | 10 | .011 | Accepted |
| ASTRA | 0.014 | 0.022 | 0.007 | 2.092 | 10 | .063 | Rejected |
| ATLAS | 0.009 | 0.010 | 0.003 | 3.189 | 10 | .010 | Accepted |
| AMAL | 0.022 | 0.015 | 0.005 | 4.853 | 10 | .001 | Accepted |
| BHIL | 0.007 | 0.020 | 0.006 | 1.163 | 10 | .272 | Rejected |
| BSIL | 0.042 | 0.048 | 0.014 | 2.878 | 10 | .016 | Accepted |
| BKIL | 0.011 | 0.029 | 0.009 | 1.296 | 10 | .224 | Rejected |
| BATL | 0.047 | 0.084 | 0.025 | 1.832 | 10 | .097 | Rejected |
| BCSL | -0.012 | 0.036 | 0.011 | -1.103 | 10 | .296 | Rejected |
| BERG | 0.014 | 0.020 | 0.006 | 2.240 | 10 | .049 | Accepted |
| BHARB | 0.010 | 0.047 | 0.014 | 0.698 | 10 | .501 | Rejected |
| BHARG | 0.008 | 0.020 | 0.006 | 1.303 | 10 | .222 | Rejected |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| BOMB | -0.005 | 0.028 | 0.008 | -0.561 | 10 | .587 | Rejected |
| BOSCH | -0.005 | 0.043 | 0.013 | -0.412 | 10 | .689 | Rejected |
| BRIT | 0.005 | 0.023 | 0.007 | 0.773 | 10 | .457 | Rejected |
| CAST | 0.010 | 0.019 | 0.006 | 1.676 | 10 | .125 | Rejected |
| CEAT | 0.016 | 0.017 | 0.005 | 3.094 | 10 | .011 | Accepted |
| CHOL | 0.034 | 0.041 | 0.012 | 2.705 | 10 | .022 | Accepted |
| CDIL | 0.011 | 0.021 | 0.006 | 1.716 | 10 | .117 | Rejected |
| CORO | 0.008 | 0.029 | 0.009 | 0.865 | 10 | .408 | Rejected |
| COSM | 0.027 | 0.023 | 0.007 | 3.808 | 10 | .003 | Accepted |
| CUMM | 0.013 | 0.021 | 0.006 | 2.084 | 10 | .064 | Rejected |
| DCML | 0.097 | 0.158 | 0.048 | 2.029 | 10 | .070 | Rejected |
| DCL | 0.021 | 0.015 | 0.005 | 4.531 | 10 | .001 | Accepted |
| DHFL | 0.024 | 0.036 | 0.011 | 2.215 | 10 | .051 | Rejected |
| DAL | 0.018 | 0.046 | 0.014 | 1.281 | 10 | .229 | Rejected |
| DIGJ | 0.003 | 0.047 | 0.014 | 0.241 | 10 | .814 | Rejected |
| EICH | 0.043 | 0.049 | 0.015 | 2.901 | 10 | .016 | Accepted |
| ELEC | 0.003 | 0.031 | 0.009 | 0.353 | 10 | .731 | Rejected |
| ELGI | 0.025 | 0.055 | 0.016 | 1.530 | 10 | .157 | Rejected |
| ESSA | 0.010 | 0.018 | 0.005 | 1.874 | 10 | .090 | Rejected |
| EVER | 0.008 | 0.012 | 0.004 | 2.186 | 10 | .054 | Rejected |
| FIL | 0.001 | 0.030 | 0.009 | 0.056 | 10 | .957 | Rejected |
| GAMM | 0.051 | 0.122 | 0.037 | 1.399 | 10 | .192 | Rejected |
| GESH | 0.005 | 0.015 | 0.004 | 1.141 | 10 | .281 | Rejected |
| GLAXP | 0.027 | 0.038 | 0.011 | 2.401 | 10 | .037 | Accepted |
| GLAXS | 0.010 | 0.008 | 0.002 | 4.279 | 10 | .002 | Accepted |
| GRAS | 0.005 | 0.012 | 0.004 | 1.450 | 10 | .178 | Rejected |
| GREA | 0.005 | 0.031 | 0.009 | 0.486 | 10 | .637 | Rejected |
| HINDM | 0.009 | 0.024 | 0.007 | 1.314 | 10 | .218 | Rejected |
| HINDA | -0.010 | 0.041 | 0.012 | -0.846 | 10 | .417 | Rejected |
| HUL | 0.014 | 0.039 | 0.012 | 1.231 | 10 | .246 | Rejected |
| INGER | 0.071 | 0.151 | 0.045 | 1.572 | 10 | .147 | Rejected |
| ITC | -0.003 | 0.041 | 0.013 | -0.201 | 10 | .844 | Rejected |
| KIL | 0.014 | 0.013 | 0.004 | 3.587 | 10 | .005 | Accepted |
| KLRF | 0.028 | 0.044 | 0.013 | 2.082 | 10 | .064 | Rejected |
| LAT | 0.002 | 0.021 | 0.006 | 0.353 | 10 | .731 | Rejected |
| MAM | 0.006 | 0.019 | 0.006 | 1.006 | 10 | .338 | Rejected |
| MAHC | 0.050 | 0.041 | 0.012 | 3.972 | 10 | .003 | Accepted |
| MAHU | 0.023 | 0.022 | 0.007 | 3.485 | 10 | .006 | Accepted |
| NIL | 0.009 | 0.006 | 0.002 | 4.892 | 10 | .001 | Accepted |
| NILK | 0.017 | 0.015 | 0.005 | 3.643 | 10 | .005 | Accepted |
| ORIS | 0.062 | 0.065 | 0.020 | 3.183 | 10 | .010 | Accepted |
| PEARL | 0.010 | 0.049 | 0.015 | 0.663 | 10 | .523 | Rejected |
| PENN | 0.039 | 0.058 | 0.018 | 2.223 | 10 | .050 | Rejected |
| PFIZ | 0.018 | 0.011 | 0.003 | 5.606 | 10 | .000 | Accepted |
| PCBL | 0.023 | 0.020 | 0.006 | 3.855 | 10 | .003 | Accepted |
| PIL | 0.045 | 0.051 | 0.015 | 2.933 | 10 | .015 | Accepted |
| PTL | -0.020 | 0.072 | 0.022 | -0.908 | 10 | .385 | Rejected |
| RRL | 0.112 | 0.123 | 0.037 | 3.003 | 10 | .013 | Accepted |
| RAYM | 0.004 | 0.010 | 0.003 | 1.388 | 10 | .195 | Rejected |
| RIIL | 0.015 | 0.027 | 0.008 | 1.851 | 10 | .094 | Rejected |
| RIL | 0.009 | 0.015 | 0.005 | 1.904 | 10 | .086 | Rejected |
| SFL | 0.056 | 0.124 | 0.037 | 1.489 | 10 | .167 | Rejected |
| SPL | 0.040 | 0.055 | 0.017 | 2.392 | 10 | .038 | Accepted |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| STFL | 0.049 | 0.034 | 0.010 | 4.795 | 10 | .001 | Accepted |
| SIEM | -0.001 | 0.032 | 0.010 | -0.058 | 10 | .955 | Rejected |
| SINT | 0.014 | 0.053 | 0.016 | 0.861 | 10 | .409 | Rejected |
| SSML | 0.012 | 0.015 | 0.004 | 2.649 | 10 | .024 | Accepted |
| SML | 0.022 | 0.022 | 0.007 | 3.297 | 10 | .008 | Accepted |
| SVSL | 0.024 | 0.049 | 0.015 | 1.650 | 10 | .130 | Rejected |
| TWCP | 0.035 | 0.048 | 0.014 | 2.418 | 10 | .036 | Accepted |
| TATAC | 0.009 | 0.011 | 0.003 | 2.590 | 10 | .027 | Accepted |
| TATAI | 0.031 | 0.020 | 0.006 | 5.125 | 10 | .000 | Accepted |
| TATAS | 0.002 | 0.013 | 0.004 | 0.549 | 10 | .595 | Rejected |
| TATAG | -0.003 | 0.036 | 0.011 | -0.230 | 10 | .823 | Rejected |
| TATAM | -0.001 | 0.028 | 0.008 | -0.063 | 10 | .951 | Rejected |
| TATAP | 0.020 | 0.085 | 0.026 | 0.781 | 10 | .453 | Rejected |
| TATSP | 0.029 | 0.054 | 0.016 | 1.790 | 10 | .104 | Rejected |
| TAYO | 0.015 | 0.013 | 0.004 | 3.720 | 10 | .004 | Accepted |
| TML | 0.118 | 0.223 | 0.067 | 1.760 | 10 | .109 | Rejected |
| UNIT | -0.018 | 0.075 | 0.023 | -0.812 | 10 | .436 | Rejected |
| UTTA | 0.031 | 0.021 | 0.006 | 4.996 | 10 | .001 | Accepted |
| VIPIL | 0.008 | 0.035 | 0.011 | 0.767 | 10 | .461 | Rejected |
| VISA | 0.039 | 0.023 | 0.007 | 5.501 | 10 | .000 | Accepted |
| VOLT | -0.003 | 0.040 | 0.012 | -0.271 | 10 | .792 | Rejected |
| WALL | 0.077 | 0.141 | 0.043 | 1.815 | 10 | .100 | Rejected |
| WIPR | 0.029 | 0.029 | 0.009 | 3.270 | 10 | .008 | Accepted |

The test results show that a t-statistic with 10 degrees of freedom, the two-tailed p-values are more than the conventional 5% level of significance therefore we cannot accept the hypothesis at 5% significant level. The volatility of the following companies did not change after the introduction of the depository system: ABAN, ABCB, ACCL, ADIT, ACCL, ADIT, AMBU, APOLT, ASHOK, ASTRA, BHIL, BKIL, BATL, BCSL, BHARB, BHARG, BOMB, BOSCH, BRIT, CAST, CDIL, CORO, CUMM, DCML, DHFL, DAL, DIGJ, ELEC, ELGI, ESSA, EVER, FIL, GAMM, GESH, GRAS, GREA, HINDM, HINDA, HUL, INGER, ITC, KLRF, LAT, MAM, PEARL, PENN, PTL, RAYM, RIIL, RIL, SFL, SIEM, SINT, SVSL, TATAS, TATAG, TATAM, TATAP, TATSP, TML, UNIT, VIPIL, VOLT and WALL.

The result shows that a t-statistic with 10 degrees of freedom, the two-tailed p-value is less than the conventional 5% level of significant. Therefore we can accept the hypothesis at 5% significant level. The volatility of the following companies had changed after the introduction of the Depository system. 3MIL, AKZG, AMTEK, ANANT, APOLH, ASIAN, ATLAS, AMAL, BSIL, BERG, CEAT, CHOL, COSM, DCL, EICH, GLAXP, GLAXS, KIL, MAHC, MAHU, NIL, NILK, ORIS, PFIZ, PCBL, PIL, RRL, SPL, STFL, SSML, SML, TWCP, TATAC, TATAI, TAYO, UTTA, VISA and WIPR.

Since the hypothesis is accepted in respect of 38 companies, it can be concluded that the hypothesis is acceptable in 38 companies. It means that there are 38 companies which shows a significant difference in the volatility of stocks before and after the introduction of the depository system and there are 62 companies where there is no significant difference existing in the volatility of stocks before and after the introduction of the depository system. The conclusion drawn here is that there is only a marginal increase in the volatility of stocks after the Depository System was introduced.

The volatility of stock prices can be predicted by the variance or the standard deviation of stock. This aspect was examined considering the variancesten years before and ten years after the depository system was introduced. A paired sample t-test was applied. The standard deviation of stocks increased significantly for only 32 of the sample companies. Here too, it was found that the volatility of stocks increased only marginally after the Depository system was introduced.

**5.6 Conclusion**

The study found that the trends in sensitivity index and liquidity, return and volatility impact the stock sensitivity index and on individual stocks after the introduction of the depository system. As a result, the SENSEX, number of trades, number of shares traded, number of listed companies, market capitalization and volatility has shown an unprecedented change since the introduction of Depository System. In case of companies: the number of trades has increased. In terms of turnover of stocks there is change in 48 companies and no change in case of 52 companies. In terms of number of shares there is change in 58 companies and no change in case of 42 companies. In terms of spread I point of there is a change in 43 companies and no change in case of 57 companies. in terms of there is almost no change in case of spread II for case of volatility, there is a change in case of 38 companies and no change in case of 62 companies. It is concluded that there is depository impact on the stock market.

# CHAPTER –VI

# IMPACT OF DEMATERIALISATION – INVESTOR'S PERCEPTION

# CHAPTER VI

# IMPACT OF DEMATERIALISATION – A STUDY OF INVESTORS' PERCEPTIONS

## 6.0 Introduction

This chapter explains liquidity, return and volatility which are important parameters of the impact of depository system, the perceived impact by the investors also is important. Investors' perception is important because a positive perception motivates investors to participate. On the other hand, negative perceptions discourage investor participation. Investors' perception is important because it is investors that add to the depth, breadth and resilience to the market. Perceptions of the investors about depository services in India. An attempt has been made to present the view points of DEMAT account holders on the depository system in India. The respondents are asked questions about a wide variety of issues concerning the depository services in India. Their views have been carefully analysed and presented in this chapter.

## SECTION - I

## 6.1 Demographic Profile of the DEMAT Account Holders

In the present age of Liberalisation, Privatisation and Globalisation (LPG); share market activity is no longer confined to persons of a particular age or income group. It was therefore considered necessary to understand the variation in perceptions, if any, about various aspects of DEMAT services among share market players belonging to different age groups, having different income and savings levels, educational levels, professions, etc. The three cities, Hyderabad, Mumbai and Gangtok, were consciously chosen for a detailed study so as to ascertain whether the size and nature of the city could influence the share market activity of investors there.

### 6.1.1 Gender Distribution of DEMAT Account Holders

Gender is an essential demographic variable to identify the perceptions of the DEMAT account holders. Given the gender roles largely prevailing in the country, it may be logical to expect that the majority of the DEMAT account holders would be

males. The Table 6.1.1 shows the gender distribution of DEMAT account holders in three sample cities.

**Table 6.1.1: City-Wise Gender Distribution of the Respondents**

| City | Gender | | Total |
|---|---|---|---|
| | Male | Female | |
| Hyderabad | 101(60.5%) | 66(39.5%) | 167(100%) |
| Mumbai | 99(59.3%) | 68(40.7%) | 167(100%) |
| Gangtok | 48(65.8%) | 25(34.2%) | 73(100%) |
| Total | 248(60.9%) | 159(39.1%) | 407(100%) |

From the table it is evident that the majority of the respondents (60.9%) were males. Thus, the above supposition stands confirmed. It could be seen that in all the three cities surveyed, the number of male investors was much more than that of their female counterparts. Not surprisingly, the proportion of female investors (40.7%) was found to be the highest in Mumbai – the 'business capital of India'. A significant fact that came to light was that even in relatively lesser developed cities like Gangtok, an increasing number of females are participating in share market activities. This suggests that the share market is no more an exclusive male 'preserve'.

### 6.1.2 Marital Status of the Respondent DEMAT Account Holders

In most cases, matrimony can oblige persons to think about 'investing for the future of their families'. The Table 6.1.2 can gives an idea of whether this assumption is correct.

**Table 6.1.2: City-wise Classification of Marital Status of the Respondents**

| City | Marital status | | Total |
|---|---|---|---|
| | Single | Married | |
| Hyderabad | 56(33.5%) | 111(66.5%) | 167(100%) |
| Mumbai | 39(23.4%) | 128(76.6%) | 167(100%) |
| Gangtok | 32(43.8%) | 41(56.2%) | 73(100%) |
| Total | 127(31.2%) | 280(68.8%) | 407(100%) |

The study found that the majority that the majority (68.8%) of the respondents were married. After enquiring in to the data it is evident that, overall, there were more married investors than their unmarried counterparts, the next issue

of interest, whether such a trend was to be found in the three cities as well. The Table 6.1.2 can also give a better picture on this issue. It emerged that in all the three cities, married investors outnumbered their unmarried counterparts. However, the extent of 'married investors' domination' was found to be most pronounced in Mumbai (76.6%), and the least in Gangtok (56.2%).

### 6.1.3 Number of DEMAT Account Holders: city wise frequencies

Awareness and interest in share market activities cannot be expected to be the same in all cities. Cities with a great deal of business activity should logically have a higher number of persons interested in shares, etc. The Table 6.1.3 should help us to see how far this surmise is correct.

**Table 6.1.3: City-Wise - Number of Respondents**

| City | Frequency | Percent |
|---|---|---|
| Hyderabad | 167 | 41.0 |
| Mumbai | 167 | 41.0 |
| Gangtok | 73 | 18.0 |
| Total | 407 | 100.0 |

Quite expectedly, the DEMAT account holder respondents in Hyderabad and Mumbai (41.0% each) heavily outnumbered those in Gangtok (18% only).

### 6.1.4 City Wise - Monthly Income of the Respondents

Income is a very important determinant for a person's enthusiasm for availing of depository services. If the income cannot even meet the basic needs of the family, the question of having disposable income for engaging in share market activities can hardly arise. The Table 6.1.4 shows the income distribution of the respondents. It should also inform one about the 'passion' about the share market among the various income ranges.

**Table 6.1.4: City-Wise Income Distribution of the Respondents**

| City | Monthly Income | | | | Total |
|---|---|---|---|---|---|
| | 0-20000 | 20001-30000 | 30001-40000 | Above 40000 | |
| Hyderabad | 70(41.9%) | 81(48.5%) | 12(7.2%) | 4(2.4%) | 167(100%) |
| Mumbai | 63(37.7%) | 94(56.3%) | 6(3.6%) | 4(2.4%) | 167(100%) |
| Gangtok | 24(32.9%) | 44(60.3%) | 5(6.8%) | 0(0.0%) | 73(100%) |
| Total | 157(38.6%) | 219(53.8% | 23(5.7%) | 8(2.0%) | 407(100%) |

The most striking factor that has come to the fore is that there were the relatively fewer number of respondents in the higher income brackets (Rs 30,001-4, 0,000 and above Rs 4, 0,000). One possible explanation for this may be that persons with very high incomes may not be that 'hard pressed' to look for avenues for supplementing their income. It is not surprising to find that majority of the respondents (53.8%) were in the monthly income range of Rs 20,001-30,001. It is possible that many of them were able to meet their pressing family commitments and still had some amount for investing in stocks and shares. The relatively lesser number of respondents (38.6%) are in the monthly income bracket of less than Rs 20,000 it may be attributable to the fact that perhaps such persons are just able to meet their other financial commitments. Many of them may be wishing for additional income (through such avenues) but may not be able to save much money for such activities. It would be interesting to see whether the Table 6.1.4 is also can present a departure from the overall trend when the individual cities are considered. At first glance itself, one can notice that the previous trend of the maximum number of respondents belonging to the Rs 20,001-30,000 (followed by the below Rs 20,000) in the case of individual cities as well.

### 6.1.5 Educational Background of the Respondents

The level of education of a person may have a major impact on the degree of awareness of a person. For a totally illiterate person, issues like stocks and shares may sound very confusing. For such persons, lesser interest in the share market may be due to 'fear of the unknown'. The Table 6.1.5 gives an idea of how the educational background of the respondents impacted their share market behavior. After surveying the overall educational distribution of the respondents, it would be

of interest to see from the table below if the same pattern could be seen in the individual cities as well

**Table 6.1.5: City-Wise Educational Classification of the Respondents**

| City | Educational Background | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | Professional Course | Postgraduate | Graduate | Intermediate | SSC | Others | |
| Hyderabad | 22(13.2%) | 59(35.3%) | 71(42.5%) | 11(6.6%) | 2 1.2%) | 2(1.2%) | 167(100%) |
| Mumbai | 19(11.4%) | 92(55.1%) | 43(25.7%) | 13(7.8%) | 0(0.0%) | 0(0.0%) | 167(100%) |
| Gangtok | 11(15.1%) | 29(39.7%) | 31(42.5%) | 2(2.7%) | 0(0.0%) | 0(0.0%) | 73(100%) |
| Total | 52(12.8%) | 180(44.2%) | 145(35.6%) | 26(6.4%) | 2(0.5%) | 2(0.5%) | 407(100%) |

The most noticeable factor is that as one proceeds upwards from SSC to the PG level, there was a significant increase in the number of respondents. For instance, as against only 2 ‘SSC’ respondents, there were 180 PG respondents. This, by and large, confirms the surmise that a higher level of education can also entail a greater degree of awareness of several issues, including the share market. It may also not be totally incorrect to state that a higher education qualification may open up more employment opportunities (and the resultant higher income!) No wonder, the majority of respondents were PGs (44.2%), closely followed by graduates (35.6%). One possible explanation for the relatively lesser number of respondents with professional qualifications could be their being very much tied up in their professional activities and not having much time and inclination to dabble in share market activities. The tendency of Post Graduates, followed by graduates, showing the maximum interest (overall) in the share market can be seen. However, one glaring fact noticed was that in both Hyderabad and Gangtok, the proportion of graduate respondents was more than that of Post Graduate ones. This trend was totally ‘reversed’ in Mumbai, where the number of PG respondents was more than double that of their graduate counterparts. It was this wide gap that contributed to the overall PG respondents (44.2%) being more than that of graduates (35.6%).

### 6.1.6 Professional Status of the Respondents

A person's profession can have two major implications for him/her. One, it could determine the salary (and the possible disposable income). Two, it could condition his/her degree of interest in extra income generating activities (including investing in stocks and shares). Also, some private sector companies are providing the stock options to their employees. Respondents of this category should logically have a greater degree of interest in the share market. In the case of an educational category, it has already been shown that Mumbai presented a totally different trend from that of the other two cities. The Table 6.1.6 should confirm or refute the same tendency in the case of professions and should give an idea of the impact of nature, of the organisation where employed on the investment behaviour of the respondents.

**Table 6.1.6: City-Wise Classification of Profession of the Respondents**

| City | | Hyderabad | Mumbai | Gangtok | Total |
|---|---|---|---|---|---|
| Profession | Government Employee | 16 | 27 | 9 | 52 |
| | | 9.6 | 16.2 | 12.3 | 12.8 |
| | Private Employee | 87 | 68 | 32 | 187 |
| | | 52.1 | 40.7 | 43.8 | 45.9 |
| | Self Employed | 32 | 40 | 18 | 90 |
| | | 19.2 | 24 | 24.7 | 22.1 |
| | Housewife | 11 | 26 | 8 | 45 |
| | | 6.6 | 15.6 | 11 | 11 |
| | Student | 14 | 6 | 4 | 24 |
| | | 8.4 | 3.6 | 5.5 | 5.9 |
| | Others | 7 | 0 | 2 | 9 |
| | | 4.24. | 0 | 2.7 | 2.2 |
| Total | | 167 | 167 | 73 | 407 |
| | | 100 | 100 | 100 | 100 |

The surmise that private sector employees should have a greater degree of interest in the share market is borne out by the fact that the largest proportion (45.9%) of the respondents was employed in the private sector. This was followed by self-employed persons (22.1%) and government employees (12.8%). Since it has already been brought out that females have a lesser degree of interest in the share market, the lesser proportion of housewives (11.1%) is understandable. It is not surprising to find students having an almost negligible presence (2.2%) since most of

them would not be having an independent income. It emerges that the trend of a maximum number of respondents being from the private sector, followed by self-employed ones and government employees was continued in the individual cities as well. However, one cannot totally ignore the highly noticeable number of housewives (15.6% in Mumbai and 11.0% in Gangtok) among the respondents. This suggests that housewives are not totally isolated from the share market.

### 6.1.7 Nature of Share Market Activity of the Respondents

Two major 'clients' of the share market are investors (who purchase a limited number of shares of some companies for a reasonable period and watch the developments) and traders (who keep on buying and selling shares, depending on the market trends). There may also be persons who are both investors and clients. An examination of the overall share market activity showed that the proportion of investors was more than that of those performing both roles. The table 6.1.7 gives an idea whether the same tendency could be seen in the individual cities as well and should give an idea of the category to which the respondents belonged.

**Table 6.1.7: City-Wise Classification of Nature of Share Market Activity of the Respondents**

| City | Nature of Share Market Activity | | | Total |
|---|---|---|---|---|
| | Investor | Trader | Both | |
| Hyderabad | 67(40.1%) | 21(12.6%) | 79(47.3%) | 167(100%) |
| Mumbai | 107(64.1%) | 25(15.0%) | 35(21.0%) | 167(100%) |
| Gangtok | 46(63.0%) | 9(12.3%) | 18(24.7%) | 73(100%) |
| Total | 220(54.1%) | 55(13.5%) | 132(32.4%) | 407(100%) |

Participation in the share market can be a full-time activity for which many regular private sector and government employees may not have that much time. It was therefore not surprising to note that that the largest proportion of respondents (54.1%) reported that they were only investors. The proportion of respondents (32.4%) who were both investors and traders was more than that of those who were only traders (13.5%). It was rather surprising to note that while Mumbai and Gangtok had the largest proportion of investors, vis-à-vis the other two categories of

activities, Hyderabad had more investors-cum-traders (47.3%) as against 40.1% only investor.

### 6.1.8 Average Duration of Holding Securities

Investments in the share market do not always assure one of the immediate returns. The highly volatile share market can bring in a degree of uncertainty about the optimum time to sell one's shares.

**Table 6.1.8: City Wise Classification of Average Duration of Holding Securities**

**(In years)**

| Average Duration of Holding Securities | City | | | Total |
|---|---|---|---|---|
| | Hyderabad | Mumbai | Gangtok | |
| 1.00 | 21(12.6%) | 25(15.0%) | 8(11.0%) | 54(13.3%) |
| 1.25 | 1(0.6%) | 0(0.0%) | 0(0.0%) | 1(0.2%) |
| 2.00 | 35(21.0%) | 21(12.6%) | 12(16.4%) | 68(16.7%) |
| 2.25 | 1(0.6%) | 0(0.0%) | 0(0.0%) | 1(0.2%) |
| 2.50 | 1(0.6%) | 0(0.0%) | 0(0.0%) | 1(0.2%) |
| 3.00 | 52(31.1%) | 48(28.7%) | 16(21.9%) | 116(28.5%) |
| 3.25 | 1(0.6%) | 0(0.0%) | 0(0.0%) | 1(0.2%) |
| 3.50 | 1(0.6%) | 0(0.0%) | 0(0.0%) | 1(0.2%) |
| 4.00 | 33(19.8% | 45(26.9%) | 29(39.7%) | 107(26.3%) |
| 5.00 | 20(12.0%) | 22(13.2%) | 7(9.6%) | 49(12.0%) |
| 6.00 | 1(0.6%) | 6(3.6%) | 1(1.4%) | 8(2.0%) |
| Total | 167(100.0%) | 167(100.0%) | 73(100.0%) | 407(100.0%) |

The Table 6.1.8 presents the preferred average investment durations of the respondents and should confirm or refute whether respondents in the individual cities exhibited the same degree of preference for the investment durations.

The most popular average durations, in the order of priority, were found to be: 3 years (28.5%), 4 years (26.3%), 2 years (16.7%) 1 year (13.3%) and 5 years (12.0%). The other durations were almost insignificant. One could find a slight departure from the overall trends. The largest proportion of respondents in Hyderabad (31.1%) and Mumbai (28.7%) mentioned the duration of three years. However, in the case of Gangtok, this honor was garnered by the duration of four

years (39.7%). The proportion of investors (21.0%) opting for the investment duration of two years was quite noticeable in Hyderabad.

In the case of Mumbai, 26.9% of the respondents stated that they had invested for four years. All this points to the fact that investment decisions (including the period opted for) need not always be uniformly the same and that investors can have 'minds of their own'.

### 6.1.9 Shortest Period for which the Securities were Held

The share market is known for its high degree of volatility and that the share prices may rise or fall sharply. It is possible that many investors would not like to hold their shares for too long and may sell these on the apprehension that their value may fall steeply. The table 6.1.9 gives an idea of the minimum period for which respondents tended to hold their securities.

