Initial Public Offerings (IPOs): Awareness, Behavioural Biases Leading to Investment Intention and Investor Satisfaction

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Submitted By

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DECLARATION

I, **ASIF HASAN**, hereby declare that the thesis entitled, "**Initial Public Offerings (IPOs): Awareness, Behavioural Biases Leading to Investment Intention and Investor Satisfaction**," submitted by me under the guidance and research 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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Research articles related to the topic of this thesis have been:

A. Published in the following publication:

1. Published paper titled "Sector Wise Investment Preference of Retail Investors-A Study of City Kolkata" in EPRA International Journal of, Economic and Business Review, Vol.-IV, Issue-IV, pp. 135-140, ISSN: 2349-0187.

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B. Presented in the following conferences:

1. Presented a paper titled "Retail Investors Concerns during Investment through Primary Market: Evidences from Hyderabad city" at International Conference on Financial Markets and Corporate Finance, held on 12-13th August 2016, organized by the IIT Chennai.

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1.	Financial Management and Strategic Finance	3	Pass
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Paper No	Title of the Courses	Max. Marks	Min. Marks	Marks Obtained	Month & Year of Passing
	Semester - I				
P - I	Quantitative Techniques for Research	100	40	56	DEC/11
P - II	Research Methodology	100	40	76	DEC/11
P - III	Optional:Financial Management	100	40	76	DEC/11
	Semester - II				
P - I	Seminar Presentation 1	100	50	68	JUL/12
P - II	Seminar Presentation 2	100	50	65	JUL/12
P - III	Seminar Presentation 3	100	50	72	JUL/12
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ABSTRACT

The present study has been undertaken to examine the awareness level of retail investors about the primary market, the presence of behavioural biases while investing in IPOs and their impact on investment intention and investment satisfaction. Moreover, this study has attempted to find the determinants of retail investors' demand and listing day returns in the primary market. Both primary and secondary data has been collected for the study.

A total 228 IPOs listed in the NSE through the process of book building during the financial years 2008-09 to 2017-18 have been used for the secondary data analysis. Two models have been used to achieve the research questions and objectives of the study. The first analysis has been done to know determinants of listing day returns, and the second analysis has been done to identify determinants for retail investors' demand of IPOs represented by subscription level (times subscribed). Multivariate regression has been performed and E views software has used to analyse the secondary data. The result from the analysis of secondary data revealed that demand of IPOs from retail investors is positively influencing the listing day returns. The results from the second model exhibit that demand for IPOs from retail investors are high for the issue where investors have to invest more money when applying for the subscription of IPOs; the result has supported the overreaction hypothesis that retail investors invest aggressively in IPOs.

Primary data has been collected by using a structured questionnaire to analyze investor awareness, presence of behavioural biases, and their impact on investment intention, investment satisfaction and concerns of retail investors about IPO investment.

Primary data has been collected from four different cities: Mumbai, Delhi, Hyderabad, and Kolkata, representing the four regions of India. SPSS 20 and SPSS AMOS 20 softwares have been used to analyze a total of 838 responses to achieve the objectives and hypotheses. Firstly, descriptives of respondents and cross-tab analysis have been presented, followed by assumptions of data in the analysis part. Accordingly, all items have been tested in exploratory factor analysis to identify the constructs. Following this, confirmatory factor analysis has been used to test the measurement theory. This study makes an effort to identify the mediating impact of Investment Intention between behavioural biases and investment satisfaction. Structured equation modeling has been used by following the recommendation of Baron and Kenny.

The results from the primary data analysis have confirmed the presence of behavioural biases like overconfidence, over optimism and herding behaviour in retail investors while investing in IPOs and these biases are leading to investment intentions. Behavioural biases positively influence investment intentions and investment satisfaction of retail investors and investment intention plays a mediating role between behavioural biases and investment satisfaction.

When asked about the preferred time horizon of investments in IPOs, nearly 50% of the respondents prefer to invest till listing day only. The results from analysis reveal that retail investors differ in their level of awareness about the primary market based on which class of education groups, income groups and experience groups they belong to.