**Table 6.1.9: City-Wise Classification of the Shortest Period for which Securities were held**

| City | | Hyderabad | Mumbai | Gangtok | Total |
|---|---|---|---|---|---|
| **Shortest Period for which the Securities were held** | **Less than one year** | 100 (59.9%) | 60 (35.9%) | 27 (37.0%) | 187 (45.9%) |
| | **More than one year** | 67 (40.1%) | 107 (64.1%) | 46 (63.0%) | 220 (54.1%) |
| | Total | 167 (100%) | 167 (100%) | 73 (100%) | 407 (100%) |

It would be interesting to see whether a different pattern on the duration of holding securities could be found in the individual cities and The Table 6.1.9 provides some clarity on this issue. It could be seen that 54.1% of the respondents were holding securities for more than a year. This suggests that they were not impatient and were prepared to wait. Respondents in Hyderabad were found to exhibit a different trend than that of the other two cities and the overall pattern, since, here; a greater proportion (59.9%) stated that the shortest period for which they held securities was less than one year.

### 6.1.10 Longest Duration for which Securities were held

After ascertaining that the general trend regarding the shortest period for holding securities was for more than one year, it would be interesting to see what the

table 6.1.10 would reveal about the longest duration of which the respondents were holding securities.

**Table 6.1.10: City-wise Classification of Longest Duration of Holding Securities**

| Duration | City | | | Total |
|---|---|---|---|---|
| | Hyderabad | Mumbai | Gangtok | |
| 1.00 | 21(12.6%) | 25(15.0%) | 8(11.0%) | 54(13.3%) |
| 2.00 | 7(4.2%) | 2(1.2%) | 0(0.0%) | 9(2.2%) |
| 3.00 | 11(6.6%) | 8(4.8%) | 0(0.0%) | 19(4.7%) |
| 4.00 | 38(22.8%) | 42(25.1%) | 25(34.2%) | 105(25.8%) |
| 5.00 | 34(20.4%) | 43(25.7%) | 28(38.4%) | 105(25.8%) |
| 6.00 | 28(16.8%) | 31(18.6%) | 9(12.3%) | 68(16.7%) |
| 7.00 | 19(11.4%) | 9(5.4%) | 1(1.4%) | 29(7.1%) |
| 8.00 | 5(3.0%) | 5(3.0%) | 2(2.7%0 | 12(2.9%) |
| 9.00 | 4(2.4%) | 2(1.2%) | 0(0.0%) | 6(1.5%) |
| Total | 167(100.0%) | 167(100.0%) | 73(100.0%) | 407(100%) |

It can be seen that the most popular durations of the respondents were four and five years (each 25.8%), followed by six years (16.7%) and one year (13.3%). The other durations were relatively insignificant in number. It emerges that while four and five years were the most preferred investment durations, the relative 'importance' of these in Mumbai and Gangtok differed from the overall trend and that of Hyderabad (where the proportion of respondents preferring to invest for four years was higher). However, investment for six years was the most common third option of respondents in all the three cities. It would be interesting to see if any of the cities demonstrated a trend different from the above one. And the table 6.1.10 is also quite revealing on this issue.

### 6.1.11 Approximate Monthly Savings

Monthly savings of a person can provide a degree of disposable income for him/her. Those with an inclination towards shares can invest a part of this in the share market. The Table 6.1.11 can give an idea about this issue and may give an idea whether the above trend was continued in the case of individual cities also, or was a different tendency in one or two cities.

**Table 6.1.11: City-wise Classification of Monthly Savings of the Respondents**

| City | Percentage Approximately Saved Per Month | | | | | Total |
|---|---|---|---|---|---|---|
| | 1-10 | 11-20 | 21-30 | 31-40 | Above 40 | |
| Hyderabad | 21 (12.6%) | 61 (36.5%) | 47 (28.1%) | 27 (16.2%) | 11 (6.6%) | 167 (100%) |
| Mumbai | 6 (3.6%) | 50 (29.9%) | 79 (47.3%) | 28 (16.8%) | 4 (2.4%) | 167 (100%) |
| Gangtok | 2 (2.7%) | 30 (41.1%) | 22 (30.1%) | 14 (19.2%) | 5 (6.8%) | 73 (100%) |
| Total | 29 (7.1%) | 141 (34.6%) | 148 (36.4%) | 69 (17.0%) | 20 (4.9%) | 407 (100%) |

It was very encouraging to note that more than 70% of the respondents had monthly savings in the range of 11 to 30%. Also, 17.0% of them had savings in the range of 31-40%. Obviously, they invested a reasonable part of these savings in the share market. It could be seen that majority of the respondents having monthly savings in the 11-30% were found in the individual cities as well. Also, the 31-40%, the saving range was noticeable in these cities. Respondents of Mumbai (with 47.3%) seemed to have dominated the 21-30% savings range.

### 6.1.12 Portion of Savings Invested in Securities

The disposable income of a person can be put to a variety of uses like acquiring moveable/immovable assets, meeting the expenditure on social obligations like weddings or making investments (including the share market ones). The Table 6.1.12 reveals the degree of enthusiasm of the respondents towards ‘diverting' a part of their savings towards the share market, and reveals whether respondents in any of the individual cities ‘departed' from this trend.

**Table 6.1.12: City-wise Classification of Percentage of Savings Invested in Securities**

| City | Percentage of Savings Invested in Securities | | | | | Total |
|---|---|---|---|---|---|---|
| | 1-10 | 11-20 | 21-30 | 31-40 | Above 40 | |
| Hyderabad | 25(15.0%) | 42(25.1%) | 32(19.2%) | 25(15.0%) | 43(25.7%) | 167 (100%) |
| Mumbai | 18(10.8%) | 73(43.7%) | 48(28.7%) | 19(11.4%) | 9(5.4%) | 167 (100%) |
| Gangtok | 7(9.6%) | 27(37.0%) | 23(31.5%) | 8(11.0%) | 8(11.0%) | 73(100%) |
| Total | 50(12.3%) | 142(34.9%) | 103(25.3%0 | 52(12.8%) | 60(14.7%) | 407 (100%) |

The trend of monthly savings being mostly in the 11-30% range is also seen to be reflected in investment in securities as well, since more than 60% of the respondents confirmed on this issue. However, it is clear that higher savings do not necessarily entail a greater degree of investment in the share market. As already mentioned, the majority of the overall respondents stated that they were investing between 11 to 30% of their savings in securities the overall trend noticed above could be seen in the case of Mumbai and Gangtok. However, in Hyderabad, 25.7% of the respondents stated that they were investing above 40.0% of their savings in securities. This suggests that investors can take independent decisions on such issues and that the trend noticed in a few places may not be applicable 'universally'.

### 6.1.13 Duration of Investments by Respondent

The year 1996 was a landmark year since it saw the introduction of the depository system in the country. Earlier, the physical system was in vogue. The Table 6.1.13 reveals the extent to which the investment behaviour of the investors has been influenced after 1996.

**Table 6.1.13: City-wise Classification of Investment Period**

| City | Period as an Investor | | Total |
|---|---|---|---|
| | Before 1996 | After 1996 | |
| Hyderabad | 61(36.5%) | 106(63.5%) | 167(100%) |
| Mumbai | 46(27.5%) | 121(72.5%) | 167(100%) |
| Gangtok | 19(26.0%) | 54(72.5%) | 73(100%) |
| Total | 126(31.0%) | 281(69.0%) | 407(100%) |

Not surprisingly, more than 69.0% of the respondents mentioned that they had been investors from 1996 onwards. Obviously, the changes introduced in 1996 made stock market transactions more user-friendly.

It has already been established that overall, the changes introduced in 1996 triggered a lot of interest in the investors. The Table 6.1.13 is also depicts the impact on the individual cities. While the trend of a majority of the respondents being investors only after 1996, could be seen in the individual cities as well, it is noteworthy that the highest proportion (72.5%) of such investors was found in Mumbai and Gangtok, as against 63.5% in Hyderabad.

### 6.1.14 Functions Performed by the DP

The depository participants (DPs) can belong to various categories like stockbroker & DP, banker & DP, stock exchange & DP, NBFC & DP and just DP. The Table 6.1.14 can give us an idea of the functions performed by the respondents.

**Table 6.1.14: City-Wise Classification of Functions Being Performed by the DP**

| City | Functions Being Performed | | | | | Total |
|---|---|---|---|---|---|---|
| | Stock Broker and DP | Banker and DP | Stock Exchange and DP | NBFC and DP | DP only | |
| Hyderabad | 85 (50.9%) | 26 (15.6%) | 1 (0.6%) | 51 (30.5%) | 4 (2.4%) | 167 (100%) |
| Mumbai | 72 (43.1%) | 22 (13.2%) | 0 (0.0%) | 73 (43.7%) | 0 (0.0%) | 167 (100%) |
| Gangtok | 20 (27.4%) | 6 (8.2%) | 0 (0.0%) | 47 (64.4%) | 0 (0.0%) | 73 (100%) |
| Total | 177 (43.5%) | 54 (13.3%) | 1 (0.2%) | 171 (42.0%) | 4 (1.0%) | 407 (100%) |

It can be seen that the two most 'popular' functions of the respondents were stockbroker & DP (43.5%) and NBFC & DP (42.0%). After that, was that of Banker & DP (13.3%).The other functions were almost insignificant in number. The Table 6.1.14 should reveal whether the individual cities exhibited a trend different from what was found above. A very interesting finding was that while the respondents in Hyderabad seemed to be in sync with the overall trend (of the proportion of Stockbrokers & DP being the highest), in the case of Mumbai and Gangtok, respondents performing the roles of NBFC & DP were most in number.

The next 'popular role, i.e., of Banker & DP, could be found in the three cities. Also, in the individual cities, the proportion of respondents performing other roles was found to be almost insignificant.

### 6.1.15 Status of DEMAT Account

The DEMAT account can either be in the name of individual residents, NRIs or firms. The table 6.1.15 can give an idea on this issue.

It can be seen that the majority (95.1%) of the respondents was holding individual resident accounts. This was followed by NRI accounts (4.2%) and Firms (0.7%).The table 6.1.15 also reveals whether the overall trend of the overwhelming

number of respondents holding individual resident accounts DEMAT was there in the individual cities as well.

**Table 6.1.15: City Wise Classification by Type of DEMAT Account**

| City | Type of DEMAT Account | | | Total |
|---|---|---|---|---|
| | Individual Resident | NRI | Firms | |
| Hyderabad | 162(97.0%) | 5(3.0%) | 0(0.0%) | 167(100%) |
| Mumbai | 156(93.4%) | 9(5.4%) | 2(1.2%) | 167(100%) |
| Gangtok | 69(94.5%) | 3(4.1%) | 1(1.4%) | 73(100%) |
| Total | 387(95.1%) | 17(4.2%) | 3(0.7%) | 407(100%) |

It can be seen that the trend of individual resident accounts heavily outnumbered the other two categories in the individual cities as well.

### 6.1.16 the Most Preferred Attributes for Selection of DP

Investor decisions are influenced by factors like Safety, Accessibility, Image, Cost Structure, Quick Settlement and Personalized Attention. The table 6.1.16 depicts the perceptions of the respondents on this issue.

**Table 6.1.16: City-Wise Classification of the Most Preferred Attribute for DP**

| City | The Most Preferred Attribute For DP Selection | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | Safety | Accessibility | Image | Cost structure | Quick settlement | Personalised attention | |
| Hyderabad | 37(22.2%) | 35(21.0%) | 26(15.6%) | 28(16.8%) | 24(14.4%) | 17(10.2%) | 167(100%) |
| Mumbai | 8(4.8%) | 79(47.3%) | 17(10.2%) | 24(14.4%) | 19(11.4%) | 20(12.0%) | 167(100%) |
| Gangtok | 11(15.1%) | 28(38.4%) | 6(8.2%) | 14(19.2%) | 7(9.6%) | 7(9.6%) | 73(100%) |
| Total | 56(13.8%) | 142(34.9%) | 49(12.0%) | 66(16.2%) | 50(12.3%) | 44(10.8%) | 407(100%) |

Accessibility was found to be the most important consideration for the largest proportion of respondents (34.9%), followed by cost structure (16.2%), safety (13.8%), quick settlement (12.3%), image (12.0%) and personalised attention (10.8%). While the ‘Accessibility' factor was found to be quite dominant, the other considerations drew an almost equal weight.

The table 6.1.16 is also reveals whether respondents in the individual cities too tended to exhibit the same order of preference for the various attributes. Accessibility was found to be the most preferred consideration for respondents in Mumbai (47.3%) and Gangtok (38.4%), followed by cost structure (14.4% and 19.2% respectively) – in keeping with the overall trend. However, in the case of respondents in Hyderabad, safety (22.2%) and accessibility (21.0%) were found to be the two most important reasons. Interestingly, 'Image' and Quick Settlement' (15.6% and 14.4%, respectively) figured quite noticeably for respondents in Hyderabad.

### 6.1.17 Reasons for Choosing Specific Institutions for Opening DEMAT Accounts

With so much of cut-throat competition in the market, the potential investors have many choices before them when deciding the institution in which to open the DEMAT account. The table 6.1.17 can reveal the reasons for opting for a particular institution.

**Table 6.1.17: City-wise Classification of Reasons for Choosing Specific Institutions**

| Reason for opening DEMAT Account | City | | | Total |
|---|---|---|---|---|
| | Hyderabad | Mumbai | Gangtok | |
| Past Dealing with Bank | 5 (3.0%) | 8 (4.8%) | 4 (5.5%) | 17 (4.2%) |
| Low Maintenance Charges | 61 (36.5%) | 67 (40.1%) | 37 (50.7%) | 165 (40.5%) |
| Friends Recommendation | 20 (12.0%) | 33 (19.8%) | 12 (16.4%) | 65 (16.0%) |
| Better Services | 18 (10.8%) | 7 (4.2%) | 3 (4.1%) | 28 (6.9%) |
| Easy Accessibility | 35 (21.0%) | 38 (22.8%) | 15 (20.5%) | 88 (21.6%) |
| Multiple Reasons | 27 (16.2%) | 14 (8.4%) | 2 (2.7%) | 43 (10.6%) |
| Security and Confidentiality | 1 (0.6%) | 0 (0.0%) | 0 (0.0%) | 1 (0.2%) |
| Total | 167 (100.0%) | 167 (100.0%) | 73 (100.0%) | 407 (100.0%) |

The three most prominent reasons were found to be: low maintenance charges (40.5%), easy accessibility (21.6%) and recommendations from friends (16.0%). Another interesting option was 'Multiple reasons (10.6%). Enigmatically,

better services (6.9%), past dealings with the bank (4.2%) and 'security and confidentiality (0.2%) figured very low in the list of reasons.

The Table 6.1.17 is also reveal whether the individual cities had the same trend of reasons, or was any variations to be found. Respondents in all the three cities were in sync with the overall trend regarding the first two reasons in the same order of priority. However, there was a degree of disagreement between the respondents of Hyderabad and those of the other two as regards the third most popular option. In Hyderabad, it was 'Multiple Reasons', whereas, it was 'Recommendation of friends. Also, 'Better Services' garnered a reasonable degree of support in Hyderabad (10.8%); it was not a very high priority consideration in the other two cities.

### 6.1.18 Preferred Investment Avenues of the Respondents

Persons with disposable income have before them some options on how to utilise such funds, whether in shares, debentures, mutual funds, gold or others. The table 6.1.18 depicts the preferred investment options of the respondents.

**Table 6.1.18: City-wise Classification of Investment Avenues of the Respondents**

| **Investment Avenue** | **City** | | | **Percent** |
|---|---|---|---|---|
| | Hyderabad | Mumbai | Gangtok | |
| **Shares** | 163(97.6%) | 159(95.2%) | 70(95.9%) | 392(96.3%) |
| **Debentures** | 2(1.2%) | 3(1.8%) | 0(0.0%) | 5(1.2%) |
| **Mutual Funds** | 1(0.6%) | 4(2.4%) | 3(4.1%) | 8(2.0%) |
| **Gold** | 1(0.6%) | 0(0.0%) | 0(0.0%) | 1(0.2%) |
| **Others** | 0(0.0%) | 1(0.6%) | 0(0.0%) | 1(0.2%) |
| Total | 167(100.0%) | 167(100.0%) | 73(100.0%) | 407(100%) |

It could be seen that shares were the most preferred option for an overwhelming proportion of the respondents (96.3%). Contrary to the common perception that Indians are obsessed with acquiring gold, here, only 0.2% of the respondents chose this investment option. Even otherwise, the proportion of other investment options was almost insignificant.

The table 6.1.18 is also clearly brought out the fact that investment in shares was the most preferred option for the respondents. It would be interesting to see

whether respondents in the individual cities too demonstrated the same trend. As a departure from some of the earlier cases, where respondents in some of the individual cities differed from the overall trend, here, investment behavior in the individual cities was almost in sync with that of the overall behavior.

### 6.1.19 Type of Markets in which Respondents were Investing

Today, investors have the option of investing in the primary, or secondary market, or both. The Table 6.1.19 reveals the preference of the respondents.

It can be seen that investment in the primary market alone was the least preferred option for the respondents. The tendency was found to play safe and invest in both types of markets (76.7%). The secondary market option was found to be a distant second (20.4%).

**Table 6.1.19: City-wise Classification of the Investor's Investments in Markets**

| City | Where Do You Invest | | | Total |
|---|---|---|---|---|
| | Primary Market | Secondary Market | Both | |
| Hyderabad | 5(3.0%) | 50(29.9%) | 112(67.1%) | 167(100%) |
| Mumbai | 7(4.2%) | 20(12.0%) | 140(83.8%) | 167(100%) |
| Gangtok | 0(0.0%) | 13(17.8%) | 60(82.2%) | 73(100%) |
| Total | 12(2.9%) | 83(20.4%) | 312(76.7%) | 407(100%) |

The table 6.1.20 is also gives an idea whether respondents in the individual cities were following the overall trend of giving the highest preference for both types of markets and the least for primary markets, or whether there was any departure from that in any city. It could be seen that respondents in all the three cities 'agreed' with the overall trend.

### 6.1.20 Frequency of Buying and Selling Shares

The high degree of volatility of the share market – with the sudden and unpredictable highs and lows in share prices may have impacted the periodicity of share trading by many investors. The Table 6.1.20 may be quite illuminating on this score. It can be seen that the respondents have been rather impatient since a relatively small proportion of them mentioned periods more than once in a quarter.

The preferred options, in order of priority, were: once in a week (49.4%), daily (35.6%) and once in a month (10.6%).

**Table 6.1.20: City-wise Classification of Frequency of Buying and Selling Shares**

| Periodicity | City | | | Total |
|---|---|---|---|---|
| | Hyderabad | Mumbai | Gangtok | |
| Daily | 93(55.7%) | 43(25.7%) | 9(12.3%) | 145(35.6%) |
| Once in a Week | 52(31.1%) | 94(56.3%) | 55(75.3%) | 201(49.4%) |
| Once in a Month | 11(6.6%) | 24(14.4%) | 8(11.0%) | 43(10.6%) |
| Once in a Quarter | 1(0.6%) | 1(0.6%) | 1(1.4%) | 3(0.7%) |
| Once in 6 Months | 1(0.6%) | 3(1.8%) | 0(0.0%) | 4(1.0%) |
| Once in a Year | 1(1.2%) | 3(1.2%) | 0(0.0%) | 4(1.0%) |
| Not Normally | 7(4.2%) | 0(0.0%) | 0(0.0%) | 7(1.7%) |
| Total | 167(100.0%) | 167(100.0%) | 73(100.0%) | 407(100%) |

It would be of interest to see whether respondents in the individual cities had different periodicities for trading in shares. The largest proportion of respondents in Mumbai (56.3%) and Gangtok (75.3%) were in sync with the overall tendency of trading once in a week. By contrast, the largest proportion in Hyderabad (55.7%) was more inclined towards trading on a daily basis. The third most preferred option of trading once in a month could be seen in the case of the three cities.

### 6.1.21 Number of DEMAT Accounts Held

The number of DEMAT accounts held by a person may be conditioned by factors like the amount of disposable income and the tendency of not 'putting all eggs in the same basket." The table 6.1.21 gives some clarity on this issue.

**Table 6.1.21: City-wise Classification of Number of DEMAT Accounts held by the Respondents**

| City | Number of DEMAT Accounts Held | | | Total |
|---|---|---|---|---|
| | 1 | 2 | 3-5 | |
| Hyderabad | 132(79.0%) | 33(19.8%) | 2(1.2%) | 167(100%) |
| Mumbai | 87(52.1%) | 75(44.9%) | 5(3.0%) | 167(100%) |
| Gangtok | 48(65.8%) | 20(27.4%) | 5(6.8%) | 73(100%) |
| Total | 267(65.6%) | 128(31.4%) | 12(2.9%) | 407(100%) |

It is obvious that the majority of the respondents (65.6%) were content with having only one DEMAT account. This was followed by those with two such accounts (31.4%). Very few respondents mentioned that they had more than three DEMAT accounts.

It is seen that the respondents are content with one DEMAT account only, followed by slightly less than half of them having two such accounts. It would be of interest to see whether respondents in some of the individual cities departed from this trend. The Table 6.1.21 is also gives an idea on this issue. While the preferred number of accounts, in order of priority, continued to be one, followed by two, one cannot totally ignore the highly noticeable number of respondents in Mumbai (44.9%) who stated that they had two DEMAT accounts.

### 6.1.22 Age of the DEMAT Account

Investors have been holding DEMAT accounts for varying periods, ranging from less than one year to more than seven years. The table 6.1.22 gives an idea of the general vintage of these accounts.

It can be seen that the majority of the respondents (40.0%) were holding DEMAT accounts for more than seven years. This was followed by one to three years (23.1%), three to five years (18.4%) and five to seven years (12.8%). The least proportion (5.7%) was found to belong to the less than one-year category.

**Table 6.1.22: City Wise Classification of Experience of DEMAT Account with DP**

| City | Age of Your DEMAT Account with the DP | | | | | Total |
|---|---|---|---|---|---|---|
| | Less Than 1 Years | 1-3years | 3-5 | 5-7 | Above 7 Years | |
| Hyderabad | 9(5.4%) | 41(24.6%) | 20(12.0%) | 21(12.6%) | 76(45.5%) | 167(100%) |
| Mumbai | 12(7.2%) | 30(18.0%) | 36(21.6%) | 20(12.0%) | 69(41.3%) | 167(100%) |
| Gangtok | 2(2.7%) | 23(31.5%) | 19(26.0%) | 11(15.1%) | 18(24.7%) | 73(100%) |
| Total | 23(5.7%) | 94(23.1%) | 75(18.4%) | 52(12.8%) | 163(40.0%) | 407(100%) |

After seeing the preferred vintage of DEMAT accounts, the next issue would be to see whether the table 6.1.22 suggests whether there was any variation in the individual cities. It can be seen that respondents in Hyderabad and Mumbai ‘agreed with the overall trend of having the maximum respondents in the above seven years category. In the case of Gangtok, this ‘honor' was garnered by the one to the three-year range (31.5%). In all the three cities, the least number of respondents was found in the less than one year range. The one to three years range was quite pronounced in the case of Hyderabad as well, while the three to five years range was very noticeable in the case of Mumbai (21.6%) and Gangtok (26.0%).

### 6.1.23 Method of Trading

The method of trading of the investor is also helpful to analyse whether depository services were used by online or offline traders. Invariably it is expected that on line traders would deal more with the dematerialization and rematerialisation of depository services than off line traders.

The highest proportion of respondents (69.0%) stating that they were trading online, suggests the very high level of computer literacy among them. The noticeable proportion (30.2%) of respondents who mentioned that they were using the offline option may be due to their lesser degree of comfort level with computers.

The online trading option is adopted by investors who have a reasonable degree of computer literacy. The table 6.1.23is quite illuminating on this aspect.

**Table 6.1.23: City-wise Classification of Method of Trading by the Respondents**

| City | Method of Trading | | | Total |
|---|---|---|---|---|
| | Offline | Online | Both | |
| Hyderabad | 69(41.3%) | 96(57.5%) | 2(1.2%) | 167(100%) |
| Mumbai | 45(26.9%) | 121(72.5%) | 1(0.6%) | 167(100%) |
| Gangtok | 9(12.3%) | 64(87.7%) | 0(0.0%) | 73(100%) |
| Total | 123(30.2%) | 281(69.0%) | 3(0.7%) | 407(100%) |

While the online option was preferred by most respondents in all the three cities, it was rather amazingly to note that the largest proportion of respondents trading online was found in Gangtok (87.7%).

**SECTION II**

## 6.2 Liquidity and Profitability

This section explains the perceptions of the DEMAT account holders regarding liquidity and profitability, which are important considerations for a person for making investment decisions.

### 6.2.1 Liquidity position of the Respondents

The table 6.2.1 gives an idea of the liquidity position of the respondents after dematerialization of the securities and gives an idea whether respondents in the individual cities too were in sync with the overall trends.

According to responses the minor impact was found in the city of Hyderabad with 41.3% and it contributed about (44.7%) among the total respondents. The major impact was found in the city of Mumbai with 33.5% and it contributed to 27.3% among the total respondents. It can be inferred that overall 27.3% have informed that the liquidity position of the respondents have been impacted after of dematerilisation of securities.

**Table 6.2.1: City-wise Classification of Liquidity Position of the Respondents**

| City | Liquidity Position | | | | | Total |
|---|---|---|---|---|---|---|
| | No Impact | Minor Impact | Neutral | Moderate Impact | Major Impact | |
| Hyderabad | 17 (10.2%) | 69 (41.3%) | 24 (14.4%) | 11 (6.6%) | 46 (27.5%) | 167 (100%) |
| Mumbai | 3 (1.8%) | 79 (47.3%) | 14 (8.4%) | 15 (9.0%) | 56 (33.5%) | 167 (100%) |
| Gangtok | 6( 8.2%) | 34 (46.6%) | 18 (24.7%) | 6 (8.2%) | 9 (12.3%) | 73 (100%) |
| Total | 2 (6.4%) | 182 (44.7%) | 56 (13.8%) | 32 (7.9%) | 111 (27.3%) | 407 (100%) |

The majority of the respondents in the three cities were in sync with the overall pattern of mentioning "Minor Impact on their liquidity position. Also, while the next higher option in the case of Hyderabad and Mumbai was ‘Major Impact, this position was occupied by the ‘Neutral' responses in the case of Gangtok (24.7%).

### 6.2.2 Profitability experienced the Respondents

Investments in business ventures of this nature are primarily made with a profit motive. The Table 6.2.2 reveals the opinions of the respondents on this issue.

The respondents viewed that the major effect and minor effect was found in the city of Mumbai with 32.3% and 47.9% respectively. Among the total respondents, 21.9% stated that there was a major impact of depository system on profitability of respondents whereas the minor effect was 44.7 respectively.

**Table 6.2.2: City-wise Classification of Profitability of the Respondents**

| City | Profitability | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 36 (21.6%) | 68 (40.7%) | 29 (17.4%) | 8 (4.8%) | 26 (15.6%) | 167 (100%) |
| Mumbai | 3 (1.8%) | 80 (47.9%) | 15 (9.0%) | 15 (9.0%) | 54 (32.3%) | 167 (100%) |
| Gangtok | 6 (8.2%) | 34 (46.6%) | 18 (24.7%) | 6 (8.2%) | 9 (12.3%) | 73 (100%) |
| Total | 45 (11.1%) | 182 (44.7%) | 62 (15.2%) | 29 (7.1%) | 89 (21.9%) | 407 (100%) |

The table 6.2.2 is also reveals whether the overall trend was reflected in the individual cities as well. In all the three cities, the largest proportion of respondents stated that there was only a minor impact on their profitability. However, as a departure from the overall trend, the second position in the category of responses in respect of Hyderabad and Gangtok was occupied by the option 'Neutral'.

### 6.2.3 Costs to the Respondents before and after Dematerialization

The Table 6.2.3 reveals the overall impact on the respondents before and after dematerialization, and it would be interesting to see whether respondents in the individual cities showed the same orientation as the overall trend. The largest proportion of respondents (37.3%) mentioned that there was only a minor effect on them. This was followed by Major Effect (27.0%) and 'Neutral' (19.9%) responses. The other two responses were relatively lesser in number. Respondents in Hyderabad were found to differ from the overall trend of giving the highest ranking to 'Minor Effect', while those in Gangtok did not accord second priority to the response 'Major

Effect'. The proportion of 'neutral' responses was found to be rather low in Mumbai.

**Table 6.2.3: City-wise Cost to the Respondents before and After Dematerialisation**

| City | Cost | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 12 (7.2%) | 42 (25.1% | 46 (27.5%) | 20 (12.0%) | 47 (28.1%) | 167 (100%) |
| Mumbai | 3 (1.8%) | 80 (47.9% | 18 (10.8%) | 13 (7.8%) | 53 (31.7%) | 167 (100%) |
| Gangtok | 9 (12.3%) | 30 (41.1% | 17 (23.3%) | 7 (9.6%) | 10 (13.7%) | 73 (100%) |
| Total | 24 (5.9%) | 152 (37.3% | 81 (19.9%) | 40 (9.8%) | 110 (27.0%) | 407 (100%) |

### 6.2.4 Impact of Dematerialisation on Transparency in Transactions

In many transactions of this nature, there is always the issue whether these have been conducted in a transparent and 'above-board' manner. In the instant case, the issue is whether dematerialisation has brought in greater transparency. The Table 6.2.4 is quite revealing on this issue.

It is very comforting to note that the largest proportion of respondents (48.9%) agreed that dematerialisation has brought about a very significant increase in transparency and that hardly anyone replied, 'No Effect'. Those giving the responses 'Moderate Effect' and 'Neutral' were equal in number (17.0% each), followed by the response 'Minor Effect' (16.2%).

**Table 6.2.4: City-Wise Classification of Responses on Impact of Dematerialisation on Transparency in Transactions**

| City | Transparency | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 3 (1.8%) | 11 (6.6%) | 30 (18.0%) | 28 (16.8%) | 95 (56.9%) | 167 (100%) |
| Mumbai | 0 (0.0%) | 48 (28.7%) | 16 (9.6%) | 22 (13.2%) | 81 (48.5%) | 167 (100%) |
| Gangtok | 1 (1.4%) | 7 (9.6%) | 23 (31.5%) | 19 (26.0%) | 23 (31.5%) | 73 (100%) |
| Total | 4 (1.0%) | 66 (16.2%) | 699 (17.0%) | 69 (17.0%) | 199 (48.9%) | 407 (100%) |

The issue to be examined now is whether the Table 6.2.4 is also reveals about any variations in the three cities on this issue. It was only in Hyderabad and Mumbai that the largest proportion of respondents was in sync with the overall pattern of responses that transparency has significantly improved after dematerialisation. In contrast to the earlier pattern, the neutral responses were more in number than the 'Moderate effect' responses in the case of Hyderabad and Gangtok. Also, highly noticeable 28.7% respondents in Mumbai spoke that the new procedure had brought about only a minor effect on transparency.

### 6.2.5 Impact on Transaction Time

Any change in procedure can impact the time required for completing transactions. The Table 6.2.5 depicts the perceptions on this issue.

**Table 6.2.5: City-Wise Classification of Responses on Impact on Transaction Time after Dematerialisation**

| City | Transaction Time | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 0 | 9 (5.4%) | 27 (16.2%) | 39 (23.4%) | 92 (55.1%) | 167 (100%) |
| Mumbai | 0 | 23 (13.8%) | 26 (15.6%) | 28 (16.8%) | 90 (53.9%) | 167 (100%) |
| Gangtok | 0 | 3 (4.1%) | 22 (30.1%) | 22 (30.1%) | 26 (35.6%) | 73 (100%) |
| Total | 0 | 35 (8.6%) | 75 (18.4%) | 89 (21.9%) | 208 (51.1%) | 407 (100%) |

It is very encouraging to note that all the respondents agreed that dematerialisation had indeed reduced the transaction time. Even more remarkable was the fact that the largest proportion (51.1%) agreed the impact was a major one, followed by 'Moderate Effect' (21.9%) and Neutral (18.4%).

The table 6.2.5is also reveals whether the same trend could be found in the individual cities as well. While the largest proportion of respondents in all the three cities agreed that dematerialisation had a major impact on the transaction time, one cannot totally ignore the relatively lesser proportion in Gangtok (35.6%). Also, an equal number of respondents in this city gave 'Neutral' and 'Moderate Effect' responses. It is also to be noted that a noticeable proportion (13.8%) of respondents felt that there was only a moderate effect.

### 6.2.6 Impact on Safety (Security) due to Dematerialisation

Any investor would like his or her investments to be safe and secure. The Table 6.2.6 reveals the perception of the respondents regarding the security of their investments as a result of the introduction of the dematerialisation system.

It can be seen that the majority of the respondents (56.0%) agreed that dematerialisation had a major effect on the security of their investments, followed by those mentioning a moderate effect (20.6%), neutral (16.0%) and minor effect (6.9%). Hardly any respondent felt there was no effect.

**Table 6.2.6: City-wise Perceptions of Impact on Security due to Dematerialisation**

| City | Response | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 2 (1.2%) | 6 (3.6%) | 20 (12.0%) | 31 (18.6%) | 108 (64.7%) | 167 (100%) |
| Mumbai | 0 (0.0%) | 19 (11.4%) | 23 (13.8%) | 31 (18.6%) | 94 (56.3%) | 167 (100%) |
| Gangtok | 0 (0.0%) | 3 (4.1%) | 22 (30.1%) | 22 (30.1%) | 26 (35.6%) | 73 (100%) |
| Total | 2 (0.5%) | 28 (6.9%) | 65 (16.0%) | 84 (20.6%) | 228 (56.0%) | 407 (100%) |

The overall trend suggested that there was a very high degree of security of the investments of the respondents. The Table 6.2.6 helps in knowing if a similar pattern of enthusiasm can be found in the individual cities as well. While the largest proportion of respondents in the individual cities were in sync with the overall perception that dematerialisation has had a major impact on the security aspect, one needs to take note of the relatively lesser degree of agreement (only 35.6%) with this statement in Gangtok. At the same time, an equal proportion of respondents (30.1%) mentioned ‘Moderate Effect’, or was neutral.

### 6.2.7 Impact on Volume of Trading Activity in Securities after Introduction of the Depository System

It has already been brought out that the depository system has contributed to making the trading activity in the share market more streamlined and smoother. The table 6.2.7 gives an idea of the impact on the trading activity of the respondents.

**Table 6.2.7: Impact on Volume of Trading Activity in Securities after Introduction of the Depository System**

| City | Whether Trading Volume has Increased after Dematerialisation of Shares | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 6(3.6%) | 22(13.2%) | 36(21.6%) | 45(26.9%) | 58(34.7%) | 167(100.0%) |
| Mumbai | 0(0.0%) | 5(3.0%) | 21(12.6%) | 67(40.1%) | 74(44.3%) | 167(100.0%) |
| Gangtok | 0(0.0%) | 0(0.0%) | 10(13.7%) | 43(58.9%) | 20(27.4%) | 73(100.0%) |
| Total | 6(1.5%) | 27(6.6%) | 67(16.5%) | 155(38.1%) | 152(37.3%) | 407(100.0%) |

Most of the preceding analyses brought out that there had been a major impact in various areas after the depository system was introduced. However, in this case, it can be seen that the largest proportion (38.1%) of respondents opined that the new system had a moderate effect on the volume of their trading activities. This was closely followed by the number of respondents (37.3%) who spoke about a major impact on their trading activities.

### 6.2.8 Impact on the Inclination to Trade in Small Quantities of Securities as and when Desired after the Introduction of the Depository System

The earlier system of trading in securities did not provide for trading in small volumes in securities. The depository system, by contrast, facilitates even buying or selling of single shares. The table 6.2.8 gives an idea about the extent to which the respondents are availing of this new facility.

**Table 6.2.8: Impact on the Inclination of Trade in Small Quantities of Securities as and when Desired after the Introduction of the Depository System**

| City | Trade in Small Quantities of Securities as and when Desired after the Introduction of the Depository System | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 3(1.8%) | 12(7.2%) | 40(24.0%) | 49(29.3%) | 63(37.7%) | 167(100%) |
| Mumbai | 0(0.0%) | 0(0.0%) | 12(7.2%) | 67(40.1%) | 88(52.7%) | 167(100%) |
| Gangtok | 0(0.0%) | 0(0.0%) | 5(6.8%) | 32(43.8%) | 36(49.3%) | 73(100%) |
| Total | 3(0.7%) | 12(2.9%) | 57(14.0%) | 148(36.4%) | 187(45.9%) | 407(100%) |

The facility mentioned above seems to have very positively impacted the inclination of a majority of the respondents to trade even in small volumes as and when desired. This is evident from the proportion of responses - Major Effect (45.9%) and Moderate Effect (36.4%). However, one cannot totally ignore the noticeable proportion of respondents (14.0%) who chose to be neutral on this issue. The proportion of the other responses was almost negligible.

**Table 6.2.9 Inclination to Trade as and when Desired at a Chosen Price before Significant Movement in the Price**

| City | Whether Trading Volume has Increased after Dematerialisation of Shares. | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 4 (2.4%) | 15 (9.0%) | 38 (22.8%) | 44 (26.3%) | 66 (39.5%) | 167 (100%) |
| Mumbai | 0 (0.0%) | 1 (0.6%) | 10 (6.0%) | 67 (40.1%) | 89 (53.3%) | 167 (100%) |
| Gangtok | 0 (0.0%) | 0 (0.0%) | 6 (8.2%) | 31 (42.5%) | 36 (49.3%) | 73 (100%) |
| Total | 4 (1.0%) | 16 (3.9%) | 54 (13.3%) | 142 (34.9%) | 191 (46.9%) | 407 (100%) |

As in the previous case, the introduction of the depository system has certainly brought about a significant change in the trading behaviour of the investors. This is evident from the high proportion of responses – Major Effect (46.9%) and Moderate Effect (34.9%). Here too, the proportion of respondents (13.3%) who chose to be neutral cannot be totally ignored. Also, the number other responses were hardly noticeable.

### 6.2.9 Impact on Trading Volume of the Respondents after Dematerialisation of shares

It has already been mentioned that the new system has helped in making the share-trading activity smoother. The Table 6.2.10 reveals whether this had led to an increase in the trading volume of the respondents.

The trend noticed in the preceding few cases can be seen here too in that the proportion of respondents. 46.9% respondents agreed that there was a major increase in trading volume after dematerilisation of shares but 3.4% did not found any difference. About 34.6% found that there was a moderate effect. Due to dematerilisation, the investors found it easy to buy and sell shares without much waste of time.

**Table 6.2.10: City-wise Classification of Responses to Increase in Trading Volume after Dematerialisation of Shares**

| City | Whether Trading Volume has Increased after Dematerialisation of Shares. | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 3 (1.8%) | 13 (7.8%) | 41 (24.6%) | 47 (28.1%) | 63 (37.7%) | 167 (100%) |
| Mumbai | 0 (0.0%) | 1 (0.6%) | 11 (6.6%) | 63 (37.7%) | 92 (55.1%) | 167 (100%) |
| Gangtok | 0 (0.0%) | 0 (0.0%) | 6 (8.2%) | 31 (42.5%) | 36 (49.3%) | 73 (100%) |
| Total | 3 (0.7%) | 14 (3.4%) | 58 (14.3%) | 141 (34.6%) | 191 (46.9%) | 407 (100%) |

It would be interesting to see whether the overall trend noticed about the increase in trading activity was to be found in the individual cities as well. It could be seen that the overall pattern (about the priority of responses) was reflected in the individual cities as well. However, one cannot fail to notice the relatively low proportion (37.7%) of respondents in Hyderabad who stated that the fresh changes had a major effect on their trading behaviour. Also, the significantly higher proportion (24.6%) of respondents in Hyderabad who chose to be neutral cannot be lost sight of.

### 6.2.10 Change in Frequency of Trading Activity after Introduction of the Depository System

Another issue to be studied is whether the improvements brought about by the depository system have impacted the frequency of trading of the respondents. The Table 6.2.11 gives a better idea about this.

**Table 6.2.11: City-wise Classification of Responses about Change in Frequency Trading Activity after Introduction of the Depository System**

| City | Change in Trading Frequency after Introduction of the Depository System | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 1 (0.6%) | 18 (10.8%) | 35 (21.0%) | 51 (30.5%) | 62 (37.1%) | 167 (100%) |
| Mumbai | 0 (0.0) | 0(0.0%) | 12(7.2%) | 60(35.9%) | 95 (56.9%) | 167 (100%) |
| Gangtok | 0 (0.0%) | 0(0.0%) | 4(5.5%) | 34(46.6%) | 35 (47.9%) | 73 (100%) |
| Total | 1 (0.2%) | 18 (4.4%0 | 51 (12.5%0 | 145 (35.6%) | 192 (47.2%) | 407 (100%) |

The trend noticed in most of the immediately preceding cases, can be seen here too, since the proportion of respondents who mentioned that there was a significant improvement in their trading activity was much more than that of the other responses.

The neutral responses too were found to be quite noticeable it could be seen that respondents in all the three cities tended to follow the overall pattern regarding the priority accorded to the various options. Yet, one cannot totally ignore the relatively lesser proportion (37.1%) of respondents in Hyderabad who stated that the depository system had a major effect on the frequency of their trading activity. Also, the proportion of neutral responses (21.0%) was much above the overall figure of 12.5%.

### 6.2.11 Perceptions about Changes in Speed of Arbitrage Trading after Introduction of the Depository System

After reviewing the perceptions about various issues after the introduction of the depository system, the next issue of concern is about change in speed of arbitrage trading. The Table 6.2.12 will provide inputs regarding the same.

The pattern about the priority accorded to the various options, the noticeable proportion of neutral responses and the almost insignificant of the other two responses could be seen in this case as well.

**Table 6.2.12: City-wise Classification of Responses Regarding Speed of Arbitrage Trading after Introduction of the Depository System**

| City | Opinion about the Speed of arbitrage trading after the introduction of depository system. | | | | | Total |
|---|---|---|---|---|---|---|
| | No Effect | Minor Effect | Neutral | Moderate Effect | Major Effect | |
| Hyderabad | 1 (0.6%) | 15 (9.0%) | 34 (20.4%) | 49 (29.3%) | 68 (40.7%) | 167 (100%) |
| Mumbai | 0 (0.0%) | 0 (0.0%) | 9 (5.4%) | 62 (37.1%) | 96 (57.5%) | 167 (100%) |
| Gangtok | 0 (0.0%) | 0 (0.0%) | 4 (5.5%) | 34 (46.6%) | 35 (47.9%) | 73 (100%) |
| Total | 1 (0.2%) | 15 (3.7%) | 47 (11.5%) | 145 (35.6%0 | 199 (48.9%) | 407(100%) |

It would be interesting to see whether the pattern found in the earlier cases was reflected in the individual cities as well. In this case, too, the immediately

preceding pattern regarding the priority accorded to the various response options, the noticeable proportion of neutral responses and the almost insignificant number of other responses options was found here.

**SECTION III**

## 6.3 Convenience

This section explains the convenience of the DEMAT account holders with the depository system, the DEMAT account holders' convenience is also important for the depository services.

Any financial activity – be it banking, insurance or stock-trading – can be successful only if this is user-friendly. The discussion below will focus on some issues in this regard.

### 6.3.1 Number of days taken to open a DEMAT Account

Time, they say, is precious and no customer (including that of the share market) would want to wait indefinitely before his account is opened. The table 6.3.1 would provide some clarity about the number of days it took to open a DEMAT account.

**Table 6.3.1: City-wise Classification of Responses on Number of days taken to open a DEMAT Account**

| City | Number of days taken to open a DEMAT Account | | | | Total |
|---|---|---|---|---|---|
| | Less Than 1 Day | 1-2 Days | 2-5 Days | More Than 5 Days | |
| Hyderabad | 5(3.0%) | 20(12.0%) | 46(27.5%) | 96(57.5%) | 167(100%) |
| Mumbai | 1(0.6%) | 35(21.0%) | 57(34.1%) | 74(44.3%) | 167(100%) |
| Gangtok | 2(2.7%) | 13(17.8%) | 53(72.6%) | 5(6.8%) | 73(100%) |
| Total | 8(2.0%) | 68(16.7%) | 156(38.3%) | 175(43.0%) | 407(100%) |

It is rather sad that the system improvements noticed in many of the above cases could not be seen in the matter of the number of days taken to open a DEMAT account. In fact, the majority of respondents (43.3%) mentioned that this took more than five days. The next higher category (38.3%) mentioned two to five days. It was cold comfort to find that 16.7% of the respondents mentioned one to two days.

It would be interesting to analyse whether the class of the particular city could impact the number of days taken to open a DEMAT account. The Table 6.3.1 is also helps to draw some conclusions on this issue. A very interesting fact was noticed in the case of Gangtok, where the proportion of respondents who mentioned more than five days (6.8%) was much lesser than those who mentioned two to five days (72.6%) and one to two days (17.8%). This departure from the overall pattern (which was also found in Hyderabad and Mumbai) may be because Gangtok is a much smaller city and the concerned authorities there were more inclined to believe in the credentials of the potential clients.

### 6.3.2 Motivating Factors for Investment in Shares

A person with a reasonable disposable income can find a number of avenues for multiplying that income. Investment in shares could be one such means. The Table 6.3.2 presents the various motivating factors for their choosing this investment option. At first glance, one can draw the conclusion that the respondents are quite pragmatic since they have largely chosen options like Safety of Investment (26.8%), Capital Appreciation (26.3%) and Regular and Reasonable Return (23.3%). Hardly any respondent chose Gambling as the reason. However, a noticeable proportion (16.7%) is still mentioning speculation as for a reason for their investing in shares.

**Table 6.3.2: City-Wise Classification of Responses on Motivating Factors for Investment in Shares**

| City | Motivating Factor for Investing in Shares | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | |
| Hyderabad | 31 (18.6%) | 29 (17.4%) | 11 (6.6%) | 55 (32.9%) | 39 (23.4%) | 2 (1.2%) | 167 (100%) |
| Mumbai | 54 (32.3%) | 46 (27.5%) | 7 (4.2%) | 35 (21.0%) | 19 (11.4%) | 6 (3.6%) | 167 (100%) |
| Gangtok | 10 (13.7%) | 34 (46.6%) | 1 (1.4%) | 17 (23.3%) | 10 (13.7%) | 1 (1.4%) | 73 (100%) |
| Total | 95 (23.3%) | 109 (26.80%) | 19 (4.7%) | 107 (26.3%0 | 68 (16.7%) | 9 (2.2%) | 407 (100%) |

1= Regular and Reasonable Return, 2= Safety of Investment, 3=Liquidity, 4=Capital Appreciation, 5=Speculation, 6=Gambling

The Table 6.3.2 also reveals whether the respondents in the individual cities were as pragmatic as the overall respondents, or whether there were variations, if any, here. Safety of Investment was not found to be the topmost consideration of respondents in Hyderabad and Mumbai, even though it was that in Gangtok (46.6%). However, only 13.7% of the respondents in the last named city gave importance to

Regular and Reasonable Return. The highest proportion of respondents (32.9%) in Hyderabad mentioned Capital Appreciation as the reason for investing in shares. As regards speculation (as the reason for investing in shares), the proportion was highly noticeable in the respondents in Hyderabad. The conclusion that can be drawn is that the overall trend need not always be the same in the individual cities as well.

### 6.3.3 An institution with which DEMAT Account is Held

Potential investors have the option of holding a DEMAT account with NSDL, CDSL, or both. The Table 6.3.3 reveals the preferences of the respondents in this regard. The largest proportion of respondents (37.6%) was found to be holding the account with NSDL, followed by CDSL (33.4%) and both (29.0%).

**Table 6.3.3: City-Wise Classification of Responses Regarding Institution with which DEMAT Account is held**

| City | An institution with which DEMAT account is being held | | | Total |
|---|---|---|---|---|
| | NSDL | CDSL | NSDL & CDSL | |
| Hyderabad | 49(29.3%) | 38(22.8%) | 80(47.9%) | 167(100%) |
| Mumbai | 80(47.9%) | 60(35.9%) | 27(16.2%) | 167(100%) |
| Gangtok | 24(32.9%) | 38(52.1%) | 11(15.1%) | 73(100%) |
| Total | 153(37.6%) | 136(33.4%0 | 118(29.0%) | 407(100%) |

The Table 6.3.3is also revealing on whether the respondents in the individual cities were in sync with the overall trend. Respondents in Hyderabad were found to 'depart' significantly from the overall trend in that the largest proportion in that city (47.9%) stated that they were holding DEMAT accounts in both NSDL and CDSL. Another interesting conclusion that emerged was that the largest proportion (52.1%) of respondents in Gangtok mentioned that their DEMAT accounts were with CDSL.

### 6.3.4 Time Taken for Dematerialisation of Shares

With the introduction of the DEMAT system, it has become mandatory for physical shares to be converted into the electronic mode. The Table 6.3.4 depicts the responses regarding the time taken for such a conversion.

**Table 6.3.4: City-Wise classification of responses on the Time Taken for Dematerialisation of Shares**

| City | Time Taken for Dematerialisation of Shares | | | | Total |
|---|---|---|---|---|---|
| | 15 Days | 15-30 Days | 30-60 Days | More Than 60 Days | |
| Hyderabad | 16(9.6%) | 104(62.3%) | 42(25.1%) | 5(3.0%) | 167(100%) |
| Mumbai | 2(1.2%) | 99(59.3%) | 64(38.3%) | 2(1.2%) | 167(100%) |
| Gangtok | 0(0.0%) | 32(43.8%) | 39(53.4%) | 2(2.7%) | 73(100%) |
| Total | 18(4.4%) | 235(57.7%) | 145(35.6%) | 9(2.2%) | 407(100%) |

It was very encouraging to note that the proportion of respondents who mentioned that the conversion period took more than 60 days was almost insignificant. At the same time, one should not be unduly perturbed over the low proportion (4.40%) of respondents who spoke about a period of 15 days. It is possible that when the new system was introduced, the concerned officials were not very much aware of the procedural issues. The largest proportion of respondents (57.7%) mentioned a period of 15 to 30 days. This was followed by 30 to 60 days (35.60%).

The table 6.3.4 is also reveals whether respondents in the individual cities 'agreed' with the overall trend on this issue. It can be seen that the trend of most respondents reporting that it took them 15 to 30 days, (followed by 30 to 60 days) was seen in Hyderabad and Mumbai. However, in the case of Gangtok, the largest proportion mentioned 30 to 60 days. It also emerged that in Hyderabad 9.6% stated that this process took them 15 days.

### 6.3.5 Preferred Mode of making a Balance Enquiry

As in a normal commercial bank, one can make enquiries about the status of one's DEMAT account by making personal visits to the office of the company, using the online option, or utilise the telephone. The Table 6.3.5 should reveal the preferred mode in this regard.

**Table 6.3.5: City-Wise Classification of Responses on the Preferred Mode of Balance Enquiry**

| | Preferred Mode of Balance Enquiry | | | | Total |
|---|---|---|---|---|---|
| **City** | Visiting Office | Online Enquire | Telephone Enquiry | Others | |
| Hyderabad | 22(13.2%) | 129(77.2%) | 13(7.8%) | 3(1.8%) | 167(100%) |
| Mumbai | 26(15.6%) | 129(77.2%) | 10(6.0%) | 2(1.2%) | 167(100%) |
| Gangtok | 11(15.1%) | 62(84.9%) | 0(0.0%) | 0(0.0%) | 73(100%) |
| Total | 59(14.5%) | 320(78.6%) | 23(5.7%) | 5(1.2%0 | 407(100%) |

The online option was utilised by 78.6% of the respondents, followed by personal visits to the office (14.5%). The reason for the relatively low proportion (5.7%) of respondents using the telephone for this purpose could be that the slightly complex nature of such transactions may preclude the use of the phone by many respondents.

The Table 6.3.5 is also reveals whether respondents in the individual cities too had the same order of preference of options. The largest proportion of respondents in all the three cities was using the online enquiry mode – the figure was as high as 84.5% in Gangtok. In this case, too, the second preferred option was: visiting the office. Interestingly, none of the respondents in Gangtok used the telephone enquiry option.

### 6.3.6 Medium through which Respondents Learnt about DEMAT Services

Since the DEMAT services, when first introduced, were something new, the respondents must have learnt about these from some outside sources. The Table 6.3.6 gives an idea about the source in this regard.

Not surprisingly, the largest proportion of respondents (34.6%) learnt about the DEMAT service from brokers (obviously looking for new customers). The other three noticeable sources were relatives (32.9%), friends (15.0%) and the websites (11.1%). The other sources were hardly significant in number.

**Table 6.3.6: City-Wise Classification of Responses Regarding Medium through which Respondents Learnt About DEMAT Services**

| The medium through Which the Respondents Learnt about the DEMAT services | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **City** | Friend | Relative | Broker | Web site | Investor Education | Media | Others | **Total** |
| Hyderabad | 43 (25.7%) | 49 (29.3%) | 41 (24.6%) | 15 (9.0%) | 8 (4.8%) | 9 (5.4%) | 2 (1.2%) | 167 (100%) |
| Mumbai | 10 (6.0%) | 44 (26.3%) | 82 (49.1%) | 27 (16.2%) | 3 (1.8%) | 1 (0.6%) | 0 (0.0%) | 167 (100%) |
| Gangtok | 8 (11.0%) | 41 (56.2%) | 18 (24.7%) | 3 (4.1%) | 3 (4.1%) | 0 (0.0%) | 0 (0.0%) | 73 (100%) |
| Total | 61 (15.0%) | 134 (32.9%) | 141 (34.6%) | 45 (11.1%0 | 14 (3.4%) | 10 (2.5%) | 2 (0.5%) | 407 (100%) |

The Table 6.3.6 is also gives an idea whether the respondents in the individual cities followed the same order of preference regarding the source of awareness. At first glance itself, it can be seen that brokers were not the first preferred sources of respondents in Hyderabad and Gangtok. Here, relatives were found to be the most 'influential' sources. **The figure was as high as 56.2 % in Gangtok.** Respondents in Hyderabad 'relegated brokers (24.6%) to the third position – after relatives (29.3%) and friends (25.7%). A very significant feature found in Mumbai was the highly noticeable figure of 16.2% respondents who learnt about the DEMAT services from the websites.

### 6.3.7 Support for Multiple Depositories in India

The issue at stake here is whether one should rely on only one depository, or is prepared to support more than one depository. The Table 6.3.7 presents the perceptions of the respondents on this issue.

**Table 6.3.7: City-wise Classification of Responses on Support for Multiple Depositories in India**

| **City** | **Whether Supporting multiple depositories in India** | | **Total** |
|---|---|---|---|
| | Yes | No | |
| Hyderabad | 159(95.2%) | 8(4.8%) | 167(100%) |
| Mumbai | 167(100.0%) | 0(0.0%) | 167(100%) |
| Gangtok | 73(100.0%) | 0(0.0%) | 73(100%) |
| Total | 399(98.0%) | 8(2.0%) | 407(100%) |

An overwhelming proportion of respondents (98.0%) stated that they were in favour of multiple depositories in the country. The trend of overwhelming support

for multiple depositories in the country could be seen in the individual cities as well. However, what was remarkable was that all the respondents in Mumbai and Gangtok spoke in support of multiple depositories.

### 6.3.8 Awareness about Services being offered by the Depository System in India

The issue at stake here is whether persons are availing of depository services due to pressure or others (like friends, relatives or brokers) or are aware of these. The Table 6.3.8 gives an idea about this.

**Table 6.3.8: City-wise Classification of Responses on Awareness about Services Being Offered by the Depository System in India**

| City | Level of Awareness of Services Offered by the Depository System in India | | | | | Total |
|---|---|---|---|---|---|---|
| | Not At All Aware | Slightly Aware | Somewhat Aware | Moderately Aware | Fully Aware | |
| Hyderabad | 7(4.2%) | 22(13.2%) | 53(31.7%) | 48(28.7%) | 37(22.2%) | 167(100%) |
| Mumbai | 3(1.8%) | 5(3.0%) | 82(49.1%) | 66(39.5%) | 11(6.6%) | 167(100%) |
| Gangtok | 0(0.0%) | 4(5.5%) | 46(63.0%) | 21(28.8%) | 2(2.7%) | 73(100%) |
| Total | 10(2.5%) | 31(7.6%) | 181(44.5%) | 135(33.2%) | 50(12.3%) | 407(100%) |

It can be seen that the extreme responses ('Not at all Aware' and 'Fully Aware') are relatively lesser in proportion). The largest two proportions of responses were: 'Somewhat Aware (44.5%) and 'Moderately Aware (33.2%). It also emerged that 7.6% of the respondents were 'Slightly Aware'. The lesson that can be drawn from this is that there is a need for creating greater awareness among the potential investors so that the 'customer-base' could be increased significantly.