Presence of volatility in the primary market has been found from MAAR analysis. Only 35% reserved share for retail investors and information asymmetry are

the top three concerns for retail investors in the primary market. Implications and directions for future study have been also discussed in the final chapter.

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LIST OF ABBREVIATIONS

SEBI	Securities and Exchange Board of India
RBI	Reserve Bank of India
NSE	National Stock Exchange
BSE	Bombay Stock Exchange
NIM	New Issue Market
IPO	Initial Public Offering
FPO	Follow on Public offering
RII	Retail Individual Investor
QIB	Qualified Institutional Buyer
NII	Non-Institutional Investor
DEMAT	Dematerialisation
MAAR	Market Adjusted Abnormal Return
GDP	Gross Domestic Product
ISIN	International Securities Identification Number
LOG	Logarithm
OLS	Ordinary Least Squares
SPSS	Statistical Package for the Social Sciences
AMOS	Analysis of Moment Structures
IV	Independent Variable
DV	Dependent Variable
CFI	Difference in Comparative Fit Index
AGFI	Adjusted Goodness of Fit Index
AVE	Average Variance Extracted
BB	Behavioural Biases
AW	Awareness
ID	Investment Intention
IS	Investment Satisfaction
CI	Concerns of Investors
FA	Factor Analysis
EFA	Exploratory Factor Analysis
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CR	Construct Reliability

DOF/DF	Degrees of freedom
GFI	Goodness of Fit Index
GOF	Goodness of Fit
IFI	Incremental Fit Indices
KMO	Kaiser – Meyer – Olkin
ANOVA	Analysis of Variance
NFI	Normed Fit Index
PCA	Principle Component Analysis
PNFI	Parsimony Normed Fit Index
RMR	Root Mean Residual
RMSEA	Route Mean Square Error of Approximation
SD	Standard Deviation
SEM	Structural Equation Modeling
SRMR	Standardized Root Mean Residual

LIST OF SYMBOLS

Σ ……... Sigma

p ……... Probability

β …… Beta

α …… Alpha

μ …… Mu

σ …… Sigma (Standard Deviation)

σ2 …….. Sigma Square (Variance)

df ……... Degrees of Freedom

R……Correlation Coefficient

R^2 ……..Coefficient of Determination

LN ……... Natural Logarithm

CHAPTER-I

INTRODUCTION

1 INTRODUCTION

This chapter presents an overview of the primary market and its functions, and describes the various products and functionaries of the new issue market. Different stages of listing, latest provisions, and the process of grading in Indian IPOs is also explored. According to the Securities and Exchange Board of India (SEBI), firms must disclose and make public the prospectus, offer documents, and other requirements for an IPO. These formalities are explained in detail. The Book building process, a common yet essential part, is also described. Investment intentions of individual investors are discussed; specifically, retail investors are defined in this chapter. The number of IPOs listed in NSE in the financial year 2008 to 2018 have been illustrated with the help of a graph and the region wise investments made by individuals in different options are represented in tabular form.

1.1 AN OVERVIEW OF THE PRIMARY MARKET

One of the main pre-requisites for growth in industry and commerce of a country is a decent capital market. Firms can develop, diversify or remodel their business with the investments made. To raise capital, firms usually issue shares in the primary market (new issue market), which is a part of the capital market that deals with the issuance of new securities. The primary market ensures productive utilization of disposal income of households and facilitates in raising capital through direct investment in firms with less intermediation. It helps in accelerating capital formation in a country's economy.

As per SEBI, "Primary market can be defined as a market where the securities are sold in order to raise the capital or the fund required by the company". It is a market for fresh capital or for new issues, and makes the channels of the sale of new

equity, debt securities, and preference shares accessible. Firms in the private and public sectors can raise capital (acquire funding) through the sale of new securities in the primary market. Listing of a firm on the stock exchange for the first time through an issue of stock is called initial public offer (IPO). The primary market provides the issuers of stock from the government or other firms means to raise funds for investments in projects or to clear obligations. It is also known as the New Issue Market as it deals with issue of new securities to the public which were earlier unavailable. For raising capital, firms take account of current market conditions of IPO issues.