The table 6.3.8 is also depicts whether respondents in the individual cities were showing the same trend in the level of awareness as the overall figures suggest**.** It could be seen that the proportion of respondents who mentioned that they were 'Fully Aware' of the services being offered by the depository system was the highest in Hyderabad (22.8%). At the same time, the proportion of those who were 'Not at all aware' was the highest (4.2%) in this city. Interestingly, none of the respondents in Gangtok said that they were 'Not at all Aware' of these services. Also, the largest proportion of respondents in this city (63.0%) stated that they were 'Somewhat Aware'. The conclusion that can be drawn is that one cannot always assume that persons in smaller cities would be having lesser awareness about such issues.

### 6.3.9 Time gap between the Settlement and the Actual crediting of the Shares to the Account of the Respondents

One common complaint against Financial Institutions regards the undue procedural delays. The Table 6.3.9 indicates the perceptions of the respondents on this issue.

**Table 6.3.9: City-Wise Classification of Responses on Time Gap between the Settlement and the Actual Crediting of the Shares to the Account**

| | **Time gap between the Settlement and Crediting of the Dematerialised Shares to the Account** | | | | | | **Total** |
|---|---|---|---|---|---|---|---|
| **City** | Within 24 Hours | Within 48 Hours | Within 72 Hours | Within a Week | Within 15 Days | More Than 15 Days | |
| Hyderabad | 15 (9.0%) | 89 (53.3%) | 58 (34.7%) | 3 (1.8%) | 1 (0.6%) | 1 (0.6%) | 167 (100%) |
| Mumbai | 1 (0.6%) | 136 (81.4%) | 27 (16.2%) | 0 (0.0%) | 0 (0.0%) | 3 (1.8%) | 167 (100%) |
| Gangtok | 1 (1.4%) | 60 (82.2%) | 12 (16.4%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 73 (100%) |
| Total | 17 (4.2%) | 285 (70.0%) | 97 (23.8%) | 3 (0.7%) | 1 (0.2%) | 4 (1.0%) | 407 (100%) |

It was very heartening to note that hardly any respondent mentioned that the process took a week or more. The time periods mentioned by a majority of the respondents were ‘Within 48 hours’ (70.0%), followed by ‘Within 72 hours’ (23.8%). Thus, an undue time lag did not appear to be a big issue with most of the respondents.

The Table 6.3.9is also can tell us whether similar perceptions on this issue were found in the individual cities as well. Interestingly, the largest proportion (82.2%) of respondents in Gangtok reported that this process was completed within 48 hours. As regards the time gap of within 72 hours, the largest proportion was found in Hyderabad (34.7%). As in the case of overall trends, the other time periods were relatively few in all the three cities. The conclusion that can be drawn is that the entire process is reasonably streamlined now and customers do not have to wait for long periods to get the benefits credited to their accounts.

### 6.3.10 Frequency of Checking the Share-holding Position of the DEMAT Account by the Respondents

The Table 6.3.10 reveals the frequency at which the respondents check the share-holding position with the depository participant.

The three most favoured frequencies were found to be once in 15 days (58.0%), once in a month (22.9%) and daily (15.5%). The other frequencies were almost negligible. This suggests that the respondents were quite alert on this issue.

**Table 6.3.10: City-Wise Classification of Frequency of Checking the Share-holding Position of the DEMAT Account by the Respondents**

| City | Frequency of Checking the Share-holding Position of the DEMAT Account with the DP | | | | | | Total |
|---|---|---|---|---|---|---|---|
| | Daily | Once In a Week | Once In 15 Days | Once In a Month | Once In a Quarter | Once In 6 Months | |
| Hyderabad | 62 (37.1%) | 42 (25.1%) | 57 (34.1%) | 4 (2.4%) | 1 (0.6%) | 1 (0.6%) | 167 (100%) |
| Mumbai | 1 (0.6%) | 33 (19.8%) | 124 (74.3%) | 5 (3.0%) | 3 (1.8%) | 1 (0.6%) | 167 (100%) |
| Gangtok | 0 (0.0%) | 18 (24.7%) | 55 (75.3%) | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) | 73 (100%) |
| Total | 63 (15.5%) | 93 (22.9%) | 236 (58.0%) | 9 (2.2%) | 4 (1.0%) | 2 (0.5%) | 407 (100%) |

The Table 6.3.10 is also reveals whether the above-preferred pattern of frequency was found in the individual cities as well. Respondents in Hyderabad appeared to be the most restless since the largest proportion (37.1%) of them stated that they were checking the status of their accounts daily. On the other hand, the largest proportions of them in Mumbai and Gangtok were content with checking these once in 15 days. The second preferred option in these two cities was once in a week. This brings out that investor behaviour may not always be the same everywhere. As in the case of overall trends, the other frequencies were found to be almost insignificant in number in the three cities.

### 6.3.11 Transfer of DEMAT Account from one DP to Another

Such a course of action is resorted to when an investor is dissatisfied with the quality of service offered by the existing DP. The Table 6.3.11 helps to form an idea on this issue.

**Table 6.3.11: City-Wise Classification of Responses Regarding Transfer of DEMAT Account from one DP to Another**

| City | Whether the DEMAT Account was Transferred from one DP to Another | | Total |
|---|---|---|---|
| | Yes | No | |
| Hyderabad | 53(31.7%) | 114(68.3%) | 167(100%) |
| Mumbai | 55(32.9%) | 112(67.1%) | 167(100%) |
| Gangtok | 14(19.2%) | 59(80.8%) | 73(100%) |
| Total | 122(30.0%) | 285(70.0%) | 407(100%) |

A degree of comfort can be drawn from the fact that the majority (70.0%) of the respondents stated that they did not transfer their DEMAT account to a different DP. The Table 6.3.11 is also indicates whether the respondents in the individual cities too 'agreed' with the trend of overall responses. The fact that the larger proportion of respondents in all the three cities did not transfer their DEMAT accounts to a different DP suggests the relatively high degree of confidence that the respondents had in their existing DPs. Yet, one needs to take cognizance of the fact that 80.8% of the respondents in Gangtok did not transfer their DEMAT accounts to other DPs.

### 6.3.12 Usage of Internet Facility by DEMAT account Holders

Today, Internet is being put to a number of uses like exchanging messages, finding information and chatting. The Table 6.3.12 helps to know the purposes for which DEMAT account holders have been using the Internet.

**Table 6.3.12: City-Wise Classification of Responses on Use of Internet Facility**

| City | Internet facility Used for | | | | Total |
|---|---|---|---|---|---|
| | Checking Statement of Account | Checking Transaction Statement | Receipt of Instructions | Never Use the Internet | |
| Hyderabad | 80(47.9%) | 68(40.7%) | 14(8.4%) | 5(3.0%) | 167(100%) |
| Mumbai | 55(32.9%) | 96(57.5%) | 16(9.6%) | 0(0.0%) | 167(100%) |
| Gangtok | 36(49.3%) | 33(45.2%) | 4(5.5%) | 0(0.0%) | 73(100%) |
| Total | 171(42.0%) | 197(48.4%) | 34(8.4%) | 5(1.2%) | 407(100%) |

It is clear that the majority of the respondents were using the Internet for some or the other purpose. The most common purposes were 'Checking Transaction

Statements' (48.4%) and 'Checking Statement of Accounts' (42.0%), and 'Receipt of Instructions (8.4%).

The Table 6.3.12 is also reveals whether the above pattern was to be found in the individual cities as well. It can be seen that respondents in Hyderabad and Gangtok gave greater priority to checking their statement of accounts (47.9% and 49.3%, respectively) than to checking their transaction statements (40.7% and 45.2% respectively). This suggests that the Internet usage behaviour of the investors can vary from place to place.

### 6.3.13 Support for Round the Clock Depository Services

Round the clock services can ensure that the investors can transact the shares business 24/7. The Table 6.3.13 should reveal the level of enthusiasm of the respondents on this issue.

**Table 6.3.13: City-Wise Classification of Responses on Support for around the Clock Depository Services**

| City | The degree of Support for Depository Services Round the Clock | | | | | Total |
|---|---|---|---|---|---|---|
| | Strongly Agree | Agree | Undecided | Disagree | Strongly Disagree | |
| Hyderabad | 86(51.5%) | 48(28.7%) | 20(12.0%) | 7(4.2%) | 6(3.6%) | 167(100%) |
| Mumbai | 44(26.3%) | 98(58.7%) | 25(15.0%) | 0(0.0%) | 0(0.0%) | 167(100%) |
| Gangtok | 24(32.9%) | 45(61.6%) | 4(5.5%) | 0(0.0%) | 0(0.0%) | 73(100%) |
| Total | 154(37.8%) | 191(46.9%) | 49(12.0%) | 7(1.7%) | 6(1.5%) | 407(100%) |

It emerges that there was a positive orientation on this issue – 'Agree' (46.9%) plus 'Strongly agree' (37.8%). True, there was also a noticeable proportion (12.0%) of 'Undecided' responses, but then, the number of negatively oriented ones ('Disagree' plus 'Strongly Disagree') was almost negligible.

The Table 6.3.13also gives an idea whether respondents in the individual cities' agreed with' the overall pattern seen above. The proportion of respondents expressing strong support for round the clock depository services were found to be the highest in Hyderabad (51.5%). At the same time, while none of the respondents in Mumbai and Gangtok disagreed with this idea, the proportion of such respondents in Hyderabad was 3.6%). As regards the priority accorded to the degree of

agreement, the respondents in Mumbai and Gangtok were found to be in sync with the overall trend.

### 6.3.14 Problems faced by respondents with the Depository System

The depository system is one of a comparatively recent vintage. It would not be surprising if some of the investors were facing problems with this system. The Table 6.3.14 should be quite illuminating on this issue.

**Table 6.3.14: City-Wise Classification of Responses of Whether Problems were faced by the Depository System**

| Response | City | | | Total |
|---|---|---|---|---|
| | Hyderabad | Mumbai | Gangtok | |
| Yes | 155(92.8%) | 156(93.4%) | 56(76.7%) | 367(90.2%) |
| No | 12(7.2%) | 1(16.6%) | 17(23.3%) | 40(9.8%) |
| Total | 167(100.0%) | 167(100.0%) | 73(100.0%) | 407(100.0%) |

It is clear that the depository system has still not become totally foolproof and easily understandable since the larger proportion of respondents (88.7%) stated that they had problems with this system. While the majority of respondents in all the three cities mentioned that they were facing problems with the depository system, one cannot ignore the fact that the proportion was much less in Gangtok (only 76.6%). This may be because the depository participants in Gangtok were more responsive towards the problems highlighted to them by the investors.

**SECTION IV**

## 6.4 Investors' Satisfaction with Depository System

This section explains the DEMAT account holders opinion about the depository system in India.

### 6.4.1 Degree of Satisfaction with the Dematerialisation System

The DEMAT system has now been in operation in India for about 20 years. The Table 6.4.1 gives an idea about the degree of satisfaction of the respondents.

**Table 6.4.1:City-Wiise Classification of Responses on Degree of satisfaction**

| City | Degree of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 2(1.3%) | (3(1.9%) | 8(5.2%) | 12(7.7%) | 130(83.9%) | 155(100%) |
| Mumbai | 0(0.0%) | 0(0.0%) | 6(3.8%) | 15(9.6%) | 135(86.5%) | 156(100%) |
| Gangtok | 0(0.0%) | 0(0.0%) | 6(5.4%) | 15(16.1%) | 44(78.6%) | 56(100%) |
| Total | 2(0.5%) | 3(0.8%) | 17(4.6%) | 36(9.8%) | 309(84.2%) | 367(100%) |

It is very comforting to note the very high positive orientation of responses (Totally Satisfied, 84.2%; Very Satisfied, 9.8% and moderately satisfied, 4.6%). The other categories of responses were almost significant in number.

The Table 6.4 is also reveals whether the degree of enthusiasm noticed above was also present in the individual cities. It can be seen that the overall priority order regarding the degree of satisfaction was also found in the individual cities. However, the proportion of respondents in Gangtok who were totally satisfied was relatively lesser (78.6%), compared to over 83% in the other two cities.

### 6.4.2 Degree of Satisfaction with the Rematerialisation System

It has already been established that there was a high degree of satisfaction regarding the dematerialisation system. The Table 6.4.2 reveals the state of affairs regarding the Rematerialisation system.

**Table 6.4.2: City-Wise Classification of Responses on Degree of Satisfaction with the Rematerialisation System**

| City | Degree of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 5 (3.2%) | 47 (30.3%) | 27 (17.4%) | 9 (5.8%) | 67 (43.2%) | 155 (100.0%) |
| Mumbai | 0 (0.0%) | 0 (0.0%) | 6 (3.8%) | 15 (9.6%) | 135 (86.5%) | 156 (100.0%) |
| Gangtok | 0 (0.0%) | 0 (0.0%) | 3 (5.4%) | 10 (17.9%) | 43 (76.8%) | 56 (100.0%) |
| Total | 5 (1.4%) | 47 (12.8%) | 36 (9.8%) | 34 (9.3%) | 245 (66.8%) | 367 (100.0%) |

While the trend towards positive perceptions (Totally Satisfied, 66.8%; Very Satisfied, 9.3% and Moderately Satisfied, 9.8%) about this system could be seen here too, the degree was found to be relatively less.

It would be of interest whether respondents in the individual cities too had the same trend of perceptions regarding the Rematerialisation system. The Table 6.4.2 is also brings out this issue. At first glance itself, it can be seen that the proportion of respondents who were totally satisfied with this system was much more in Mumbai (86.5%) and Gangtok 76.8%) than in Hyderabad (43.2%). A similar situation was found in the case of respondents who were 'Very Satisfied'. The conclusion that can be drawn is that the quality of Rematerialisation was better in Mumbai and Gangtok than in Hyderabad.

### 6.4.3 Satisfaction with the Settlement Period

It has already been seen that the respondents (both overall and in the individual cities) had largely positive perceptions about the dematerialisation and Rematerialisation systems. The next issue of interest would be the position regarding the settlement period.

In this case too, the positively-oriented (Totally Satisfied, 67.6%; Very Satisfied, 14.2% and Moderately Satisfied, 12.5%) responses found to be predominant. In fact, no respondent reported that he/she was Not at all satisfied.

**Table 6.4.3**: **City-wise Classification of Responses Regarding the Settlement Period**

| | **Level of Satisfaction** | | | | | **Total** |
|---|---|---|---|---|---|---|
| **City** | Not At All Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 0 | 16(10.3%) | 32(20.6%) | 20(12.9%) | 87(56.1%) | 155(100%) |
| Mumbai | 0 | 2(1.3%) | 10(6.4%) | 18(11.5%) | 126(80.8%) | 156(100%) |
| Gangtok | 0 | 3(5.4%) | 4(7.1%) | 14(7.1%) | 35(25.0%) | 56(100%) |
| Total | 0 | 21(5.7%) | 46(12.5%) | 52(14.2%) | 248(67.6%) | 367(100%) |

The Table 6.4.3 is also reveals whether the above trend of perceptions was present in the individual cities as well. One cannot fail to notice perceptible variations in the degree of 'enthusiasm' in the individual cities. While 80.8% of the

respondents in Mumbai were 'Totally Satisfied', the corresponding figure for Gangtok was only 25.0%. Respondents in Hyderabad appeared to be more inclined towards the middle-level options (Very Satisfied plus Moderately Satisfied plus Slightly Satisfied) than those in the other two cities.

### 6.4.4 Safety of Securities

A major concern of many investors is the security of his investments. This includes safe-keeping and the confidentiality angle. The Table 6.4.4 reveals the perceptions of the respondents on this issue.

**Table 6.4.4: City-Wise Classification of Respondent's Satisfaction on the Safety Angle**

| | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| **City** | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 1(0.6%) | 37(23.9%) | 26(16.8%) | 22(14.2%) | 69(44.5%) | 155(100.0%) |
| Mumbai | 0(0.0%) | 66(42.3%) | 31(19.9%) | 11(7.1%) | 48(30.8%) | 156(100.0%) |
| Gangtok | 1(1.8%) | 22(39.3%) | 11(19.6%) | 10(17.9%) | 12(21.4%) | 56(100.0%) |
| Total | 2(0.5%) | 125(34.1%) | 68(18.5%) | 43(11.7%) | 129(35.1%) | 367(100.0%) |

The earlier trend of a definite orientation towards the positive perceptions cannot be seen in this case. Even though the highest proportion of respondents (35.1%) stated that they were Totally Satisfied, an almost equal proportion (34.1%) of respondents was only 'Slightly satisfied'. The middle-level degrees of satisfaction (Moderately satisfied, 18.5% and Very Satisfied, 11.7%) too were very noticeable.

Respondents in Gangtok appeared to be not very happy with this issue. This is evident from the least proportion of respondents who were totally satisfied (21.4%) and a very noticeable proportion (39.3%) who was only Slightly Satisfied. It appeared that the majority of the respondents in Hyderabad were having an overall positive perception on this issue (Totally Satisfied, 44.5%).

### 6.4.5 Attitude of Staff

The way the staff behaves with the customers can be a major determinant of the degree of satisfaction of the customers. The behaviour could include attending to

the work diligently and patiently replying to queries from the customers. The Table 6.4.5 gives an idea of the experience of the respondents on this issue.

**Table 6.4.5: City-Wise Classification of Responses on the Attitude of the Staff**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 5(3.2%) | 97(62.6%) | 36(23.2%) | 8(5.2%) | 9(5.8%) | 155(100%) |
| Mumbai | 3(1.9%) | 103(66.0%) | 31(19.9%) | 4(2.6%) | 15(9.6%) | 156(100%) |
| Gangtok | 2(3.6%) | 36(64.3%) | 15(26.8%) | 2(3.6%) | 1(1.8%) | 56(100%) |
| Total | 10(2.7%) | 236(64.3%) | 82(22.3%) | 14(3.8%) | 25(6.8%) | 367(100%) |

It was rather shocking to note that the proportion of positively inclined responses (Totally Satisfied, 6.8% plus Very Satisfied, 3.8%) was very less in this case. The respondents were more inclined towards the middle-level responses – Slightly Satisfied, 64.3% and Moderately Satisfied, 22.3%). The concerned depository participants need to make their personnel more responsive towards the needs of the customers so that more customers would be attracted.

The Table 6.4.5 is also helps to know whether respondents in the individual cities had similar perceptions about the attitude of the staff of the depository participants. In all the three cities, the largest proportions of respondents were found to be Slightly Satisfied (Hyderabad, 62.6%; Mumbai, 66.0% and Gangtok, 64.3%). This was followed by those who were moderately satisfied (Hyderabad, 23.2%, Mumbai, 19.9% and Gangtok, 26.8%). The lesson that could be drawn is that respondents in all the three cities did not have a very high opinion about the attitude of the staff of the depository participants.

### 6.4.6 Prompt and Timely Service

Rendering prompt and timely service can be a major plus point for any business venture. Many customers are hard-pressed for time and would not like to wait indefinitely before they are attended to. The table 6.4.6 depicts the perceptions of the respondents on this issue.

**Table 6.4.6**: **City-Wise Classification of Responses Regarding Timely Services by the Depository Participant**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 3(1.9%) | 73(47.1%) | 51(32.9%) | 12(7.7%) | 16(10.3%) | 155(100%) |
| Mumbai | 2(1.3%) | 83(53.2%) | 35(22.4%) | 8(5.1%) | 28(17.9%) | 156(100%) |
| Gangtok | 1(1.8%) | 35(62.5%) | 17(30.4%) | 2(3.6%) | 1(1.8%) | 56(100%) |
| Total | 6(1.6%) | 191(52.0%) | 103(28.1%) | 22(6.0%) | 45(12.3%) | 367(100%) |

Having seen that the majority of the respondents overall were only just about satisfied with the quality of timely services rendered by the DPs, the next issue would be to ascertain whether a similar trend was to be found in the individual cities as well. The table 6.4.6 is also helpful in this regard.

A noticeable proportion of respondents who were *Totally Satisfied* could be found in Hyderabad (10.3%) and Mumbai (17.9%). In, this case too, the largest numbers of respondents in all the three cities were inclined to show only an average level of satisfaction (Slightly Satisfied plus Moderately Satisfied). The concerned authorities need to impress on the staff the need for rendering prompt and timely service to the customers.

### 6.4.7 Satisfaction Regarding Cost of Transaction

Any business transaction brings in its wake certain costs like handling charges, maintenance charges and profit to the concerned organisation. The issue of concern here is whether the customers feel that these are cost-effective. The Table 6.4.7 provides more information on this issue. One cannot take much comfort from the fact that the lowest proportions of respondents (3.3%) were not at all satisfied with the cost angle. Of greater concern was the fact that the highest proportion of satisfaction tended to be just about average (Slightly Satisfied, 49.6% and Moderately Satisfied, 23.7%). Interestingly, 14.7% of the respondents were totally satisfied and 8.7%, Very Satisfied

**Table 6.4.7: City -Wise Classification of Responses Regarding Satisfaction Regarding Cost of Transaction.**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 7(4.5%) | 54(34.8%) | 39 (29.7%) | 26(16.8%) | 29(18.7%) | 155(100%) |
| Mumbai | 3(1.9%) | 89(57.1%) | 34(21.8%) | 5(3.2%) | 25(16.0%) | 156(100%) |
| Gangtok | 2(3.6%) | 39(69.6%) | 14(25.0%) | 1(1.8%) | 0(0.0%) | 56(100%) |
| Total | 12(3.3%) | 182(49.6%) | 87 (23.7%) | 32(8.7%) | 54(14.7%) | 367(100%) |

The Table 6.4.7 is also reveals whether there was any noticeable departure from the overall trend in the level of satisfaction on this issue. In the individual cities too, the degree of satisfaction in all the three cities was largely confined to the average levels (Slightly satisfied plus moderately satisfied. Interestingly, none of the respondents in Gangtok reported that he/she was Totally Satisfied on this issue. It was also noteworthy that 18.7% of the respondents in Hyderabad and 16.0%, in Mumbai, were Totally Satisfied on this issue.

### 6.4.8 Nomination Facility

This facility is provided for by financial Institutions to facilitate easy transfer of the benefits in the event of death, or infirmity, of the account holder. The Table 6.4.8 depicts the level of satisfaction of the respondents on this issue**.**

**Table 6.4.8: City -Wise Classification of Responses on Nomination Facility**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 2(1.3%) | 18(11.6%) | 21(13.5%) | 30(19.4%) | 84(54.2%) | 155(100%) |
| Mumbai | 0(0.0%) | 48(30.8%) | 26(16.7%) | 14(9.0%) | 68(43.6%) | 156(100%) |
| Gangtok | 0(0.0%) | 19(33.9%) | 11(19.6%) | 13(23.2%) | 13(23.2%) | 56(100%) |
| Total | 2(0.5%) | 85(23.2%) | 58(15.8%) | 57(15.5%) | 165(45.0%) | 367(100%) |

In this case too, one does not find much of an overwhelming trend in favour of any one option. Still, the positively inclined levels of satisfaction (Totally Satisfied, 45.0%, Moderately Satisfied, 15.8% and Very Satisfied, 15.5%) dominated the other levels.

The Table 6.4.8 is also reveals variations, if any, in the individual cities on this issue. It can be seen that the largest proportion of respondents who were Totally Satisfied (54.2%) were from Hyderabad, followed by Mumbai, with 43.6%. On the other hand, the corresponding figure in the case of Gangtok was only 23.2%. The conclusion drawn in the case of overall responses applies to the individual cities as well.

### 6.4.9 Timely Process of Depositing Securities

Timeliness is an important lifeline of any business venture (including that in the share market). The Table 6.4.9 gives an idea of the perceptions of the respondents on this issue.

**Table 6.4.9: City-Wise Classification of Responses Regarding Timely Processing of Depositing Securities**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 1(0.6%) | 11(7.1%) | 26(16.8%) | 42(27.1%) | 75(48.4%) | 155(100%) |
| Mumbai | 0(0.0%) | 12(7.7%) | 15(9.6%) | 19(12.2%) | 110(70.5%) | 156(100%) |
| Gangtok | 0(0.0%) | 7(12.5%) | 10(17.9%) | 19(33.9%) | 20(35.7%) | 56(100%) |
| Total | 1(0.3%) | 30(8.2%) | 51(13.9%) | 80(21.8%) | 205(55.9%) | 367(100%) |

It can be seen that the maximum orientation was towards the positively oriented responses (Totally Satisfied, 55.9%; Very Satisfied, 21.8%; Moderately Satisfied, 13.9% and Slightly Satisfied, 8.2%). This suggests a very high degree of satisfaction of the respondents on this issue.

The issue to be considered here is whether respondents in the individual cities too showed a similar degree of enthusiasm on this aspect. The table 6.4.9 should be very revealing. While the pattern of satisfaction levels is increasing significantly from option (1) to (5) was noticeable in all the three cities, one cannot ignore the

variation in the proportion of ‘Totally Satisfied' responses. This was the highest in Mumbai (70.5%) and the lowest in Gangtok (35.7%). However, Gangtok outscored the other two cities by having the highest proportion of responses in the ‘Very Satisfied' (33.9%) and ‘Moderately Satisfied' (17.9%) categories. This suggests that investors in various cities need not have a similar degree of satisfaction on a parameter.

### 6.4.10 Perceptions Regarding Availability of Trained Staff

An important confidence building measure of any organisation is its ability to convince the customers that its staff is adequately trained to perform their assigned duties. This training may be while on the job, or conducting training capsules for the fresh recruits before assigning them their duties. The Table 6.4.10 indicates the level of satisfaction of the respondents on this issue.

**Table 6.4.10: City-Wise Classification of Responses Regarding Availability of Trained Staff**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 3(1.9%) | 66(42.6%) | 21(13.5%) | 10(6.5%) | 55(35.5%) | 155(100%) |
| Mumbai | 1(0.6%) | 26(16.7%) | 17(10.9%) | 14(9.0%) | 98(62.8%) | 156(100%) |
| Gangtok | 1(1.8%) | 11(19.6%) | 5(8.9%) | 18(32.1%) | 21(37.5%) | 56(100%) |
| Total | 5(1.4%) | 103(28.1%) | 43(11.7%) | 42(11.4%) | 174(47.4%) | 367(100%) |

In, this case too, the proportion of ‘Totally Satisfied' respondents was the highest (47.4%). However, one cannot ignore the fact that 28.1% of them were only ‘Slightly satisfied'. It is not very comforting to note that a total of 23.1% of them were ‘Moderately satisfied' plus ‘Very satisfied'. The concerned organisations need to note that untrained staff for such complicated jobs can be liabilities for them.

The Table 6.4.10 is also reveals whether a similar type of perception existed in the individual cities as well. It can be seen that the largest proportion of respondents (62.8%) in Mumbai stated that they were ‘Totally Satisfied’. The largest proportion of respondents (42.6%) who said that they were ‘Slightly Satisfied’ was found in Hyderabad. The proportion of ‘Very Satisfied’ respondents (32.1%) was

seen in Gangtok. This makes it clear that perceptions of an issue need not be uniformly alike in all cities.

### 6.4.11 Level of Satisfaction Regarding T+2 and Rolling Settlement

The Table 6.4.11 indicates the degree of satisfaction regarding T+2 and Rolling Settlement. One could find a definite increase in the proportion of 'Totally Satisfied" responses, which was 62.9% in this case. One could also notice a perceptible increase in the proportion as one proceeded from Slightly Satisfied' to 'Totally Satisfied responses. This suggests that they were having a definite positive orientation regarding T+2 and Rolling Settlement.

The issue at stake here is whether a similar trend of enthusiasm could be found in the individual cities as well. The largest proportion of respondents in Mumbai (71.2%) said that they were 'Totally Satisfied' on this issue. In this category of responses, Gangtok, with 42.9%, was found to have the lowest proportion. However, the proportion of respondents who were 'Very Satisfied' was found to be the highest in Gangtok (37.5%). This suggests that a high or low in one city may not necessarily be so in another city.

**Table 6.4.11: City-Wise Classification of Responses on T+2 and Rolling Settlement**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 0 | 7(4.5%) | 24(15.5%) | 28(18.1%) | 96(61.9%) | 155(100%) |
| Mumbai | 0 | 6(3.8%) | 18(11.5%) | 21(13.5%) | 111(71.2%) | 156(100%) |
| Gangtok | 0 | 4(7.1%) | 7(12.5%) | 21(37.5%) | 24(42.9%) | 56(100%) |
| Total | 0 | 17(4.6%) | 49(13.4%) | 70(19.1%) | 231(62.9%) | 367(100%) |

### 6.4.12 Satisfaction Level regarding Remittances of Sales Proceeds

Remittance of sales proceeds to the accounts of the customers can have two dimensions – one, prompt action on this issue and two, crediting the proper amount. The Table 6.4.12 reveals the satisfaction level of the respondents on this issue.

**Table 6.4.12: City -Wise Classification of Responses regarding Remittance of Sale Proceeds**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 2(1.3%) | 0(0.0%) | 25(16.1%) | 39(25.2%) | 89(57.4%) | 155(100%) |
| Mumbai | 0(0.0%) | 1(0.6%) | 16(10.3%) | 26(16.7%) | 113(72.4%) | 156(100%) |
| Gangtok | 0(0.0%) | 2(3.6%) | 7(12.5%) | 22(39.3%) | 25(44.6%) | 56(100%) |
| Total | 2(0.5%) | 3(0.8%) | 48(13.1%) | 87(23.7%) | 227(61.9%) | 367(100%) |

It would be of interest to see whether the respondents in the individual cities too had a high opinion about the alacrity of their DP regarding remittance of the sales proceeds. A similar progressive increase in the satisfaction levels from (2) to (5) could be seen here also. However, one cannot ignore the fact that the highest proportion (72.4%) of respondents from Mumbai was 'Totally Satisfied'. The largest proportion of 'Very Satisfied' respondents (39.3%) was found in Gangtok. It is clear the DPs in Hyderabad and Gangtok need to work harder to enhance the satisfaction levels of their customers.

Here too, the majority of responses tended to be very positive 'Totally Satisfied, 61.9% and 'Very Satisfied, 23.7%), followed by 'Moderately Satisfied', 13.1%. The other responses were almost negligible in number. This speaks highly of the overall promptitude of the DPs in performing this task.

### 6.4.13 Perceptions on Repatriation of Sales Proceeds

This is another important function of the DPS. The Table 6.4.13 depicts the levels of satisfaction on this issue. The very high degree of positive feedback could be noticed here as well, since the highest proportion of respondents (67.3%) was 'Totally Satisfied', followed by 'Very Satisfied', 19.3%; 'Moderately Satisfied', 11.4% and 'Slightly Satisfied', 1.9%, in that order.

The Table 6.4.13 is also reveals whether a similar euphoria was found in the individual cities as well. Respondents in Mumbai (80.1%) and Gangtok (78.6%) were more inclined than those in Hyderabad (50.3%) to state that they were 'Totally satisfied'. Also, the second common option in Hyderabad was 'Moderately Satisfied' (24.5%), whereas it was 'Very Satisfied' in Mumbai (17.3%) and Gangtok

(21.4%). This suggests that DPs in Hyderabad need to really 'pull up their socks' to enhance the satisfaction levels of their customers.

**Table 6.4.13: City-Wise Classification of Responses Regarding Repatriation of Sale Proceeds**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 0 | 7(4.5%) | 38(24.5%) | 32(20.6%) | 78(50.3%) | 155(100%) |
| Mumbai | 0 | 0(0.0%) | 4(2.6%) | 27(17.3%) | 125(80.1%) | 156(100%) |
| Gangtok | 0 | 0(0.0%) | 0(0.0%) | 12(21.4%) | 44(78.6%) | 56(100%) |
| Total | 0 | 7(1.9%) | 42(11.4%) | 71(19.3%) | 247(67.3%) | 367(100%) |

### 6.4.14 Opening of DEMAT Account

This can be a rather unnerving experience for first-time investors, especially if the DPs are not cooperative and helpful. The Table 6.4.14 speaks about the experiences of the respondents on this issue. It can be seen that though the highly positively oriented responses ('Totally Satisfied', 60.8% and 'Very Satisfied', 14.7%) continued to be dominant, there were 7 respondents who were 'Not at all satisfied'. The concerned functionaries need to find out the reasons for such dissatisfaction so that such instances do not recur.

**Table 6.4.14: City -Wise Classification of Responses to Opening of DEMAT Account**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 7(4.5%) | 55(35.5%) | 19(12.3%) | 12(7.7%) | 62(40.0%) | 155(100%) |
| Mumbai | 0(0.0%) | 3(1.9%) | 5(3.2%) | 28(17.9%) | 120(76.9%) | 156(100%) |
| Gangtok | 0(0.0%) | 0(0.0%) | 1(1.8%) | 14(25.0%) | 41(73.2%) | 56(100%) |
| Total | 7(1.9%) | 58(15.8%) | 25(6.8%) | 54(14.7%) | 223(60.8%) | 367(100%) |

It would be of interest to see whether a similar type of perceptions could be found to be found in the individual cities as well. The Table 6.4.14 is also should reveal more on this issue. At first glance itself, it can be seen that relatively the respondents in Hyderabad had a lesser degree of satisfaction. This is evident from the least proportion (40.0%) of those who were 'Totally Satisfied' and the fact that

all the seven respondents who were 'Not at all satisfied' hailed from this city. On the other hand, respondents in Mumbai and Gangtok tended to exhibit almost similar levels of behaviour regarding most of the response options.

### 6.4.15 Opinions on Maintenance of Records in Electronic Form

The electronic form of record maintenance seeks to dispense with dealing with huge volumes of paper documents. Also, retrieval of information is faster. The only possible hitch can be when the power supply is suddenly interrupted, or when the 'server is down'. The Table 6.4.15 reveals the perceptions on this issue.

One can find a marginal dip in the proportion of 'Totally Satisfied' respondents. Here, the figure is 59.4%, followed by 18.0% for 'Very Satisfied' respondents. Another 'change' has been that the proportion of 'Slightly Satisfied' respondents (14.2%) is nearly double that of the 'Moderately Satisfied' ones (7.6%).

**Table 6.4.15: Maintenance of Records of Holdings in Electronic Form**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 3(1.9%) | 45(29.0%) | 20(12.9%) | 18(11.6%) | 69(44.5%) | 155(100%) |
| Mumbai | 0(0.0%) | 7(4.5%) | 7(4.5%) | 31(19.9%) | 111(71.2%) | 156(100%) |
| Gangtok | 0(0.0%) | 0(0.0%) | 1(1.8%) | 17(30.4%) | 38(67.9%) | 56(100%) |
| Total | 3(0.8%) | 52(14.2%) | 28(7.6%) | 66(18.0%) | 218(59.4%) | 367(100%) |

Also, there were three respondents who were 'Not at all satisfied' with the electronic form of record maintenance. The concerned administrators need to tone up their system to ensure a much higher degree of customer satisfaction on this issue.

### 6.4.16 City-Wise Classification of Responses on SMS Alert

This is a comparatively recent innovation that seeks to intimate the customers by SMS about credits or withdrawals in their accounts. The Table 6.4.16 gives an idea about the level of enthusiasm of the respondents about this facility.

**Table 6.4.16: City-Wise Classification of Responses on SMS Alerts**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 29(18.7) | 89(57.4%) | 13(8.4%) | 7(4.5%) | 17(11.0%) | 155(100%) |
| Mumbai | 5(3.2%) | 46(29.5%) | 21(13.5%) | 18(11.5%) | 66(42.3%) | 156(100%) |
| Gangtok | 1(1.8%) | 5(8.9%) | 6(10.7%) | 13(23.2%) | 31(55.4%) | 56(100%) |
| Total | 35(9.5) | 140(38.1%) | 40(10.9%) | 38(10.4%) | 114(31.1%) | 367(100%) |

It can be seen that the respondents were not too much impressed by this facility through their mobile phones. This is evident from the fact that the proportion of 'Totally Satisfied' respondents (31.1%) was lesser than those who were only 'Slightly satisfied (38.1%). Even more noteworthy was that close to 105 of the respondents were 'not at all satisfied'. Maybe, the DPS should present such alerts in a more customer friendly manner.

It has been established that the SMS alert is a very popular service for most of the respondents. It would be interesting to see whether the same perception could be found in the individual cities as well. The Table 6.4.16 should also help one to form an opinion on this issue. One cannot fail to notice the very high proportion (18.7%) of respondents in Hyderabad who were Not at all satisfied'. This city also had the highest proportion (57.4%) of 'Slightly Satisfied' respondents. On the other hand, a very significant proportion of 'Totally Satisfied' respondents could be seen in Mumbai (42.3%) and Gangtok (55.4%). As already mentioned, the DPs need to pay special attention to this aspect – especially in cities like Hyderabad.

### 6.4.17 Opinions on Account Opening Charge

When a fresh account is opened, there can be certain administrative and other expenses which are recovered from the concerned customers. The Table 6.4.17 would reveal the perceptions of the respondents on the account opening charges.

For once, the negatively-orientated responses nearly overwhelmed the positively inclined one. In fact, 65.1% of the respondents were only 'Slightly Satisfied', 21.1%, 'Not at all Satisfied' and 6.8%, 'Moderately Satisfied'. In comparison, the other two responses were almost insignificant in proportion. The

DPs need to consider bringing the account opening charges to more acceptable levels.

**Table 6.4.17: City -Wise Classification of Responses Regarding Account Opening Charge**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 28(18.1%) | 103(66.5%) | 12(7.7%) | 4(2.6%) | 8(5.2%) | 155(100%) |
| Mumbai | 17(10.9%) | 120(76.9%) | 9(5.8%) | 5(3.2%) | 5(3.2%) | 156(100%) |
| Gangtok | 34((60.7%) | 16(28.6%) | 4(7.1%) | 0(0.0%) | 2(3.6%) | 56(100%) |
| Total | 79(21.5%) | 239(65.1%) | 25(6.8%) | 9(2.5%) | 15(4.1%) | 367(100%) |

Since the above analysis brought out that the respondents seemed to be overwhelmingly ‘unhappy' regarding the account opening charges. It would be interesting to see whether the same degree of disagreement was reflected in the individual cities as well. The Table 6.4.17 is also would be helpful in forming an opinion on this issue. The trend towards dissatisfaction on this issue can be seen in the individual cities as well. In fact, 66.5 respondents in Hyderabad and 76.95 were only ‘Slightly Satisfied. At the same time, 60.9% of the respondents in Gangtok were ‘Not at all satisfied', and none of them was ‘Very Satisfied'. It can also be seen that the proportion of ‘Not at all satisfied' responses was more than that of either the ‘Very Satisfied' or ‘Totally Satisfied' ones in all the three cities. As already mentioned, the concerned authorities should consider reducing the charges in this regard to more acceptable levels.

### 6.4.18 Inter-Depository Instructions

It is possible that some investors have accounts in more than one DP. At times, a DP may have to interact with another DP. The Table 6.4.18 depicts the perceptions about the quality of interaction between the various DPs

**Table 6.4.18: City-Wise Classification of Responses on Inter-Depository Instructions**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 11(7.1%) | 60(38.7%) | 40(25.8%) | 14(9.0%) | 30(19.4%) | 155(100%) |
| Mumbai | 3(1.9%) | 85(54.5%) | 18(11.5%) | 15(9.6%) | 35(22.4%) | 156(100%) |
| Gangtok | 15(26.8%) | 19(33.9%) | 12(21.4%) | 4(7.1%) | 6(10.7%) | 56(100%) |
| Total | 29(7.9%) | 164(44.7%) | 70(19.1%) | 33(9.0%) | 71(19.3%) | 367(100%) |

Here also, the 'unhappy' nature of responses ('Not at all Satisfied, 7.9% plus 'Slightly Satisfied', 44.7%) outnumber the more positively oriented ones ('Very Satisfied', 9.0% plus 'Totally Satisfied', 19.3%). This suggests that there should be a better quality of communication between the various DPs.

The Table 6.4.18 should also reveal whether there was a difference (however marginal) in the perceptions on this issue in the individual cities. It can be seen that in all the three cities, the proportion of respondents who were only 'Slightly Satisfied' was more than that of any of the others. Interestingly, noticeable proportions of respondents in Hyderabad (19.4%), Mumbai (22.4%) and Gangtok (10.7%) stated that they were 'Totally Satisfied'. This suggests that the quality of performance of DPs was not uniform at all places.

### 6.4.19 Fast Disbursement of Non-Cash Corporate Benefits

The responsibilities of DPs also include disbursement of non-cash corporate benefits. The Table 6.4.19 reveals the perceptions of the respondents on the performance efficiency of the DPs.

One could not find a definite tilt in the responses on this on this issue. Still, the total of 'Not at all satisfied' (7.6%) and 'Slightly Satisfied' (34.1%) was found to be marginally higher than the total of 'Very Satisfied' (12.4%) and 'Totally Satisfied' (25.3%) responses. This suggests that the procedure needs to be substantially streamlined.

**Table 6.4.19: City-Wise Classification of Responses on Fast Disbursement of Non-Cash Corporate Benefits**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 8(5.2%) | 34(21.9%) | 42(27.1%) | 25(16.1%) | 46(29.7%) | 155(100%) |
| Mumbai | 3(1.9%) | 76(48.7%) | 19(12.2%) | 19(12.2%) | 39(25.0%) | 156(100%) |
| Gangtok | 17(30.4) | 15(26.8%) | 11(19.6%) | 5(8.9%) | 8(14.3%) | 56(100%) |
| Total | 28(7.6%) | 125(34.1%) | 72(19.6%) | 49(13.4%) | 93(25.3%) | 367(100%) |

The Table 6.4.19 is also helps one to find out whether the perceptions on this issue in the individual cities too were as per the overall trend. Respondents in Hyderabad appeared to have a more positive perception on this issue – 'Totally satisfied (29.7%) plus 'Very satisfied (16.1%) responses when compared to those in the other two cities. In Mumbai and Gangtok, the respondents were more inclined towards giving the more negatively oriented responses ('Not at all Satisfied' plus 'Slightly Satisfied'). The concerned authorities should devise means to ensure speedier disbursement of non-cash corporate benefits.

### 6.4.20 Tariff Structure

Customers of any financial service expect to find a reasonable tariff structure so that their investments could be cost-effective.

**Table 6.4.20: City-Wise Classification of Responses on Tariff Structure**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 26(16.8%) | 84(54.2%) | 25(16.1%) | 8(5.2%) | 12(7.7%) | 155(100%) |
| Mumbai | 22(14.1%) | 116(74.4%) | 11(7.1%) | 1(0.6%) | 6(3.8%) | 156(100%) |
| Gangtok | 37(66.1%) | 14(25.0%) | 2(3.6%) | 0(0.0%) | 3(5.4%) | 56(100%) |
| Total | 85(23.2%) | 214(58.3%) | 38(10.4%) | 9(2.5%) | 21(5.7%) | 367(100%) |

The Table 6.4.20 depicts the perceptions of the respondents on this issue. One could not a high proportion of dissatisfaction on this issue – 'Not at all Satisfied (23.2%) plus 'Slightly Satisfied' (58.3%). The 'enthusiastic' responses ('Very Satisfied' (2.5%) plus 'Totally satisfied' (5.7%) were relatively fewer in number. Hence, there is a definite need to make the tariff structure more rational.

The Table 6.4.20 is also reveals whether similar types of perceptions were found in the individual cities as well. A similar 'tilt' towards 'Not at all Satisfied' plus 'Slightly Satisfied' responses could be seen in the individual cities as well. As already mentioned, there is an urgent need for making the tariff structure more customer-friendly.

### 6.4.21 Transaction Statement

This is a document which can convince the investors that all transactions are being conducted in a transparent manner. The Table 6.4.21 helps one to form an opinion on this issue

One could notice a slightly negative orientation of the respondents on this issue. The total of 'Not at all satisfied' (5.7%) and 'Slightly Satisfied' (38.7%) was found to be more than the total of 'Very Satisfied' (11.7%) and 'Totally Satisfied (21.3%) responses. True, there was also a noticeable proportion (22.6%) of respondents who were 'Moderately Satisfied'. This suggests that both the quality and frequency of furnishing these documents to the investors need to be substantially improved.

**Table 6.4.21: City-Wise Classification of Responses to transaction statement**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 9(5.8%) | 49(31.6%) | 37(23.9%) | 24(15.5%) | 36(23.2%) | 155(100%) |
| Mumbai | 6(3.8%) | 76(48.7%) | 25(16.0%) | 14(9.0%) | 35(22.4%) | 156(100%) |
| Gangtok | 6(10.7%) | 17(30.4%) | 21(37.5%) | 5(8.9%) | 7(12.5%) | 56(100%) |
| Total | 21(5.7%) | 142(38.7%) | 83(22.6%) | 43(11.7%) | 78(21.3%) | 367(100%) |

The Table 6.4.21 is also reveals whether there was a change in the individual cities on this issue. In Hyderabad and Mumbai, the major proportion of respondents was only 'Slightly satisfied'. However, the proportion of 'Moderately Satisfied respondents was the highest (37.5%) in Gangtok. All this suggests that a lot of work need to be done by the DPs to bring the transaction statements to a much higher level – both regarding frequency and quality.

### 6.4.22 Conversion Period of Physical Shares to Electronic Form

Earlier, the shares were in the physical form. Now, with the introduction of the DEMAT system, these are all in the electronic form. Conversion of the existing shares in the electronic form could have taken some time. The Table 6.4.22 reveals the satisfaction levels of the respondents regarding the period for such a conversion.

This is one of the rare areas where the positively oriented responses ['Totally Satisfied' (55.3%) plus 'Very Satisfied' (17.7%)] outnumbered the negatively inclined ones ['Not at all Satisfied (0.8%) plus 'Slightly Satisfied (7.1%)] ones. This can be considered as a healthy sign.

**Table 6.4.22: City-Wise Classification of Responses on Conversion Period of Physical Shares to Electronic Form**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 2(1.3%) | 15(9.7%) | 22(14.2%) | 31(20.0%) | 85(54.8%) | 155(100%) |
| Mumbai | 1(0.6%) | 8(5.1%) | 21(13.5%) | 25(16.0%) | 101(64.7%) | 156(100%) |
| Gangtok | 0(0.0% | 3(5.4% | 27(48.2% | 9(16.1%) | 17(30.4%) | 56(100%) |
| Total | 3(0.8%) | 26(7.1%) | 70(19.1%) | 65(17.7%) | 203(55.3%) | 367(100%) |

The table 6.4.22 is also gives an idea whether a similar type of enthusiasm regarding the conversion period was found in the individual cities as well. The trend brought out in the above discussion was also noticed in the individual cities as well. However, it is noteworthy that 54.8% respondents in Hyderabad and 64.7%, in Mumbai stated that they were 'Totally Satisfied'. As against this, the figure for Gangtok was only 30.4%.

### 6.4.23 Conversion Period of Electronic Form to Physical Form

There may be occasions (especially in the case of Rematerialisation) when shares in the electronic form have to be converted to the physical form. The Table 6.4.23 reveals the levels of satisfaction of the respondents regarding the time taken for such a conversion.

**Table 6.4.23: City-Wise Classification of Responses on Conversion Period of Electronic Form to Physical Form**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 5(3.2%) | 11(7.1%) | 22(14.2%) | 29(18.7%) | 88(56.8%) | 155(100%) |
| Mumbai | 0(0.0% | 8(5.1%) | 20(12.8%) | 27(17.3%) | 101(64.7%) | 156(100%) |
| Gangtok | 0(0.0%) | 2(3.6%) | 28(50.0%) | 9(16.1%) | 17(30.4%) | 56(100%) |
| Total | 5(1.4%) | 21(5.7%) | 70(19.1%) | 65(17.7%) | 206(56.1%) | 367(100%) |

One can find an almost similar degree of satisfaction – largely positively oriented – as in the case of conversion from the physical to electronic form.

The Table 6.4.23 is also helps one decide whether the pattern highlighted above was found in the individual cities as well. Amazingly, the pattern noticed in the case of conversion of shares from the physical to the electronic form (in the individual cities) was found in this case as well. This brings out the high satisfaction level of the respondents on this issue.

### 6.4.24 Perceptions on Customer Care Service

The customers of such financial institutions may have a number of queries (mostly due to lack of awareness). The customer care department in such institutions is required to attend to the needs of the customers and give the required clarifications when sought. There should not be a situation like a person being told, "Ask at the Enquiry Counter where the Inquiry Counter is!" The Table 6.4.24 reveals the perceptions of the respondents regarding the quality of service of the customer care departments.

It is rather unfortunate to note that that the total of 'Not at all satisfied' (17.4%) and 'Slightly Satisfied' (41.7%) responses was much more than that of 'totally Satisfied (22.1%) and Very Satisfied (7.9%) ones. It is clear that the DPs

need to make the customer care departments more responsive to the needs of the customers.

**Table 6.4.24: City-Wise Classification of Responses on Customer Care Service**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hydera bad | 20(12.9%) | 76(49.0%) | 28(18.1%) | 13(8.4%) | 18(11.6%) | 155(100%) |
| Mum bai | 18(11.5%) | 70(44.9%) | 4(2.6%) | 12(7.7%) | 52(33.3%) | 156(100%) |
| Gangtok | 26(46.4%) | 7(12.5%) | 8(14.3%) | 4(7.1%) | 11(19.6%) | 56(100%) |
| Total | 64(17.4%) | 153(41.7%) | 40(10.9%) | 29(7.9%) | 81(22.1%) | 367(100%) |

The table 6.4.24 is also reveals whether a similar sorry state of affairs was to be found in the individual cities as well. It was rather shocking to note that 46.4% of the respondents in Gangtok were 'Not at all satisfied'. Also, 49.0% of the respondents in Hyderabad and 44.9%, in Mumbai were only 'Slightly Satisfied'. Thus, none of the cities appeared to be having responses customer care departments. Therefore, the concerned DPs need to look into this issue on priority.

### 6.4.25 Pledging of Dematerialised Securities

This facility enables investors to meet their pressing financial needs by offering their dematerialised securities as collaterals. The table 6.4.25 reveals the perceptions of the respondents on this issue.

The Table 6.4.25 should reveal whether a similar degree of positive orientation was to be found in the individual cities as well. It could be seen that the largest proportions of respondents in Hyderabad (41.9%) and Mumbai (60.9%) were 'Totally Satisfied' on this issue. On the other hand, the figure in Gangtok was as low as 25.0%. Highly noticeable proportions of 'Moderately Satisfied' responses could be seen in Hyderabad (24.5%) and Gangtok (39.3%). The conclusion that could be drawn is that DPs need to make the procedure more convenient for the investors.

**Table 6.4.25: City-Wise Classification of Responses on Pledging of Dematerialised Securities**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 3(1.9%) | 23(14.8%) | 38(24.5%) | 26(16.8%) | 65(41.9%) | 155(100%) |
| Mumbai | 1(0.6%) | 12(7.7%) | 18(11.5%) | 30(19.2%) | 95(60.9%) | 156(100%) |
| Gangtok | 0(0.0%) | 8(14.3%) | 22(39.3%) | 12(21.4%) | 14(25.0%) | 56(100%) |
| Total | 4(1.1%) | 43(11.7%) | 78(21.3%) | 68(18.5%) | 174(47.4%) | 367(100%) |

### 6.4.26 Awareness Programme about Trends in Depository Service

The depository service is a relatively new field where new trends and innovations are constantly emerging. The DPs need to constantly disseminate information about these both to the existing customers and the existing ones. The Table 6.4.26 gives idea about the perceptions of the respondents on this issue.

It is clear that not much is being done to spread awareness about the new trends in depository service. This can be seen from the fact that only 27.8% of the respondents were 'Totally Satisfied. Also, the negatively-oriented responses ('Not at all satisfied', *20*.2% and 'Slightly Satisfied', 28.1%) appeared to be predominant.

**Table 6.4.26: City -Wise Classification of Responses Awareness Programmes about Trends in the Depository Service**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderab Ad | 19(12.3%) | 55(35.5%) | 29(18.7%) | 22(14.2%) | 30(19.4%) | 155(100%) |
| Mumbai | 24(15.4%) | 47(30.1%) | 8(5.1%) | 14(9.0%) | 63(40.4%) | 156(100%) |
| Gangtok | 31(55.4%) | 1(1.8%) | 4(7.1%) | 11(19.6%) | 9916.1%) | 56(100%) |
| Total | 74(20.2%) | 103(28.1%) | 41(11.2%) | 47(12.8%) | 102(27.8%) | 367(100%) |

The Table 6.4.26 is also reveals whether any of the three individual cities 'performed' better than the overall performance. DPs in Mumbai seemed to have performed better than their counterparts in the other two cities since the proportion

of ‘Totally Satisfied' responses in Mumbai was as high as 40.4%. It also needs to be noted that all the three cities had a significant proportion of respondents who were ‘Not at all satisfied'.

### 6.4.27 Purchase of Securities on Behalf of Minors

Much like bank accounts in the name of minors, it is now possible to purchase securities on behalf of minors. Obviously, these would be operated by the guardians till the children become majors. The Table 6.4.27 depicts the perceptions on this issue.

While the positively-oriented (‘Totally Satisfied, 40.3%, ‘Very Satisfied', 22.1% and ‘Moderately Satisfied', 24.8%) responses were dominant, the position could certainly have been better. The procedure in this regard needs to be simplified.

**Table 6.4.27: City-Wise Classification of Responses on Purchase of Securities on behalf of Minors**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 1(0.6%) | 27(17.4%) | 45(29.0%) | 32(20.6%) | 50(32.3%) | 155(100%) |
| Mumbai | 0(0.0%) | 9(5.8%) | 25(16.0%) | 36(23.1%) | 86(55.1%) | 156(100%) |
| Gangtok | 1(1.8%) | 9(16.1%) | 21(37.5%0 | 13(23.2%) | 12(21.4%) | 56(100%) |
| Total | 2(0.5%) | 45(12.3%) | 91(24.8%) | 81(22.1%) | 148(40.3%) | 367(100%) |

The table 6.4.27 is also revealing whether there were any variations in the perceptions on this issue in the individual cities. 55.1% of respondents were in ‘Totally Satisfied’ in Mumbai. The other two cities were relatively less totally satisfied when compared to Mumbai. The proportion of ‘Moderately Satisfied’ was found in Gangtok (37.5%).

### 6.4.28 Perceptions on Monthly Newsletter

The newsletter can be an important medium for an organisation to inform its customers, etc., about its activities. The Table 6.4.28 gives idea about the perceptions of the respondents about the monthly newsletters being issued by their DPs

True, the largest proportion of respondents (34.1%) said that they were ‘Totally Satisfied’ about the newsletters, but then, the other categories of responses

Slightly satisfied, 22.1% and Moderately Satisfied and Somewhat Satisfied, both 18.8%) cannot be totally ignored. This suggests that the publishers of the newsletters need to do much more to make these publications fully useful to the investors and other readers.

**Table 6.4.28: City-Wise Classification of Responses to Monthly Newsletters**

| City | Level of Satisfaction | | | | | Total |
|---|---|---|---|---|---|---|
| | Not at all Satisfied | Slightly Satisfied | Moderately Satisfied | Very Satisfied | Totally Satisfied | |
| Hyderabad | 22(14.2) | 59(38.1%) | 21(13.5%) | 16(10.3%) | 37(23.9%) | 155(100%) |
| Mumbai | 0(0.0%) | 12(7.7%) | 25(16.0%) | 39(25.0%) | 80(51.3%) | 156(100%) |
| Gangtok | 1(1.8%) | 10(17.9%) | 23(41.1%) | 14( 25.0% | 8(14.3%) | 56(100%) |
| Total | 23(6.3%) | 81(22.1%) | 69(18.8%) | 69(18.8%) | 125(34.1%) | 367(100%) |

The Table 6.4.28 is also gives an idea whether the respondents in the individual cities too were not overly satisfied with the quality and content of the newsletters. It can be seen that the largest proportion of respondents who were Totally Satisfied were those in Mumbai (51.3%) and the least in Gangtok (14.3%). It is equally noteworthy that 14.2% of the respondents in Hyderabad were Not at all satisfied. The highest figures for Hyderabad were 38.1% (Slightly satisfied) and for Gangtok, 41.1% (Moderately satisfied). This suggests that the pattern and level of satisfaction can vary from city to city.

**SECTION V**

This section attempts to test the relationships between the respondents' perceptions towards different aspects of depository system and their demographic attributes. These relationships are considered important because they enable to understand what can be improved by the service providers and others in the delivery of depository services.

## 6.5 Testing of Hypothesis

This section tests the hypotheses using primary data. The hypotheses have been tested using the following tests:

I. Chi-Square Test

II. Independent t Test

### 6.5.1 I Chi-Square Test:

**$H_{15}$: There is a significant relationship between gender of the respondent and awareness about depository services**

**Chi-Square Tests**

| | Value | df | Outcome of Chi-Square Test |
|---|---|---|---|
| Pearson Chi-Square | 1.841 | 4 | 0.765 |

Chi-square test was applied to ascertain whether there was any significant relationship between the gender of the respondent and awareness about the services offered by the depository system. The calculated p-value is 0.765 at 5% level of significance. Since, the p value is more than .05; the research hypothesis can be rejected.

Hence, it can be concluded that there is no significant relationship at 5% significance level between the gender and awareness level of services offered by depository system.

**$H_{16}$: There is a significant relationship between the marital status of the respondent and awareness about depository services.**

**Chi-Square Tests**

| | Value | df | Outcome of Chi-Square Test |
|---|---|---|---|
| Pearson Chi-Square | 9.690 | 4 | 0.046 |

Chi-square test was applied to find out whether there was any significant relationship between the marital status of the respondents and awareness level of services offered by the depository system in India. The calculated p- the value of 0.046 is less than the commonly accepted level of 0.05. Hence, the research hypotheses can be accepted.

Hence, it can be concluded that there is a significant relationship at the 5 % level of significance between the marital status of the respondents and awareness level of services offered by depository system.

**$H_{17}$: There is a significant relationship between monthly income and awareness about depository services in India**

**Chi-Square Tests**

| | Value | df | Outcome of Chi-Square Test |
|---|---|---|---|
| Pearson Chi-Square | 18.399 | 12 | 0.104 |

Chi-square test was applied to find whether there is any significant relationship between income level of respondents and awareness level of services offered by the depository system in India. The calculated p- value of 0.104 is much higher than the commonly accepted level of 0.05. Hence, the research hypotheses can be rejected.

Hence, it is concluded that there is no significant relationship at 5% significant level between the income level of respondent and awareness about the depository services in India.

**$H_{18}$: There is a significant relationship between the educational background and awareness about depository services in India**

**Chi-Square Tests**

| | Value | df | Outcome of Chi-Square Test |
|---|---|---|---|
| Pearson Chi-Square | 19.793 | 20 | 0.471 |

Chi-square test was applied to find whether there was any significant relationship between education qualification of the respondents and awareness level of services offered by the depository system in India. Since the calculated p-value of 0.471 was much higher than the commonly accepted level of 0.05, hence research hypotheses can be rejected.

Hence, one can conclude that there was no significant relationship at 5%significant level between the education level of the respondents and awareness level of services offered by the depository system in India.

**$H_{19}$: There is a significant relationship between the profession of the respondent and awareness about depository services in India**

**Chi-Square Tests**

| | Value | df | Outcome of Chi-Square Test |
|---|---|---|---|
| Pearson Chi-Square | 36.640 | 20 | 0.013 |

Chi-square test was applied to find whether there was any significant relationship between the profession of the respondents and awareness level of services offered by depository participants. The calculated p-value of 0.013 was less than the commonly accepted level of 0.05. Hence, research hypothesis can be accepted.

Therefore, it can be concluded that there is a significant relationship at 5% significance level between the profession of the respondent and the awareness level of depository services.

**$H_{20}$: There is a significant relationship between the category (a trader or investor) of the respondent and awareness about depository services in India**

**Chi-Square Tests**

| | Value | df | Outcome of Chi-Square Test |
|---|---|---|---|
| Pearson Chi-Square | 16.596 | 8 | 0.035 |

Chi-square test was applied to find whether there was any significant relationship between the category (a trader or investor) of the respondents and awareness about the services offered by the depository system in India. Since the calculated p-value of 0.035 was found to be less than the commonly accepted level of 0.05, research hypotheses can be accepted.

Hence, it can be concluded that there is a significant relationship at 5% significance level between the category (a trader or investor) of the respondents and awareness about depository services in India.

**$H_{21}$: There is a significant relationship between the percentage of investment in securities of the Respondent and awareness about depository services in India**

**Chi-Square Tests**

| | Value | df | Outcome of Chi-Square Test |
|---|---|---|---|
| Pearson Chi-Square | 26.093 | 16 | 0.053 |

Chi-square test was applied to find whether there was any significant relationship between the investment of respondents and awareness about depository services. Since the calculated p-value of 0.053 was found to be slightly higher than the commonly accepted level of 0.05, so research hypotheses can be rejected.

Hence, it can be concluded that there is no significant relationship at 5% significance level between the percentage of investment in securities and awareness level about the DEMAT services.

**$H_{22}$: There is a significant relationship between age of the of DEMAT account of the respondent and awareness about depository services in India**

**Chi-Square Tests**

| | Value | df | Outcome of Chi-Square Test |
|---|---|---|---|
| Pearson Chi-Square | 31.044 | 16 | 0.013 |

Chi - square test was applied to find whether there was any significant relationship between the age of the DEMAT account of the respondent and awareness level about the services offered by the depository system in India. Since, the calculated p-value of 0.013 was found to be less than the commonly accepted levels of 0.05 so, research hypotheses can be accepted.

Hence, it can be concluded that there is a significant relationship at 5% significance level between the age of the DEMAT account and awareness level about services offered by the depository system in India.

### 6.5.2 II Independent t Test

Here, the independent t-test was applied, in order to test whether there were significant differences between Mumbai and Gangtok, Hyderabad and Mumbai, Gangtok and Hyderabad with respective selected study variables, in terms of various aspects of liquidity, profitability, costs, transparency, and transaction time, etc. The results of independent sample test are shown below.

**Comparison between Mumbai and Gangtok with respect to liquidity and profitability**

The above-mentioned hypothesis was tested with independent sample t-test to draw inferences between Mumbai and Gangtok with individual investors. In general, the independent sample t-test is used to analyse the differences between two independent samples, in terms of interval or ratio variables. The rule of thumb in

case of independent sample t-test is that, at 95% confidence level, if the p-value is less than 0.05, or the t statistic is more than 2, the research hypotheses can be accepted, if it is more than 0.05 research hypotheses can be rejected.

**$H_{23}$: There is a significant difference between Mumbai and Gangtok with respect to liquidity and profitability**

| Item | t | df | P value | The outcome of Independent t-test |
|---|---|---|---|---|
| Liquidity | 3.231 | 165 | .001 | Accepted |
| Profitability | 3.064 | 164 | .003 | Accepted |
| Cost | 2.732 | 152 | .007 | Accepted |
| Transparency | .297 | 169 | .767 | Rejected |
| Transaction Time | .985 | 165 | .326 | Rejected |
| Security | 1.671 | 158 | .097 | Rejected |
| Whether more inclined to buy or sell large quantity of securities as and when desired after the introduction of the depository system | 1.257 | 170 | .211 | Rejected |
| Whether more inclined to buy or sell small quantities of securities as and when the desired introduction of the depository system | .347 | 238 | .729 | Rejected |
| Whether more inclined to buy or sell a particular security as and when desired at the desired price before significant movement in the price | .559 | 238 | .577 | Rejected |
| Whether the trading volume increased after dematerialisation of shares. | .685 | 238 | .494 | Rejected |
| Has the trading frequency changed after the introduction of the depository system | .831 | 238 | .407 | Rejected |
| Speed of arbitrage trading after introduction of the depository system | 1.145 | 238 | .253 | Rejected |

The outcome of the independent sample t-test, to analyse the difference between Mumbai and Gangtok in terms of liquidity and profitability of the investors, shows that there is no significant difference between Mumbai and Gangtok since the p-value is most of the cases was found to be more than 0.05 (except in case of liquidity, profitability and cost).

The results indicate that there was no significant difference between Mumbai and Gangtok, in terms of the broad concept of liquidity of the transactions.

**Comparison between Gangtok and Hyderabad with respect to liquidity and profitability**

The above-stated hypothesis was tested with independent sample t-test to draw the inferences between Gangtok and Hyderabad with individual investors. The independent sample t-test, in general, is used to analyse the differences between two independent samples in terms of interval or ratio variable. The rule of thumb, in the case of independent sample t-test, is that, at 95%confidence level, if the p-value is less than 0.05, or the t statistic is more than 2, the research hypotheses can be accepted. If it is more than 0.05, research can be rejected.

**$H_{24}$: There is a significant difference between Gangtok and Hyderabad with respect to liquidity and profitability**

| Item | t | df | P value | The outcome of Independent t-test |
|---|---|---|---|---|
| Liquidity | -1.748 | 168 | .082 | Rejected |
| Profitability | 1.003 | 238 | .317 | Rejected |
| Cost | -3.197 | 238 | .002 | Accepted |
| Transparency | -2.931 | 238 | .004 | Accepted |
| Transaction Time | -2.391 | 238 | .018 | Accepted |
| Security | -3.467 | 238 | .001 | Accepted |
| Whether more inclined to buy or sell large quantity of securities as and when desired after the introduction of the depository system | 3.227 | 227 | .001 | Accepted |
| Whether more inclined to buy or sell small quantities of securities as and when the desired introduction of the depository system | 4.480 | 214 | .000 | Accepted |
| Whether more inclined to buy or sell a particular security as and when desired at the desired price before significant movement in the price | 4.370 | 218 | .000 | Accepted |
| Whether the trading volume increased after dematerialisation of shares. | 4.424 | 212 | .000 | Accepted |
| Has the trading frequency changed after the introduction of the depository system | 4.670 | 219 | .000 | Accepted |
| Speed of arbitrage trading after introduction of the depository system | 3.977 | 217 | .000 | Accepted |

The outcome of the independent sample t-test to analyse the difference between Gangtok and Hyderabad, in terms of liquidity and profitability of the investors, shows that there is significant difference between Gangtok and Hyderabad since the p-value is most of the cases was found to be less than 0.05 (except in the case of liquidity and profitability).

The results indicate that there is a significance difference between Gangtok and Hyderabad, in terms of the broad concept of liquidity of the transactions.

**Comparison between Hyderabad and Mumbai with respect to liquidity and profitability**

The above-mentioned hypothesis was tested with independent sample t-test to draw the inferences between Mumbai and Hyderabad with individual investors. The independent sample t-test, in general, is used to analyse the differences between two independent samples regarding interval or ratio variable. The rule of thumb, in the case of independent sample t-test, is that, at 95% confidence level, if the p-value is less than 0.05, or the t statistic is more than 2, the research hypothesis can be accepted. If it is more than 0.05, the research hypothesis can be accepted.

**$H_{25}$: There is a significant difference between Hyderabad and Mumbai with respect to liquidity and profitability**

| Item | t | df | P-value | The outcome of Independent t-test |
|---|---|---|---|---|
| Liquidity | -1.641 | 332 | .102 | Rejected |
| Profitability | -4.760 | 331 | .000 | Accepted |
| Cost | .613 | 331 | .540 | Rejected |
| Transparency | 2.982 | 319 | .003 | Accepted |
| Transaction Time | 1.550 | 321 | .122 | Rejected |
| Security | 2.040 | 325 | .042 | Accepted |
| Whether more inclined to buy or sell large quantity of securities as and when desired after the introduction of the depository system | -4.553 | 291 | .000 | Accepted |
| Whether more inclined to buy or sell small quantities of securities as and when the desired introduction of the depository system | -5.502 | 273 | .000 | Accepted |
| Whether more inclined to buy or sell a particular security as and when desired at the desired price before significant movement in the price | -5.559 | 267 | .000 | Accepted |
| Whether the trading volume increased after dematerialisation of shares. | -5.782 | 276 | .000 | Accepted |

| | | | | |
|---|---|---|---|---|
| Has the trading frequency changed after the introduction of the depository system | -6.077 | 274 | .000 | Accepted |
| Speed of arbitrage trading after introduction of the depository system | -5.645 | 269 | .000 | Accepted |

The outcome of the independent sample t-test to analyse the difference between Mumbai and Hyderabad in terms of liquidity and profitability of the investors shows that there is a significant difference between Mumbai and Hyderabad since the p-value is most of the cases was found to be less than 0.05 (except in the case of security, cost and liquidity).

The results indicate that there a significant difference between Mumbai and Hyderabad, in terms of the broad concept of liquidity of the transactions

### 6.5.3 III Independent t-Test

### INVESTORS' LEVEL OF SATISFACTION WITH THE DEPOSITORY SYSTEM

Here, the independent t-test was applied in order to test the significant differences between Mumbai and Gangtok, Hyderabad and Mumbai and Gangtok and Hyderabad with respect to selected study variables. In terms of various aspects of Dematerialization, Rematerialisation, SMS alert, settlement period etc. The results of the independent sample test are shown below in Tables.

**Comparison of Mumbai and Gangtok with respect to investors' level of satisfaction with the depository system**

The above-mentioned hypothesis was tested with independent sample t-test to draw the inferences regarding differences between Mumbai and Gangtok with individual investors. The independent sample t-test, in general, is used to analyse the differences between two independent sampled in terms of interval or ratio variable. The rule of thumb, in the case of independent sample t-test is that, at 95% confidence level, if the p-value is less than 0.05 or the t statistic is more than 2, the research hypothesis can be accepted. If it is more than 0.05, the research hypothesis can be rejected.

The outcome of the majority of the variables shows that there was a significant relationship between Mumbai and Gangtok since the p-value in most of the cases it was found to be less than 0.05 (except in case of Dematerialisation,

Rematerialisation, Safety of security, Attitude of staff, Nomination facility, Availability of trained staff, Repatriation of sale proceeds, Opening of DEMAT account, Maintenance of records of holding in electronic form and Transaction statement).

**$H_{26}$: There is a significant difference between Mumbai and Gangtok with respect to investors' level of satisfaction with the depository system**

| Item | t | df | P value | The outcome of Independent t-test |
|---|---|---|---|---|
| 1. Dematerialisation | 1.138 | 84 | .258 | Rejected |
| 2. Rematerialisation | 1.339 | 84 | .184 | Rejected |
| 3. Settlement period | 2.176 | 78 | .033 | Accepted |
| 4. Safety of security | .425 | 210 | .671 | Rejected |
| 5. Attitude of staff | 1.340 | 133 | .183 | Rejected |
| 6. Timely services by depository | 3.401 | 165 | .001 | Accepted |
| 7. Cost of transaction | 4.256 | 191 | .000 | Accepted |
| 8. Nomination facility | 1.564 | 107 | .121 | Rejected |
| 9. Timely processing of depositing securities | 3.478 | 210 | .001 | Accepted |
| 10. Availability of trained staff | 1.755 | 210 | .081 | Rejected |
| 11. T+2 and Rolling settlement | 2.666 | 210 | .008 | Accepted |
| 12.Remittance of sale proceeds | 3.160 | 210 | .002 | Accepted |
| 13.Repatriation of sale proceeds | -.140 | 210 | .889 | Rejected |
| 14.Opening of DEMAT account | -.168 | 210 | .867 | Rejected |
| 15.maintenance of records of holding in electronic form | -.903 | 147 | .368 | Rejected |
| 16.SMS alert | -3.386 | 123 | .001 | Accepted |
| 17.Account opening charge | 3.949 | 83 | .000 | Accepted |
| 18.Inter-depository instructions | 2.782 | 210 | .006 | Accepted |
| 19.Fast disbursement of non-cash corporate benefits | 2.893 | 210 | .004 | Accepted |
| 20.Tariff structure | 3.581 | 79 | .001 | Accepted |
| 21.Transaction statement | .830 | 107 | .408 | Rejected |
| 22.Conversion period of physical shares to electronic form | 4.560 | 210 | .000 | Accepted |
| 23.Conversion period of electronic form to physical form | 4.815 | 210 | .000 | Accepted |
| 24.Customer care service response | 2.716 | 210 | .007 | Accepted |
| 25.Pledging of dematerialized securities | 4.789 | 210 | .000 | Accepted |
| 26.Awareness programme about trends in depository service | 3.561 | 210 | .000 | Accepted |
| 27.Sale securities on behalf of the minor | 5.376 | 210 | .000 | Accepted |
| 28.Monthly newsletter | 5.702 | 95 | .000 | Accepted |

The outcomes of a majority of the variables show that there were differences between Mumbai and Gangtok. However, in the case of some of the variables, there was no difference between the variables between Mumbai and Gangtok. The results indicate that there was no significant difference between the Mumbai and Gangtok, in terms of the investors' level of satisfaction with the depository system.

**Comparison Gangtok and Hyderabad with respect to investors' level of satisfaction with the depository system**

The above-mentioned hypothesis was tested with independent sample t-test to draw the inferences regarding the difference between Mumbai and Gangtok with individual investors. The independent sample t-test, in general, is used to analyse the differences between two independent sampled, in terms of interval or ratio variable. The rule of thumb, in the case of independent sample t-test, is that, at 95% confidence level, if the p-value is less than 0.05, or the t statistic is more than 2, the research hypotheses can be accepted. If it is more than 0.05, the research hypothesis can be rejected.

The outcome of the majority of the variables shows that there were significant differences between Hyderabad and Gangtok since the p-value in most of the cases was found to be less than 0.05 (except in case of Dematerialisation, Attitude of staff, Timely process of depositing securities, T+2 and Rolling settlement, Remittance of sale proceeds, Customer care service response, Pledging of dematerialized securities and Sale securities on behalf of minors).

The outcomes of a majority of the variables show that there were differences between Hyderabad and Gangtok. However, in the case of some of the variables, there was no difference between the variables between Hyderabad and Gangtok. The results indicate that there were no significant differences between the Mumbai and Gangtok, in terms of the investors' level of satisfactions with depository system.

**$H_{27}$: There is a significant difference between Hyderabad and Gangtok with respect to respect to investors' level of satisfaction with the depository system**

| Item | t | df | P value | The outcome of Independent t-test |
|---|---|---|---|---|
| 1. Dematerialisation | -0.20 | 209 | 0.84 | Rejected |
| 2. Rematerialisation | -8.63 | 206 | 0.00 | Accepted |
| 3. Settlement period | -2.08 | 122 | 0.04 | Accepted |
| 4. Safety of security | 3.09 | 209 | 0.00 | Accepted |
| 5. Attitude of staff | 0.92 | 209 | 0.36 | Rejected |
| 6. Timely services by depository | 3.00 | 142 | 0.00 | Accepted |
| 7. Cost of transaction | 7.04 | 198 | 0.00 | Accepted |
| 8. Nomination facility | 4.40 | 209 | 0.00 | Accepted |
| 9. Timely processing of depositing securities | 1.45 | 209 | 0.15 | Rejected |
| 10. Availability of trained staff | -2.74 | 112 | 0.01 | Accepted |
| 11. T+2 and Rolling settlement | 1.51 | 209 | 0.13 | Rejected |
| 12.Remittance of sale proceeds | 0.95 | 209 | 0.34 | Rejected |
| 13.Repatriation of sale proceeds | -6.55 | 202 | 0.00 | Accepted |
| 14.Opening of DEMAT account | -9.69 | 208 | 0.00 | Accepted |
| 15.maintenance of records of holding in electronic form | -7.67 | 208 | 0.00 | Accepted |
| 16.SMS alert | -10.69 | 209 | 0.00 | Accepted |
| 17.Account opening charge | 3.76 | 209 | 0.00 | Accepted |
| 18.Inter-depository instructions | 2.76 | 209 | 0.01 | Accepted |
| 19.Fast disbursement of non-cash corporate benefits | 4.61 | 209 | 0.00 | Accepted |
| 20.Tariff structure | 4.87 | 209 | 0.00 | Accepted |
| 21.Transaction statement | 1.99 | 106 | 0.05 | Accepted |
| 22.Conversion period of physical shares to electronic form | 2.80 | 209 | 0.01 | Accepted |
| 23.Conversion period of electronic form to physical form | 2.71 | 209 | 0.01 | Accepted |
| 24.Customer care service response | 0.67 | 77 | 0.50 | Rejected |
| 25.Pledging of dematerialized securities | 1.39 | 209 | 0.17 | Rejected |
| 26.Awareness programme about trends in depository service | 2.18 | 81 | 0.03 | Accepted |
| 27.Sale securities on behalf of the minor | 1.16 | 209 | 0.25 | Rejected |
| 28.Monthly newsletter | -2.32 | 139 | 0.02 | Accepted |

**Comparison of Hyderabad and Mumbai with respect to investors' level of satisfaction with the depository system**

The above-mentioned hypothesis was tested with independent sample t-test to draw the inferences regarding the between Hyderabad and Mumbai with individual investors. The independent sample t-test, in general, is used to analyse the

differences between two independent samples, in terms of interval or ratio variable. The rule of thumb, in the case of independent sample t-test, is that, at 95% confidence level, if the p-value is less than 0.05, or the t statistic is more than 2, the research hypothesis can be accepted. If it is more than 0.05, the hypothesis can be rejected.

**$H_{28}$: There is a significant difference between Hyderabad and Mumbai with respect to investors' level of satisfaction with the depository system**

| Item | t | Df | P value | Outcome of independent 'T' test |
|---|---|---|---|---|
| 1. Dematerilisation | -1.628 | 255 | .105 | Rejected |
| 2. Rematerialisation | -10.816 | 188 | .000 | Accepted |
| 3. Settlement period | -5.652 | 250 | .000 | Accepted |
| 4. Safety of security | 3.580 | 309 | .000 | Accepted |
| 5. Attitude of staff | -.401 | 309 | .689 | Rejected |
| 6. Timely services by depository | -.640 | 309 | .523 | Rejected |
| 7. Cost of transaction | 2.726 | 309 | .007 | Accepted |
| 8. Nomination facility | 3.485 | 301 | .001 | Accepted |
| 9. Timely processing of depositing securities | -2.729 | 309 | .007 | Accepted |
| 10. Availability of trained staff | -5.840 | 302 | .000 | Accepted |
| 11. T+2 and Rolling settlement | -1.460 | 309 | .145 | Rejected |
| 12.Remittance of sale proceeds | -2.671 | 297 | .008 | Accepted |
| 13.Repatriation of sale proceeds | -7.113 | 226 | .000 | Accepted |
| 14.Opening of DEMAT account | -10.116 | 210 | .000 | Accepted |
| 15.maintenance of records of holding in electronic form | -7.198 | 246 | .000 | Accepted |
| 16.SMS alert | -8.932 | 301 | .000 | Accepted |
| 17.Account opening charge | -.061 | 309 | .952 | Rejected |
| 18.Inter-depository instructions | -.092 | 309 | .927 | Rejected |
| 19.Fast disbursement of non-cash corporate benefits | 2.312 | 309 | .021 | Accepted |
| 20.Tariff structure | 2.582 | 279 | .010 | Accepted |
| 21.Transaction statement | 1.472 | 309 | .142 | Rejected |
| 22.Conversion period of physical shares to electronic form | -1.880 | 309 | .061 | Rejected |
| 23.Conversion period of electronic form to physical form | -1.989 | 294 | .048 | Accepted |
| 24.Customer care service response | -3.216 | 290 | .001 | Accepted |
| 25.Pledging of dematerialized securities | -4.031 | 299 | .000 | Accepted |
| 26.Awareness programme about trends in depository service | -2.156 | 299 | .032 | Accepted |
| 27.Sale securities on behalf of the minor | -5.214 | 298 | .000 | Accepted |
| 28.Monthly newsletter | -9.291 | 272 | .000 | Accepted |

The outcome of the majority of the variables shows that there is a significant difference between Hyderabad and Mumbai since the p-value in most of the cases was found to be less than 0.05 (except in case of Dematerialisation, Attitude of staff, Timely services by the depository, T+2 and Rolling settlement, Account opening charge, Inter-depository instructions, Transaction statement, and Conversion period of physical shares in the electronic form,).

The outcomes of a majority of the variables show there were differences between Hyderabad and Mumbai. However, in the case of some of the variables, there was no difference between the variables. The results indicate that there was no significant difference between Mumbai and Gangtok, in terms of the investors' level of satisfactions with the depository system.

**SECTION VI**

## 6.6FACTOR ANALYSIS

**Reliability of Scale**

According to Cronbach (1981), to assess the reliability of the research instrument, the alpha coefficients for the total questionnaire using a five point scales were calculated. The standard mean range values were 3.57 on the 5 point likert scale for instance, 2.5 scales can be regarded as neutral point. In case the values are more than 2.5 on point likert scale.

**Table 6.6.1: Reliability of Scale**

| | |
|---|---|
| Mean Range | 3.57 |
| Standard Deviation | 0.67 |

It indicates that a rating from the respondents lies on the positive side of the rating scale. It also found that, the standard deviation 0.67, indicating a relatively high degree of consent among the different respondents in their perceptions about the rating variable in questions.

**Reliability of Statistics**

According to Ker linger, (1986), the most widely used index for determining internal consistency is Cronbach alpha. It has been generally accepted that in the early stages of the research on hypothesized measure of construct, reliabilities of

0.50, or higher, are needed, while for widely used scales, the reliabilities should not be below o.6 (Nunnally, 1978). In the current survey, all subscales, alpha coefficients were found to exceed 0.5, with an overall alpha for the entire questionnaire. The high alpha value in all five subscales confirms the homogeneity of the items comprising them, and indicates the acceptable level of reliability.

**Reliability of Statistics**

To understand the investors' opinions on the depository system, 29 items were identified in the study. Each item describes one aspect of the respondents' perception. The opinions on the depository system were collected using Likert five point scale. Factor analysis is used to reduce the variables into a smaller number of manageable variables by exploring common dimensions available among the variables. The variable which has common response and high correlation were grouped under a common factor. Some variables were excluded which did not show any significant effect. Therefore the reduced factors should be dissimilar and distinct from each other.

**Table 6.6.2:Reliability of statistics**

| | **Calculated value** |
|---|---|
| Cronbach's Alpha | 0.657 |

Prior to running factor analysis, it is recommended to check the suitability of the data. The data can be checked by using tests namely, Kaiser-Maiyer-Olkim (KMO) test and Bartlett's test of sphericity. The KMO test measures the sampling adequacy to indicate the proportion of variance in the variables which might be caused by new factors. A higher value generally indicates that a factor analysis may be useful with the data. In case, the value is lesser than 0.50, the output of the factor analysis might not be very useful.

The Table 6.6.3 shows the KMO value as 0.787 which signified that the factor analysis was useful with data and the sample was good enough for sampling. The overall significance of correlation, tested with the chi-square value for Bartlett's test of sphericity, was found to be 5027.697 and the significant value was 0.0000 which is significant at more than 99 percent level of confidence. This means that the data was very suitable for factor analysis.

Hence, all these standards indicate that the data was suitable for factor analysis. A principal component was employed for extracting factors.

**Table 6.6.3: KMO and Bartlett's Test**

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .787 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 5027.697 |
| | Df | 231 |
| | Sig. | .000 |

The second step in the process is to decide about the number of factors to be derived. The thumb rule is applied to choose the number of factors for which 'Eigen values' is greater than one by using principal component analysis method. According to Hair (199), all the factors with latent roots less than one are considered as insignificant and disregarded. The component matrix, so formed, is further rotated orthogonally using the varimax rotation algorithm.

**Table 6.6.4: Total Variance Explained**

| Total Variance Explained | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Component | Initial Eigen values | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 5.627 | 25.577 | 25.577 | 5.627 | 25.577 | 25.577 | 4.033 | 18.330 | 18.330 |
| 2 | 3.174 | 14.426 | 40.003 | 3.174 | 14.426 | 40.003 | 3.428 | 15.582 | 33.912 |
| 3 | 3.159 | 14.359 | 54.362 | 3.159 | 14.359 | 54.362 | 2.592 | 11.782 | 45.694 |
| 4 | 1.606 | 7.302 | 61.664 | 1.606 | 7.302 | 61.664 | 2.519 | 11.452 | 57.146 |
| 5 | 1.462 | 6.645 | 68.308 | 1.462 | 6.645 | 68.308 | 2.456 | 11.162 | 68.308 |
| 6 | .998 | 5.574 | 73.882 | | | | | | |
| 7 | .906 | 4.118 | 78.000 | | | | | | |
| 8 | .721 | 3.275 | 81.276 | | | | | | |
| 9 | .562 | 2.554 | 83.830 | | | | | | |
| 10 | .526 | 2.390 | 86.219 | | | | | | |
| 11 | .462 | 2.102 | 88.321 | | | | | | |
| 12 | .393 | 1.785 | 90.106 | | | | | | |
| 13 | .317 | 1.440 | 91.546 | | | | | | |
| 14 | .306 | 1.389 | 92.936 | | | | | | |
| 15 | .271 | 1.233 | 94.169 | | | | | | |
| 16 | .234 | 1.064 | 95.233 | | | | | | |
| 17 | .225 | 1.023 | 96.256 | | | | | | |
| 18 | .217 | .986 | 97.241 | | | | | | |
| 19 | .188 | .854 | 98.096 | | | | | | |
| 20 | .180 | .818 | 98.914 | | | | | | |
| 21 | .144 | .653 | 99.567 | | | | | | |
| 22 | .095 | .433 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

By performing factor analysis, 28 variables were first reduced to 22 variables and then further reduced into five factors, as shown in the table below. Each component factor included some items which were otherwise called variables. Each variable represented the perception of investors about one particular aspect of the depository system. Only the five perceptual factors which were having Eigen value more than unity were taken for consideration. The five perceptual factors represent around 68.308 percent of total variance which is very significant and the remaining variance could be explained by other factors.

**Table 6.6.5: Rotated Component Matrix**

| Rotated Component Matrix | | | | | | | |
|---|---|---|---|---|---|---|---|
| Factor Name | | Component | | | | | Reliability |
| | | 1 | 2 | 3 | 4 | 5 | Alpha |
| 1.Electronic credit of securities | Conversion period of electronic form to physical form | .782 | | | | | .867 |
| | Customer care service response | .776 | | | | | |
| | Awareness programme about trends in depository service | .765 | | | | | |
| | Pledging of dematerialized securities | .762 | | | | | |
| | Conversion period of physical shares to electronic form | .747 | | | | | |
| | Sale securities on behalf of the minor | .735 | | | | | |
| 2.Timely process of depositing securities | Timely processing of depositing securities | | .801 | | | | .792 |
| | Remittance of sale proceeds | | .744 | | | | |
| | Availability of trained staff | | .709 | | | | |
| | T+2 and Rolling settlement | | .707 | | | | |
| | Nomination of facility | | .534 | | | | |
| 3.Reduction in cost and time | Timely services by the depository participant | | | .836 | | | .748 |
| | Attitude of staff | | | .794 | | | |
| | Cost of transaction | | | .791 | | | |
| | Safety of security | | | .580 | | | |
| 4.Quick services | Opening of DEMAT account | | | | .811 | | .791 |
| | SMS alert | | | | .787 | | |
| | Maintained of records of holding in electronic form | | | | .742 | | |
| 5.Faster disbursement of benefits | Fast disbursement of non-cash corporate benefits | | | | | .809 | .788 |
| | Inter depository instructions | | | | | .806 | |
| | Account opening charge | | | | | .729 | |
| | Tariff structure | | | | | .651 | |

Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; Rotation converged in 7 iterations.

It is observed from total variance Table 6.6.4 shows that the total variance explained by factor 1,2,3,4 and 5 was 18.330 percent, 15.582 percent, 11.782 percent, 11.452 percent and 11.162 percent respectively, whereas the cumulative

variance, explained by these entire factors, was 68.308 percent. The rest of the variance was due to factors which were beyond the scope of the study.

The purpose of the rotated component matrix of factor analysis is to identify the factors that meaningfully explain the sets of closely related variables. Each number represents the partial correlation between the item and the rotated factor. These correlations can help formulate an interpretation of the factors or components. Factor analysis rotation methods start with the original axes and a mathematical rotation is applied which simplifies the relationships between factors and variables. The rotation phase of the factor analysis attempts to transfer initial matrix into one that is easier to interpret. The varimax rotation method is used to extract meaningful factors.

Further, all the variables which have high loadings are combined with the concerned factor, based on their scores in the following.

**Table 6.6.6: Summary of Factors Explained**

| Factor Name | % of variance explained | Cumulative % of variance explained |
|---|---|---|
| 1.Electronic credit of securities | 18.330 | 18.330 |
| 2.Timely process of depositing securities | 15.582 | 33.912 |
| 3.Reduction in cost and time | 11.782 | 45.694 |
| 4.Quick services | 11.452 | 57.146 |
| 5.Faster disbursement of benefits | 11.162 | 68.308 |

The Table 6.6.6 presents the factor loading for each variable. It also shows the Conversion period of electronic form to physical form, Customer care service response, Awareness programme about trends in depository service, Pledging of dematerialised securities, Conversion period of physical shares to electronic form and Sale securities on behalf of the minor have loadings of 0.782, 0.776, 0.765, 0.762, 0.747 and 0.735 respectively on factor1. This suggests that factor 1 is a combination of these variables. At this level, factor 1 can be named as **Electronic credit of securities.**

In case of the factor 2 columns, the variables are: Timely process of depositing securities, Remittance of sale proceeds, Availability of trained staff, T+2 and Rolling settlement and Nomination of facility have high loadings of 0.801, 0.744, 0.709, 0.707 and0 .534 respectively. This indicates that factor 2 is the

combination of these five variables. At this level, factor 2 can be named as **timely process of depositing securities**.

In case of the factor 3 columns, the variables are: Timely services by depository, Attitude of staff, Cost of transaction and Safety of security have high loadings of 0.836, 0.794, 0.791 and 0.580 respectively. This indicates that factor 3 is the combination of these four variables. At this level, factor 3 can be named as **Reduction in cost and time**.

In case of the factor 4 column, the variables are: Opening of DEMAT account, SMS alert and Maintenance of records of holding in electronic form have high loadings of 0.811, 0.787, and0 .742 respectively. This indicates that factor 4 is the combination of these three variables. At this level, factor 4 can be named as **Quick services**.

In case of factor 5 columns, the variables are: Fast disbursement of non-cash corporate benefits, Inter depository instructions, Account opening charge and Tariff structure have high loadings of 0.809, 0.806, 0.29 and 0.651 respectively. This indicates that factor 5 is the combination of these four variables. At this level, factor 5 can be named as **faster disbursement of benefits**. The 5 factors were identified out of 22 variables selected for the study. It indicates that these 5 factors have shown more influence on the investors' opinion on the depository system in India.

## 6.7 Conclusion

The chapter analysed the investor's perception on depository system. It is found that marital status, profession, category of respondent and age of the DEMAT account have shown significant impact on the respondent awareness level of the depository services. Further city wise comparison was also done to find whether there is any significant difference in terms of liquidity and profitability and level of satisfaction. It is found that Hyderabad is significantly different from the cities namely Mumbai and Gangtok in terms of liquidity and profitability whereas, in terms of level of satisfaction of depository services there was no significant difference among the sample cities. It is also found that the factors namely, electronic credit of securities, timely process of depositing securities, reduction in cost and time, quick services and faster disbursement of benefits, have shown influence on the depository services.

# CHAPTER –VII

# SUMMARY AND SUGGESTIONS

# CHAP TER – VII

# SUMMARY AND SUGGESTIONS

This chapter summarises the findings, suggestions and presence scope for further research relating to this topic.

**Impact of depository system in India**

**Liquidity**

The liquidity is measured in terms of Number of trades, turnover of stocks, number of shares, spread I and spread II. The study found that there is a significant difference between the number of trades, number of shares before and after the introduction of the depository system whereas there is no significant difference between turnovers of stock, spread I and spread II.

The study found that there was a significant difference between the number of trades of stocks before and after the introduction of the depository system in 79 companies and in case of 21 companies there was no significant difference.

The study found that there is significant difference between in the turnover of stocks before and after the introduction of depository system in 48 companies and in case of 52 companiesthere is no significantdifference.

The study found that there is a significant difference exists in the number of stocks before, and after the introduction of depository system in 58 companies and in case of 42 companies there was no significant difference.

The study found that there was significant difference exists in the Spread I of stocks before and after the introduction of depository system in 43 companies and in case of 57 companies there is no significant difference.

The study found that there is a significant difference exists in the spread II of stocks before, and after the introduction of depository system in 2 companies and in case of 98 companies there was no significant difference.

**Return and Volatility**

The study found that there is a significant difference exists in the return of stocks before and after the introduction of depository system.

The study found that there is a significant difference exists in the volatility of stocks before and after the introduction of depository system in 38 companies and in case of 62 companies there was no significant difference.

**Impact of the Sensitivity Index**

The study found that there is a significant difference in the sensitivity index before and after the introduction of the depository system.

The study found that there is a significant difference in the number of trades in the sensitivity index before and after introduction of the depository system

The study found that there is a significant difference in the number of shares traded of the sensitivity index before and after introduction of the depository system

The study found that there is no significant difference in the number of listed companies of the sensitivity index before and after introduction of the depository system

The study found that there is a significant difference in the market capitalisation of the sensitivity index before and after introduction of the depository system

The study found that there is no significant difference in the return of the sensitivity index before and after introduction of the depository system

The study found that there is no a significant difference in the volatility of the sensitivity index before and after the introduction of the depository system

**Investors' Perceptions**

The study found that little less than half of respondents were employed in the private sector followed by one fifth respondents as self-employed persons and one eighth of the respondents were government employees. The proportion of homemakers and students was found to be almost negligible. In the individual cities too, the maximum number of respondents were found to be from the private sector, followed by self-employed ones and government employees. However, one cannot totally ignore the highly noticeable number of homemakers (15.6% in Mumbai and 11.0% in Gangtok) among the respondents. This suggests that homemakers are not totally isolated from the share market.

The study found that the largest proportion of respondents reported only investors when compared to traders and traders cum investors. According to city wise, Mumbai and Gangtok had the largest proportion of investors, whereas Hyderabad had more investors-cum-traders

The study found that the most popular average durations, in the order of priority, were found to be: 3 years, four years, two years, one year and five years. The other durations were almost insignificant. The largest proportion of respondents in Hyderabad and Mumbai mentioned the duration of three years. However, in the case of Gangtok, this position was occupied by the duration of four years. The proportion of investors (21.0%) opting for the investment duration of two years was quite noticeable in Hyderabad. In the case of Mumbai, 26.9% of the respondents stated that they had invested for four years.

The study found that there the majority of the respondents were holding securities for more than a year. This suggests that they were not impatient and were prepared to wait. The majority of the respondents in Mumbai and Gangtok tended with the overall pattern. However, in Hyderabad, a greater proportion of the respondents stated that the shortest period for which they held securities was less than one year.

The study found that most popular durations of the respondents were four and five years, followed by six years and one year. The other durations were relatively insignificant in number. Even in the in individual cities, four and five years were the most preferred investment durations.

The study found that there is a very significant proportion of the respondents had monthly savings in the range of 11 to 30%, followed by savings in the range of 31-40%. The majority of the respondents having monthly savings in the 11-30% were found in the individual sample cities as well.

According to city wise classification of savings invested in securities, it is found that the majority of investors invest between 11-20% are located in Mumbai.

The study found that the numbers of investors have doubled since pre and post period of 1996. The increase in the number of investors after 1996 can be attributed to the introduction of depository system in stock market due to user-friendly. Even in

the individual cities, the largest proportion of the respondents stated that they became investors only after 1996.

According to the functions performed by respondents, the most 'popular' functions were stockbroker & DP and NBFC & DP and banker and DP respectively. The other functions were almost significant in number. A very interesting finding was that while the respondents in Hyderabad seemed to be in sync with the overall trend (of the proportion of Stockbrokers & DP being the highest), in the case of Mumbai and Gangtok, respondents performing the roles of NBFC & DP were most in number. The next 'popular role, i.e., of Banker &DP, can be found in all the three cities. Also, in the individual cities, the proportion of respondents performing other roles was found to be almost insignificant.

The study found that the majority (95.1%) of the respondents were holding individual resident accounts. This was followed by NRI accounts and Firms, in that order. The overall trends mentioned above were found in the individual cities as well.

Accessibility was found to be the most important attribute in selection of preferred DP, followed by cost structure, safety, quick settlement, image and personalised attention. Accessibility was found to be the most preferred consideration for respondents in Mumbai and Gangtok, followed by cost structure in keeping with the overall trend. However, in the case of respondents in Hyderabad, safety and accessibility were found to be the two most important reasons. Interestingly, 'Image' and Quick Settlement' figured quite noticeably for respondents in Hyderabad.

The most preferred reasons for opening DEMAT account are low maintenance charges, easy accessibility, recommendations of friends, multiple reasons, better services, past dealing with bank and security and confidentiality in order. In case of city wise, respondents in all the three cities were in sync with the overall trend regarding the first two reasons in the same order of priority. However, there was a degree of disagreement between the respondents of Hyderabad and those of the other two as the third most popular option. In Hyderabad, it was 'Multiple Reasons,' whereas, it was 'Recommendation of friends. Also, 'Better Services'

garnered a reasonable degree of support in Hyderabad; it was not a very high priority consideration in the other two cities.

Shares were the most preferred investment option for an overwhelming proportion of the respondents (96.3%). Contrary to the common perception that Indians are obsessed with acquiring gold, here, only 0.2% of the respondents chose this investment option. The proportion of other investment options was almost insignificant. According to city wise, the investment behaviour in the individual cities was almost in sync with that of the overall behaviour.

Investment in the primary market alone was the least preferred option for the respondents. The tendency was found to play safe and invest in both types of markets (76.7%). The secondary market option was found to be a distant second (20.4%). According to city wise classification, it can be seen that respondents in all the three cities 'agreed' with the overall trend.

The study found that the respondents frequency of buying and selling of shares in order of priority, were once in a week, daily and once in a month. Only small proportion of respondents invests once in quarterly. In case of city wise, the largest proportion of respondents in Mumbai (56.3%) and Gangtok (75.3%) were in sync with the overall tendency of trading once in a week. By contrast, the largest proportion in Hyderabad (55.7%) was more inclined towards trading on a daily basis. The third most preferred option of trading once in a month could be seen in the case of the three cities.

The majority of the respondents were content with having only one demat account, followed by those with two such accounts. Very few respondents mentioned that they had more than three demat accounts. According to city-wise classification, the preferred number of accounts for respondents in the three cities, in order of priority, continued to be one, followed by two, one cannot totally ignore the highly remarkable number of respondents in Mumbai (44.9%) who stated that they had two demo accounts.

The study found that the majority of the respondents were holding; demat accounts for more than seven years, followed by one to three years, three to five years and five to seven years respectively. According to city wise classification, it can be seen that respondents in Hyderabad and Mumbai agreed with the overall trend

of having the maximum respondents in the above seven years category. In the case of Gangtok, this 'honor' was garnered by the one to three years range (31.5%). In all the three cities, the least number of respondents were found in the less than one year range. The one to three years range was quite pronounced in the case of Hyderabad as well, while the three to five years range was very noticeable in the case of Mumbai and Gangtok.

The study found that two third of respondents use online trading while the rest use off line mode of trading. The use of online trading by respondents can be attributed to high level of computer literacy among them. According to city wise classification, while most respondents preferred the online option in all the three cities, it was rather amazing to note that the largest proportion of respondents trading online was found in Gangtok (87.7%).

**Liquidity and Profitability after Dematerilisation**

The study found that the respondents choose minor, major, neutral, moderate and no impact of introduction of depository system on liquidity respectively. According to city wise classification, the majority of the respondents in the three cities were in sync with the overall pattern of mentioning "Minor Impact on their liquidity position. In case of Hyderabad and Mumbai the respondents viewed that there was major impact whereas respondents in Gangtok viewed Neutral' responses.

The study found that there was no and/or minor impact on profitability after the introduction of depository system in respective order of degree in case of all the sample cities. However, as a departure from the overall trend, the second position in the category of responses in respect of Hyderabad and Gangtok was occupied by the option 'Neutral'.

The study found that there was either no effect or minor effect on cost to the respondent after introduction of depository system. According to the city wise classification, the respondents in Hyderabad was found to have a major effect on cost to the respondents after the introduction of the depository system.

The study found that the largest proportion of respondents in all the cities, agreed that dematerialisation had brought about a very significant increase in transparency after introduction of depository system.

The study found that there was a major impact on transaction time after dematerialization in all sample cities of Hyderabad, Mumbai and Gangtok in order of degree of impact. Also, an equal number of respondents in this city gave 'Neutral' and 'Moderate Effect' responses. It can also be noted that a noticeable proportion (13.8%) of respondents felt that there was only a moderate effect.

The study found that there the majority of the respondents agreed that dematerialization had a major effect on the security of their investments, followed by those mentioning a moderate effect,neutral and minor effect. Hardly any respondent felt that there was no effect. While the largest proportion of respondents in the individual cities were in sync with the overall perception that dematerialisation has had a major impact on the security aspect, one needs to take note of the relatively lesser degree of agreement in case of Gangtok (only 35.6%). At the same time, an equal proportion of respondents (30.1%) mentioned 'Moderate Effect,' or was neutral.

The study observed that the largest proportion of respondents opined that the new system had a moderate effect on the volume of their trading activities. This was closely followed by the number of respondents who spoke about a major impact on their trading activities.

The study found that the majority of the respondents agreed that there was either was major effect (45.7%) and moderate effect (36.4%) on the inclination to trade in small quantities of securities as and when desired after the introduction of the depository system. However, one cannot totally ignore the noticeable proportion of respondents (14.0%) who chose to be neutral on this issue. The proportion of the other responses was almost negligible.

The findings of the study indicate that there was Major Effect (46.9%) and Moderate Effect (34.9%) in Inclination to Trade as and when desired at a Chosen Price before Significant Movement in the Price. Here too, the proportion of respondents (13.3%) who chose to neutral cannot be totally ignored. Also, the number other responses were hardly noticeable.

The study found that the respondents agreed that there was either moderate or major impact on trading volume of the respondents after dematerialisation of shares. In case of city wise classification, it can be noticed that the overall pattern (about the

priority of responses) was reflected in the individual cities as well. However, one cannot fail to notice the relatively low proportion (37.7%) of respondents in Hyderabad who stated that the fresh changes had a major effect on their trading behaviour. Also, the significantly higher proportion (24.6%) of respondents in Hyderabad who chose to be neutral cannot be lost sight of.

The study found that the proportion of respondents who mentioned that there was a significant improvement in their trading activity after Introduction of the Depository System was much more than that of the other responses. The neutral responses too were found to be quite noticeable**.** It could be observed that respondents in all the three cities tended to follow the overall pattern regarding the priority accorded to the various options. One cannot totally ignore the relatively lesser proportion (37.1%) of respondents in Hyderabad who stated that the depository system had a major effect on the frequency of their trading activity. Also, the proportion of neutral responses (21.0%) was much above the overall figure of 12.5%.

The study found that there is a impact of speed of arbitrage trading after introduction of the depository system

## Convenience

According to the respondents, majority of them agreed that they took more than five days to open a DEMAT account followed by two to five days, one to two days and less than one day respectively. When compared with other cities, Gangtok respondents took less time to open a DEMAT account. This may be because Gangtok is a much smaller city and the concerned authorities there were more inclined to believe in the credentials of the potential clients.

The study found that the respondents opted for measures such as safety of investment, capital appreciation and regular and reasonable return for investing in shares but also found that respondents did not invest in securities due to chance. In the cities of Hyderabad and Mumbai, safety of investment was not found to be respondents' choice for making investments. However, only 13.7% of the respondents at the end named city gave importance to Regular and Reasonable Return. The highest proportion of respondents (32.9%) in Hyderabad mentioned Capital Appreciation as the reason for investing in shares. As regards speculation (as

the reason for investing in shares), the proportion was highly noticeable of the respondents in Hyderabad.

It is found that the largest proportions of respondents were found to be holding the account with NSDL, followed by CDSL and both, in that order. According to the city wise classification, Hyderabad was found to 'depart' significantly from the overall trend in that the largest proportion in that city stated that they were holding demat accounts in both NSDL and CDSL. Another interesting conclusion that emerged was that the largest proportion of respondents in Gangtok mentioned that their demat accounts were with CDSL.

The study found that, the majority of the respondents agreed that it took 15-30 days time for dematerilisation of shares, followed by 30-60 days and within 15 days and more than 60 days. The proportion of respondents who mentioned that the conversion period took more than 60 days was almost insignificant. According to city wise classification, the overall trend (of the period of 15 to 30 days, followed by 30 to 60 days) was found to be reflected in Hyderabad and Mumbai. However, in the case of Gangtok, the largest proportion mentioned 30 to 60 days.

The study found that the online option was preferred by the respondents, followed by personal visits to the office. Only a negligible proportion of respondents using the telephone for this purpose could be that the slightly complex nature of such transactions may preclude the use of the phone by many respondents. It is also found that all the three cities were using the online enquiry mode and was found to be highest in Gangtok. In this case, too, the second preferred option was: visiting the office. Interestingly, none of the respondents in Gangtok used the telephone enquiry option.

The study found that the largest proportion of respondents learned about the demat service from brokers (obviously looking for new customers). The other three noticeable sources were relatives, friends, and the websites, in that order. The other sources were hardly significant in number. Brokers were not the first preferred sources for respondents in Hyderabad and Gangtok. Here, relatives were found to be the most 'influential' sources. The figure was as high as 56.2 % in Gangtok**.** A very significant feature found in Mumbai was the highly noticeable figure of 16.2% respondents who learned about the demat services from the websites.

The study found that overwhelming proportion of respondents **(**98.0%) stated that they were for multiple depositories in all the sample cities However, what was remarkable was that all the respondents in Mumbai and Gangtok spoke in support of multiple depositories.

The study found that, all the respondents in sample cities have agreed that there were aware about services being offered by depository system. Among the sample cities, the respondents of Hyderabad stated that there were fully aware of such services. At the same time, the proportion of those who were 'Not at all aware' was also the highest in this city. Interestingly, none of the respondents in Gangtok said that they were 'Not at all Aware' of these services. Also, the largest proportion of respondents in this city (63.0%) stated that they were 'Somewhat Aware.'

The study found that almost all respondent mention that the process took time period of within 24 hours to within 72 hours. According to the city wise classification, the largest proportion **(**82.2%) of respondents in Gangtok reported that this process was completed within 48 hours. As regards the time gap of within 72 hours, the largest proportion was found in Hyderabad (34.7%). The other time periods were relatively few in all the three cities.

The frequency of checking the shareholding position of the DEMAT account is done once in 15 days, followed by once in a month and daily respectively. The other frequencies were almost negligible in number. In case of city wise classification**,** the largest proportion of respondents in Hyderabad stated that they checked the status of their accounts daily. On the other hand, the largest proportions of them in Mumbai and Gangtok were content with checking these once in 15 days. The second preferred option in these two cities was once in a week. The other frequencies were found to be almost insignificant in number in the three cities.

The study found that the majority of the respondents stated that they did not transfer their demat account to a different DP in all the sample cities. It indicates that there is a relatively high degree of confidence that the respondents had in their existing DPs.

It is found that the most common respondents use internet facility to 'Check Transaction Statements' and 'Checking Statement of Accounts' and 'Receipt of Instructions, in that order. It can be seen that respondents in Hyderabad and Gangtok

gave greater priority to checking their statement of accounts respectively than to checking their transaction statements.

It is found that the respondents agreed that there is support for round the clock for depository services. There were also a noticeable proportion of 'Undecided' responses, but then, the number of negatively oriented ones was almost negligible. The city wise classification, the proportion of respondents expressing strong support for round the clock depository services were found to be the highest in Hyderabad whereas the respondents in Mumbai and Gangtok disagreed. As regards the priority accorded to the degree of agreement, the respondents in Mumbai and Gangtok were found to be in sync with the overall trend.

The largest proportion of respondents (88.7%) stated that they were having difficulties with this depository system in all the sample cities.

**INVESTOR SATISFACTION AND DEPOSITORY SYSTEM**

The study found that majority of the respondents had high degree of satisfaction with the dematerialisation system. The overall priority order regarding the degree of satisfaction was also found in the individual cities too.

The study found that there is a high degree of Satisfaction with the Rematerialisation System. In case of city wise classification, the proportion of respondents who were totally satisfied with this system was much more in Mumbai (86.5%) and Gangtok 76.8%) than in Hyderabad (43.2%).

The study found that the respondents were satisfied with the settlement period. In fact, no respondent reported that he/she was not at all satisfied. One cannot fail to notice perceptible variations in the degree of 'enthusiasm' in the individual cities. While 80.8% of the respondents in Mumbai were 'Totally Satisfied,' the corresponding figure for Gangtok was only 25.0%. Respondents in Hyderabad appeared to be more inclined towards the middle-level options (Very Satisfied plus Moderately Satisfied plus Slightly Satisfied) than those in the other two cities.

The study found that the highest proportion of respondents (35.1%) stated that they were Totally Satisfied, whereas an almost equal proportion (34.1%) of respondents was only 'Slightly satisfied' with the safety of securities. The respondents in Gangtok were not satisfied with the safety of the securities. This is evident from the least proportion of respondents who were totally satisfied (21.4%)

and a very noticeable proportion (39.3%) who was only Slightly Satisfied. It appears that the majority of the respondents in Hyderabad had an overall positive perception on this issue (Totally Satisfied, 44.5%).

The respondents viewed that there were slightly satisfied with the attitude of staff in case of all the three cities, whereas only a small proportion of respondents agreed with this statement.

The study found that a low proportion of respondents are satisfied regarding cost of transaction. Of greater concern was the fact that the highest proportion of satisfaction tended to be just about average (Slightly Satisfied plus and Moderately Satisfied) and sync with all the sample cities. Interestingly, none of the respondents in Gangtok reported that he/she was 'Totally Satisfied' on this issue.

The study found that none of the respondents didn't find much of an over whelming trend for any one option. Still, the positively inclined levels of satisfaction (Totally Satisfied, Moderately Satisfied, and Very Satisfied, dominated the other levels. The largest proportion of respondents who were Totally Satisfied was from Hyderabad, followed by Mumbai.

The study found that the majority of the respondents were satisfied with the timely processing of depositing securities. One cannot ignore the variation in the proportion of 'Totally Satisfied' responses. This was the highest in Mumbai and the lowest in Gangtok. However, Gangtok outscored the other two cities by having the highest proportion of responses in the 'Very Satisfied' and 'Moderately Satisfied' categories.

The study found the respondents were satisfied with the availability of trained staff. However, one cannot ignore the fact that a noticeable proportion of respondents were only 'Slightly Satisfied or not at all satisified with the availability of staff. The concerned organisations need to note that untrained staff for such complicated jobs can be liabilities for them. The largest proportion of respondents in Mumbai stated that they were 'Totally Satisfied.' The largest proportion of respondents (who said that they were 'Slightly Satisfied' was found in Hyderabad. The proportion of 'Very Satisfied' respondents was seen in Gangtok.

The study found that the level of satisfaction regarding t+2 and rolling settlement was satisfied in case of all the sample cities. One could also notice a

perceptible increase in the proportion as one proceeded from Slightly Satisfied' to 'Totally Satisfied responses. This suggests that were having a definite positive orientation regarding T+2 and Rolling Settlement. The largest proportion of respondents in Mumbai said that they were 'Totally Satisfied' on this issue. In this category of responses, Gangtok was found to have the lowest proportion. However, the proportion of respondents who were 'Very Satisfied' was found to be the highest in Gangtok.

The majority of responses tended to be very positive satisfied regarding remittances of sales proceeds, followed by 'Moderately Satisfied.' The other responses were almost negligible in number. One cannot ignore the fact that the highest proportion of the respondents from Mumbai who were 'Totally Satisfied.' The largest proportion of 'Very Satisfied' respondents was found in Gangtok. It is thus clear the DPs in Hyderabad and Gangtok need to work harder to enhance the satisfaction levels of their customers.

The highest proportions of respondents were satisfied with the repatriation of sales proceeds. The majority of the respondents in Mumbai and Gangtok were more than those in Hyderabad in case of satisfied and totally satisfied respondnets. Also, the second common option in Hyderabad was 'Moderately Satisfied,' whereas it was 'Very Satisfied' in Mumbai and Gangtok. This suggests that DPs in Hyderabad need to really 'pull up their socks' to enhance the satisfaction levels of their customers.

The study found that the respondents were highly satisfied after opening of DEMAT account. A negligible number of respondents were not satisfied. Therefore, the concerned functionaries need to find out the reasons for such dissatisfaction so that such instances do not recur. At first glance itself, it can be seen that relatively the respondents in Hyderabad had a lesser degree of satisfaction. This is evident from the least proportion of those who were 'Totally Satisfied' and the fact that all the seven respondents who were 'Not at all satisfied' hailed from this city. On the other hand, respondents in Mumbai and Gangtok tended to exhibit almost similar levels of behaviour regarding most of the response options.

A majority of respondents agreed that there were totally satisfied with the maintenance of records of holdings in electronic form. One can find a marginal dip in the proportion of 'Totally Satisfied' respondents. Here, the figure is 59.4%,

followed by 18.0% for ‘Very Satisfied’ respondents. Another ‘change’ has been noticed that the proportion of ‘Slightly Satisfied.

The respondents were not too much impressed by this facility through their mobile phones. This is evident from the fact that the proportion of ‘Totally Satisfied’ respondents was lesser than those who were only ‘Slightly satisfied in services such as SMS alert. . Even more noteworthy was that close to 105 of the respondents were ‘not at all satisfied.' May be, the DPs should present such alerts in a more customer friendly manner. According to the city wise classification, very high proportions (18.7%) of respondents are in Hyderabad were Not at all satisfied’. This city also had the highest proportion of ‘Slightly Satisfied’ respondents. On the other hand, a very significant proportion of ‘Totally Satisfied’ respondents could be seen in Mumbai and Gangtok. As already mentioned, the DPs need to pay special attention to this aspect – especially in cities like Hyderabad.

The study found that the respondents were either slightly satisfied or not at all satisfied with cost of opening DEMAT account. Only small proportions of respondents were satisfied with cost of opening DEMAT account. In case of city wise classification, all the sample cities show the same trend. Therefore, DPs need to reduce the cost or charges of opening DEMAT account to more acceptable levels

The study found that two third of the respondents are slightly satisfied with inter depository instructions. In all the three cities, the proportion of respondents who were only ‘Slightly Satisfied’ was more than that of any of the others. This suggests that there should be a better quality of communication between the various DPs. This suggests that the quality of performance of DPs was not uniform at all places.

The study found that the respondents were either slightly satisfied or not all satisfied with the fast disbursement of non-cash corporate benefits. In case of city wise classification, Hyderabad appeared to have a more positive perception on this issue – ‘when compared to those in the other two cities. In Mumbai and Gangtok, the respondents were more inclined towards giving more negatively oriented responses. This suggests that the procedure needs to be substantially streamlined. The concerned authorities should devise means to ensure speedier disbursement of non-cash corporate benefits.

The respondents are slightly satisfied with the tariff structure of transaction charges. The satisfied responses were relatively fewer in number. In case of city wise classification, a 'tilt' towards 'Not at all Satisfied' plus 'Slightly Satisfied' responses could be seen in the individual cities as well. There is an urgent need for making the tariff structure more customer-friendly. Hence, there is a definite need to make the tariff structure more rational.

Only one third of the respondents are satisfied with the transaction statement of securities. The total of dissatisfied and slightly satisfied respondents was found to be more than the total of satisfied responses. Further, a noticeable proportion of respondents were moderately satisfied. This suggests that both the quality and frequency of furnishing these documents to the investors need to be substantially improved. In case of city wise respondents, Mumbai respondents were more slightly satisfied when compared to other cities. In Gangtok, however, the proportion of moderately satisfied respondents was highest. It suggests that there is a need to improve the transaction statements in terms of frequency and quality.

In case of conversion period of physical shares to electronic form, little more than half of respondents were satisfied. This can be considered as a healthy sign. The trend brought out in the above discussion was also noticed in the individual cities as well. However, it is noteworthy that the respondents of Gangtok were little satisfied with conversion period when compared to Hyderabad and Mumbai.

In case of conversion period of electronic form to physical form, three fourth of respondents are with totally satisfied or very satisfied. The pattern noticed in the case of conversion of shares from the physical to the electronic form (in the individual cities) was found in this case as well. This brings out the high satisfaction level of the respondents on this issue.

There are more dissatisfied respondents when compare to satisfied respondents in case of customer care service. Thus, it is clear that the DPs need to make the customer care departments more responsive to the needs of the customers. The majority of Gangtok were not at all satisfied whereas nearly half of respondents of Hyderabad and Mumbai were only slightly satisfied. None of the cities appeared to be having responsive customer care departments. Therefore, the concerned DPs need to look into this issue on priority.

Respondents were found to be satisfied with pledging of dematerialised securities. Only one eighth of the respondents were dissatisfied. This suggests that the DPs were quite cooperative on this issue. The respondents of Gangtok were indifferent when compared to the responses of Hyderabad and Mumbai in case of level of satisfaction. The DPs needs to make a more convenient procedure for the investors.

The study found that more respondents were slightly satisfied or totally dissatisfied regarding the awareness programme provided by the depository service. DPs in Mumbai seemed to have performed better than their counterparts in the other two cities since the proportion of 'Totally Satisfied' responses in Mumbai was as high as 40.4%. It also needs to be noted that all the three cities had a significant proportion of respondents who were 'Not at all satisfied.'

The study found that the majority of respondents were satisfied with purchase of securities on behalf of minors. The largest proportion of respondents in Mumbai, vis-à-via other cities, was 'Totally Satisfied' on this issue. In Gangtok, only 21.4% of the respondents expressed such an opinion. A high proportion of 'Moderately Satisfied' respondents were found in Gangtok.

The studies found that one third of the respondents were either not at all satisfied or totally dissatisfied with the facility of monthly newsletters. This suggests that the publishers of the newsletters need to do much more to make these publications fully useful to the investors and other readers. The highly satisfied respondents were found in Mumbai whereas least in Gangtok.

## Awareness Level of Services

Gender, income and awareness, educational background, and percentage of investment are not showing significant impact on the respondent awareness level of the depository services.

Marital status, profession, category of respondent and age of the DEMAT account are showing significant impact on the respondent awareness level of the depository services.

**Liquidity and profitability and Level of satisfaction between Sample Cities**

Among the sample cities, Hyderabad is significantly different from the other two cities namely Mumbai and Gangtok in terms of liquidity and profitability.

All the sample cities indicate that the respondent level of satisfaction in regarding the depository services is similar.

## Suggestions

Based on the data analysis and investors suggestions, the following measures to strengthen the depository system in capital market transactions in India are suggested:

- Majority of the respondents were male, awareness should be create among female community.
- More respondents were graduation and more than of graduation but it should expand to basic level education people also.
- Most of home makers and students are not aware of the capital markets. Therefore there is a need to create awareness among the said group so as to treat investment in capital market as an investment avenue.
- When compared to long term investors, many of the respondents invested for short term duration. Awareness should be created to explain the benefits of the long term investments in capital market.
- Most of the investors belong to banking and insurance sectors. Persons engaged in other professions should also be motivated to invest in stock market.
- The respondents select depository participants based on the cost structure and image of DPs. Therefore cost structure and brand image of depository participant should be improved to attract investors.
- DP s services such as SMS alert, news letter should be offered to enhance information in a more customer friendly manner. Investors need to be periodically informed about the trends in the depositories market.
- The account opening charges or fees should be reduced to more acceptable levels, so that more investors can afford to open an account.
- Inter depository instructions suggest that there should be a better quality of communication between the various DPs.

- The quality of performance of DPs should be improved at all places and consistency among the DPs should be maintained.
- Fast disbursement of non-cash corporate benefits suggests that the procedure needs to be substantially streamlined.
- A customer friendly tariff structure is needed to make the tariff structure more rational.
- The frequency and quality of the transaction statements should be improved to enhance better customer service.
- DPs should provide customer care departments for more responsive and prompt services to meet the requirements of the investors.
- A more convenient procedure should be adopted by the DPs and bank to aid pledging of the securities by investors at both levels.
- More programme should be formulated to enhance awareness of depository services in all the three sample cities.
- The DPs should concentrate the following factors namely electronic credit of securities, timely process of depositing securities, reduction in cost and time, quick services and faster disbursement of benefits.
- Depositories should conduct workshops on financial literacy to provide knowledge to investors for making investments in capital markets.
- When investors sell the shares, the quantity is immediately debited to the DEMAT account. However, the money is not credited immediately. Therefore measures should be taken to transfer cash to the investors account without much delay.

## Suggestions by the respondent

- Depositories should be operating round the clock.
- Depositories should provide service to banks.
- Depository services should be spread even in rural areas and small towns.
- Depositories should conduct monthly awareness programs for the investors.
- Depositories should provide depository services free of cost to persons belonging to the lower castes.
- Depositories should provide SMS service to the investors for each and every transaction.

## Scope for further study

The study of depository system in capital market plays a vital role in facilitating investment in capital markets. The scholar has acknowledged the following research areas which can be studied in future in order to explore depository system or services in India

- ❖ Similar research can be conducted with the large sample size covering total area of DEMAT account holders population.
- ❖ Interstate comparison of depository services in India
- ❖ A census survey of DEMAT account holders opinion on depository system in India.
- ❖ Comparison of depository services between north India and south India.

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CMIE monthly review of India economy

NSDL monthly updates, annual reports and work book

RBI annual reports

SEBI hand book of statistics

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www.bseindia.com

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# APPENDICES

# APPENDIX - A
# QUESTIONNAIRE

**BISHETTI RAMESH,**
Research Scholar,
School Of Management Studies,
University Of Hyderabad, Hyderabad.

## QUESTIONNAIRE FOR AN INVESTOR

**Dear Respondent,**

I, BISHETTI RAMESH, Research Scholar, School of Management Studies, University of Hyderabad, pursuing my Ph.D. on the topic "DEPOSITORY SYSTEM: ROLE IN DEVELOPMENT OF CAPITAL MARKET IN INDIA". Pursuance of this research involves conducting a survey regarding perceived Depository System in India. Please indicate the level of importance of each statement for you. Your comment is highly important for the analysis, will be treated with anonymity as well as extreme confidentiality and under any circumstances will not be revealed to any individual or organization. Your valuable responses would help me in doing my research successfully. I, solicit your cooperation in this endeavor.

**Instructions:** Please tick the appropriate box/Number and give necessary information wherever applicable.

**INDIVIDUAL PROFILE**

This section refers to your personal information which helps to validate the questionnaire your co-operation in providing this information will be greatly appreciated .All demographic information will be kept 100% confidential. Please tick/fill up the blanks with the response wherever required.

1. Name(Option)
2. Gender: a) Male b) Female
3. Age (in years):
4. Marital Status: a) Single b) Married
5. City:
6. Monthly Income Income (Rs.)
   a) Below Rs. 20,000 b) Between Rs. 20,001 to 30,000
   c) Between Rs. 30,001 to 40,000 d) Above Rs. 40,000

7 Educational background

a)SSC b)Intermediate c)Graduate d)Postgraduate e)Professional Course f)Others (Please specify) ……

8. Profession

a) Govt. employee b) Private employee c)Self employed d)Home maker e)Student f)Others (Please specify) ……

**INVESTMENT PROFILE**

9. How much percentage approximately do you save per month?

a) 1%- 10% b) 11%-20% c) 21%-30% d) 31%-40% e) Above 40%

10. 10. How much percentage of your savings do you invest in securities?

a) 0%- 10% b) 11%-20% c) 21%-30% d) 31%-40% e) Above 40%

11. How long have you been an investor?

a) Before 1996 b) After 1996

12. Name of the DP:

13. What is the status of your DP?

a) Stock broker and DP b) Banker and DP C) Stock exchange and DP d) NBFC and DP e) DP only.

14. What is the status of your DEMAT account.

a) Individual resident b) Individual c) NRI d) HUF e) Firms f) Trust g) Joint stock companies h) FII

15. From the following select the most preferred attribute for DP selection.

a)Safety b) Accessibility c) Image d) Cost Structure e) Quick settlement f)Personalized Attention

16. Which of the following is most important reason for opening DEMAT Account with

a) specific institution b) Past Dealing with Bank c) Low Maintenance Charges d)Friends Recommendation e) Better Services f) Easy Accessibility g)Multiple Reasons

17. Do you invest in any of the following?

a) Shares b) Debentures c) Mutual funds d) Gold e) Others…….

18. Where do you invest?

a)Primary market b) Secondary market c) Both

19. How frequently do you buy and sell shares?

a) Daily b) Once in a week c) Once in a month d) Once in a quarter

e) Once in 6 months f) Once in a year g) Not normally

20. How many DEMAT accounts do you have?

a) 1 b) 2 c) 3-5 d) 6 and above

21. Age of your DEMAT account with the DP

a) Less than 1 year b) 1-3 years c) 3-5 years d) 5-7 years b) Above 7 years

22. How do you trade?

a) Offline b) Online

## LIQUIDITY AND PROFITABILITY

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 23. What is your position after implementation of depository system? | | | | | |
| Liquidity | | | | | |
| Profitability | | | | | |
| Cost | | | | | |
| Transperency | | | | | |
| Transaction Time | | | | | |
| Security | | | | | |
| 24. Are you more inclined to buy or sell large quantity of securities as and when you desired after the introduction of depository system (at a price close to the observed price)? | | | | | |
| 25. Are you more inclined to buy or sell small quantity of securities as and when you desired the introduction of depository system? | | | | | |
| 26. Are you more inclined to buy or sell as and when you desired a particular security at the desired price before significant movement in the price ? | | | | | |
| 27. Whether your trading volume increased after dematerialization of shares. | | | | | |
| 28. Has your trading frequency changed after depository system? | | | | | |
| 29. How do you think is the Speed of arbitrage trading after introduction of depository system. | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Note:** 1=No Affect; 2= Minor Affect; 3= Neutral; 4= Moderate affect; 5=Major affect | | | | | |

## CONVENIENCE

30. How many days does it take to open a DEMAT Account

a) Less than 1 day b) 1-2 days c) 2-5 days d) More than 5 days

31. What motivates you to invest in shares?

a) Regular and reasonable return b) Safety of investment c) Liquidity

d) Capital appreciation e) Speculation f) Gambling

32. You have a DEMAT account with

a) NSDL b) CDSL c) NSDL and CDSL

33. How much time your DP took to dematerialize your shares?

a) 15 days b) 15-30 days c) 30- 60 days d) More than 60 days

34. Which mode of balance enquiry do you follow?

a) Visiting office b) Online enquire c) Telephone enquiry d) Others

35. How did you come to know about the DEMAT services.

a) Friend b) Relative c) Broker d) Website e) Investor Education

f)Media g) others.

36. Do you support multiple depositories in INDIA?

a) Yes b) No

37. Are you aware of services offered by depository system in India?

| | | | | |
|---|---|---|---|---|
| Not at all aware | Slightly aware | Somewhat aware | Moderate aware | Extremely aware |

## INVESTOR 'S DIFFICULTIES WITH DEPOSITORY SYSTEM

38. After the settlement, when do you get dematerialization shares credited to your account?

a)Within 24 hours b) Within 48 hours c) Within 72 hours d) Within a week

e)Within a 15 days f) More than a 15 days .

39. How frequently you check your share holding position of your DEMAT Account with DP?

a) Daily b) Once in a week c) Once in 15 days d) Once in a month

e) Once in a quarter f) Once in 6 months

40. Did you transfer your DEMAT Account from one DP to another DP?.

a) Yes b) No

41. I use internet facility to _____

a) Check my statement of account b) Check my transaction statement

c) Receipt instructions d) Never use internet

42. Do you support the introduction of depository participant services round the clock services.

| Strongly agree | Agree | Undecided | Disagree | Strongly disagree |
|---|---|---|---|---|
| | | | | |

43. Do you have any problems with depository system? a) Yes b) No

44. If your answer is yes, kindly give your opinion about the statements regarding Indian Depository System

1=Not at all Satisfied 2= Slightly Satisfied 3=Moderately Satisfied 4= Very Satisfied 5= Extremely Satisfied

| | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | Dematerilisation | | | | | |
| 2 | Rematerilisation | | | | | |
| 3 | Settlement period | | | | | |
| 4 | Safety of security | | | | | |
| 5 | Attitude of staff | | | | | |
| 6 | Timely services by depository | | | | | |
| 7 | Cost of transaction | | | | | |
| 8 | Nomination of facility | | | | | |
| 9 | Timely process of depositing securities | | | | | |
| 10 | Availability of trained staff | | | | | |
| 11 | T+2 and Rolling settlement | | | | | |
| 12 | Remittance of sale proceeds | | | | | |
| 13 | Repatriation of sale proceeds | | | | | |
| 14 | Opening of DEMAT account | | | | | |
| 15 | Maintance of records of holding in electronic form | | | | | |
| 16 | SMS alert | | | | | |
| 17 | Account opening charge | | | | | |
| 18 | Inter depository instructions | | | | | |
| 19 | Fast disbursement of non-cash corporate benefits | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 20 | Tariff structure | | | | | |
| 21 | Transaction statement | | | | | |
| 22 | Converstion period of physical shares to electronic form | | | | | |
| 23 | Converstion period of electronic form to physical form | | | | | |
| 24 | Customer care service response | | | | | |
| 25 | Pledging of dematerialized securities | | | | | |
| 26 | Awareness programme about trends in depository service | | | | | |
| 27 | Sale securities on behalf of the minor | | | | | |
| 28 | Monthly news letter | | | | | |

45. Kindly give your suggestions for overall Development of Depository System in India:

_____

_____

_____

Thank You,
Forever, for giving your valuable time, for our better future

**If you have any queries and suggestions, please contact:**
**BISHETTI RAMESH, RESEARCH SCHOLAR, SCHOOL OF MANAGEMENT STUDIES, UNIVERSITY OF HYDERABAD, E-MAIL:rameshbyshetty@gmail.com, Mobile No: +91-9849625937.**

# APPENDIX - B

# LIST OF PUBLICATION

# List of publications

## Papers published in journals

1. B.Ramesh (2017), DEMAT Account Holder's Perception about the efficiency of Depository Services offered by Depositories: An Empirical Study. International Journal of Applied Financial Management Perspectives, Volume 6, Number 2, April – June' 2017.ISSN: 2279-0896.
2. B.Ramesh (2013) the Role of Forensic Accounting in Modern Corporate Accounting World. ZENITH International Journal of Multidisciplinary Research Vol.3. (1).
3. B.Ramesh (2013) an overview of Factoring Services in India. ZENITH International Journal of Business Economics & Management Research, Vol.3 (3), March.
4. B.Ramesh (2012) Importance of XBRL: An overview. International Journal of Research in Computer Application & Management Volume No. 2 (2012), Issue No. 10.
5. Syed Azhar & B.Ramesh (2011) Working Capital Management and Profitability – A Case Study of Andhra Pradesh Power Generation Corporation. International Journal of Research in Commerce & Management. Volume No. 2, Issue No. 12.

## Papers published in conference proceedings

1. B.Ramesh (2017) Perceptions of Investors In Yadadri Bhuvanagiri District In Telangana Towards Online Share Trading, international journal of trade and global business perspective, International Conference Bharathiya Vidya Bhavans College Hyderabad, Telangana, India.
2. B.Ramesh(2015) A Study Of Investors Expectations Towards Depository Participants in Telangana State, international conference IIT ROORKE ,NOIDA,India, December 4-6.
3. B.Ramesh (2015) Measuring Financial Health of Indus Ind Bank Limited using "Z" Score Model-A Case Study, Financial Markets and Services Emerging Trends, Excel India Publishers, New Delhi, international conference IGNTU, Amarkanta, Madya Pradesh, India.

4. B.Ramesh(2014) a study on retail investors behaviour in Nalgonda district, Andhra Pradesh, National Conference on Behavioural Finance, JNTU Hyderabad, Telangana, India, January 22-23.
5. B. Ramesh (2012) FDI and stock market in India, National Conference, Maulana Azad National Urdu University Hyderabad, Telangana, India.

PEZZOTTAITE JOURNALS

*Volume 6, Number 2, April – June' 2017*
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*H5-Index: 2, H5-Median: 2, H-Citations: 5*

# DEMAT ACCOUNT HOLDER'S PERCEPTION ABOUT THE EFFICIENCY OF DEPOSITORY SERVICES OFFERED BY DEPOSITORIES: AN EMPIRICAL STUDY

**B. Ramesh**[13]

**ABSTRACT**

*Depository services have changed the Indian capital market operations. Before 1996 there were lot difficulties for the transfer of shares from one person to another person after buying and selling operations and investor community did not show much faith in a share transaction before depository services. The study has been undertaken with a purpose to find out whether the perception of DEMAT account holders has changes regarding the efficiency of depository services. A study was undertaken with an objective to what extent depository services have been able to change the viewpoint of the DEMAT account holders and also to find out the association of demographic factors and the perception towards efficiency of depository services provided by depository participants. For the analysis of the study percentage and chi-square test has applied.*

**KEYWORDS**

**DEMAT, Depository Participant, Depository Services, Investor Perception etc.**

## *INTRODUCTION*

Due to rapid change in the technology, there were many changes in the world and domestic economy due to this due to this in the entire sector's information technology has implemented same thing in the case of capital markets. After the new economic policy of Narasimha Rao, the Indian economy has made many changes in the capital market. Suitable for this, the Capital Market of Electronic Policy was introduced. However, after trading in the electronic trading, the trading went well, but the share exchange from seller to buyer very difficult, moreover, it took more days and problems like postal delay, theft, forgery etc. Problems were arisen for avoiding all those things in Indian capital market introduced depository system after this system shares can transfer from seller to buyer T plus two days. It means if you sell shares today after two these shares transfer to buyer account. In the year 1996, Depositories system introduced. In India we have a multiple depository system initially 1996 National Securities Depository Limited (NSDL) introduced and then 1999 Central Depository Services Limited (CDSL) introduced. For the effective running of the activities of capital market transactions depository system was introduced in the year 1996.

### *Depository System in Indian Capital Market*

The depository system plays very important role in capital market by providing efficiency, transparency, smooth services through transferring shares as well as holding shares in electronic form, while payment of dividend and issue of bonus shares to existing shareholders. In capital markets, there are two markets 1. Primary market 2. Secondary market both cases we can use depository services.

- Primary market is also called new issue market while issuing shares and allotment through format can use depository services.
- Secondary market is also called second hand market generally all buying and selling operations through secondary market except IPO, Bonus issue and rights issue.

## *REVIEW OF LITERATURE*

Sanjiv Agarwal and Pawan Kumar Vijay (1998) discussed a variety of operational and regulatory aspects of the depository system in India. They also provided a meticulous approach to the structure and functioning of the depository system in India.

Santi Swarup and Ambika Verma (1998) in their study on 30 brokers concluded that the shortcomings in the physical delivery problem could be solved to a great extent by adopting the depository system.

Mohan Rao (2002) while discussing dematerialisation stated that to protect the investors, the capital market regulator (SEBI) has taken up a series of steps. One of the steps is dematerialisation of shares and securities of the shareholders/investors, which would give more protection to them. Due to the many benefits of the system, it has become very popular in the capital market in India. It

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# AN OVERVIEW OF FACTORING SERVICES IN INDIA

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RESEARCH SCHOLAR,
SCHOOL OF MANAGEMENT STUDIES,
UNIVERSITY OF HYDERABAD

## ABSTRACT

This paper explains the overview of factoring services in India and the factoring idea. Factoring can broadly be defined as an arrangement in which receivables arising out of sale of goods or services are sold to the "factor" as a result of which the title to the goods or services represented by the said receivables passes on to the factor Factoring is a financial alternative for the administration of receivables. Factoring company pays the outstanding amount (Balance 20%-finance cost-operating cost) to the client when the customer pays the debt. Collection of debt from the customer is done either by the factor or the client depending upon the type of factoring.

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3rd International Conference on

# Applied Economics and Finance

January 28, 2017

## Certificate

This is to certify that Prof./Dr./Mr./Ms. B Ramesh

of University of Hyderabad

has participated/chaired/presented a paper entitled

Exploring the Factors Influencing the Choice of Investors for Opening Demat Account While Selecting Depository Participants

in 3rd International Conference on Applied Economics and Finance (ICAEF), organized by GITAM School *of* International Business, GITAM University, Visakhapatnam, in association with The Indian Econometric Society (TIES) on January 28, 2017.

Conference Director (GSIB)

Conference Coordinator (TIES)

Dean & Director (GSIB)

# EXPLORING THE FACTORS INFLUENCING THE CHOICE OF INVESTORS FOR OPENING DEMAT ACCOUNT WHILE SELECTING DEPOSITORY PARTICIPANTS:

## A FACTOR ANALYSIS APPROACH

**B.RAMESH, RESEARCH SCHOLAR, SCHOOL OF MANAGEMENT STUDIES, UNIVERSITY OF HYDERABAD**

**Email.id. rameshbyshetty@gmail.com,Mobile No. 9849625937**

## ABSTRACT

The main purpose of this paper is to find out the factors influencing the selection of investors for openings demat account in Hyderabad and Secunderabad city. The research is based on the primary data through questionnaires. The convenience sampling method has been adopted for this study. Here, data has been collected from 300 respondents who are investing in equity, mutual funds, commodity market and the currency and bullion markets. For analysing the data, the writer has applied factor analysis. The study brings out that demat account holders are influenced by the services like settlement period, contract notes, account information, etc., offered by the depository participants.

Key words: DEMAT, Depository Participant, Depository, and Investor Behaviour.

## Introduction:

Capital market is the economic indicator of the country. Based on the movements on the stock market, we can estimate the country's economic condition. After 1991, economic reforms, including those in the financial markets, started in India. The reforms in the financial markets included the increasing use of automation for the capital market transactions and introduction of the Depository System in 1996. These measures have made it easier to buy or sell shares. The Depository System works like a bank account – when shares are bought, the figures are credited to the account of the depositor; when shares are sold, the account is duly debited.

Today, there is increasing competition among the depository participants. This paper will seek to study the opinions of some demat account holders.

# ICRBS 15

Sheffield Hallam University

*This is to certify that*

*B. RAMESH*

*has presented/submitted a research paper*
*/Participated as discussant and/or provided comments/Chaired a session*
*in the*

*International Conference on 'Research and Business Sustainability'*

*organised by*

*Department of Management Studies, Indian Institute of Technology Roorkee*
*&*
*Sheffield Business School, Sheffield Hallam University, United Kingdom*

*scheduled from 4th to 6th December 2015*

*held at*

*IIT Roorkee - Greater Noida Campus, Knowledge Park II, Greater Noida*

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*Dr. Usha Lenka*
*Organizing Secretary*

*Dr. Rajat Agrawal*
*Convener*

Proceedings of ICRBS 2015
December 4-6, 2015
Department of Management Studies, IIT Roorkee

# A Study of Investors Expectations Towards Depository Participants in Telangana State

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*Abstract:* **The reforms in the Indian economy also impacted the financial services industry in the country. As a result, the depository system, NSDL, was introduced in India in 1996.Thereafter, the secondary depository, CDSL, was launched in 1999. India, today, has a multiple depository system. The main function of the depository system includes dematerialisation of shares. Purpose of research: The present study will attempt to know the investors' opinion on depository participants in the state of Telangana. The writer has obtained the opinion of DEMAT account holders in Telangana regarding account opening, maintenance charges settlement period, etc.**

**Methodology of the study: The data was collected by distributing structured questionnaires to 200 DEMAT account holders. For the statistical analysis of data, the SPSS method was employed. Findings From the analysis of data, it could be concluded that awareness levels of majority of the respondents are not to the desired degree. Hence, the DPs should conduct more awareness programmes for the investors.**

*Keywords:* **Depository, Depository participant, Investors, Dematerialisation, NSDL.**

## 1. INTRODUCTION

After 1991 in India due to economic reforms structural changes were brought about in Indian capital markets. These included the introduction of the depository system in 1996 and adoption of electronic trading. These changes sought to ensure methodical development of the financial sector and greater security of the deposits of the investors. The earlier system of physical trading placed restrictions on trading volumes. The new one has largely succeeded in minimising delays in the transfer of shares one person to another person. Today, India is following the multiple depository system. Thanks to the dematerialisation process, physical certificates can be converted into the electronic form. On the other hand, re-materilisation is the process of converting electronic mode shares into the physical mode. After the depository system was adopted, the following issues have been successfully addressed:

1. Bad deliveries due to signature difference
2. Mistake in completion of transfer deed.
3. Fake certificates.
4. Tearing and mutilation of certificates.
5. Cost of stamp duty
6. Postal delays
7. Processing time taken by the company
8. Delay in primary market allotment of shares and refund of amount
9. Dividend collection

The Depository does not directly provide services to the investor. Depositories appoint agents, known as depository participants. A Depository Participant works as a branch of the particular Depository. A Depository Participant is the mediator between the Depository and investor. Investor should open DEMAT account with the Depository Participant. Now a days, any investor wishing to invest in the capital market (either in primary market or secondary market), must open a DEMAT account with a Depository Participant. Only then can he or she invest in the stock market.

At present, in India, there are two Depositories: 1.National Securities Depository Limited (NSDL) 2. Central Depository Services Limited (CDSL). The NSDL was the first depository. It started operation in the year 1996. NSDL was promoted by NSE, Banks and financial institutions. The other Depository,

# APPENDIX - C
# PLAGARISM REPORT

# DEPOSITORY SYSTEM:ROLE IN DEVELOPMENT OF CAPITAL MARKETS IN INDIA

*by* Ramesh Bishetti


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