Investment bankers (underwriters) play a prominent role in an IPO, setting the price band of the issue, managing promotional activities and monitoring the sale of the IPO. Corporates and firms must fulfill all requirements and regulatory norms to sell securities in the primary market.

1.1.1 Functions of Primary Market

The main function of the primary market is to streamline the transmission of funds from saver to users of the fund. The savers consist of a combination of different categories like individual investors, insurance companies, commercial banks, etc. The users include public limited companies and government organizations. The primary market not only provides a platform for collecting funds to start new enterprises but also finances for development/ diversification/ modernization of existing enterprises. Its functions are:

a) Origination

b) Underwriting and

c) Distribution.

a) Origination

Origination starts before a new issue is floated in the primary market. It involves inquiry, analysis, and handling of new venture proposals. There are two parts to this function. The first is to confirm the feasibility of a new project through a cautious study of its technical, financial and economic viability. The preliminary investigation is initiated by the promoters of the new issue. The second aspect includes advisory services, which enhance the quality of new issues and safeguard their success. This function is executed by "merchant bankers", who might be commercial banks, private firms or all India financial institutions.

b) Underwriting

It is a contract where a nominated underwriter promises to subscribe to the stated number of stocks or debentures or a specified quantity of share if the public does not subscribe to the issue. If the new issue is entirely subscribed, then there is no accountability on the underwriter. If some proportion remains unsold, the underwriter purchases the unsold shares.

c) Distribution

This function comprises the sale of a new issue to investors. This is executed by brokers and agents who maintain direct and regular communication with the ultimate investors.

1.1.2 Functionaries of the New Issue Market

The functionaries of the primary market are those concerned with the pre-issue process of listing of securities in the market and to the public. The important functionaries include:

a) Merchant Bankers

To raise capital from the primary market, promoters depend on "merchant bankers", who manage the entire show through various services. They advice investors about incentives that exist in the form of tax reliefs and legal obligations. They also help firms in carrying out functions associated with new issues, such as security determinants, drafting of prospectus; managing application forms, allotment letters and other documents; registrar's appointment for handling stock applications and transfers; arrangement of underwriters, shares placement, appointment of brokers, selection of the bankers for the issue and also promotion of the issue itself.

b) Promoters of the issue

Company promoters help in establishing a joint stock company. They are behind the conceptualization of the idea of a possible business proposition. Promoters carry out the financial planning and acquire necessary funds required to convert the proposition into operation. When a firm successfully attracts investors to subscribe to its shares, the promoters are rewarded. If a new venture fails to attract investors, promoters lose not only the money invested in the venture, but also their reputation and credibility.

c) Underwriters of the issue

Underwriting is a contract under which certain parties give guarantee to the issuing firm that they would subscribe to debentures or other shares up to a specified level in case the subscription by the public does not meet the expected numbers. New firms going for public issue are obligated to ensure that their Initial Public Offer gets fully subscribed. Firms cannot depend on their promotion strategy alone to ensure complete subscription.

d) Registrars of the issue

The Registrars, also called the "Issue House", are accountable for receiving new issue applications from different collection centers through branches of bankers, analyzing the applications, recommending the basis of allotment, arranging the letters of allotment and facilitating the registration of new members. A Registrar's job usually begins with the opening of a subscription and remains till the allotted share certificates are dispatched.

e) Brokers

Brokers bring together potential investors and firms. The success or failure of a new issue depends to a great extent on the network a broker has. Normally, brokers are members of recognized "stock exchanges". They provide improved professional services to investors and encourage the expansion of the capital market on positive lines. The government has approved various memberships of brokers as associates of stock exchanges and has given recognition to corporate firms and financial institutions together with subsidiaries of banks.

f) Bankers

Commercial banks receive IPO application forms and money from potential investors. Depending on the issue size, at least 4 or 5 banks are nominated as bankers for the new issue. The IPO application money is accepted at these nominated bank branches, which can be at several locations. These branches send the IPO application forms and money received to a specified bank branch called the "Controlling Branch".

g) Financial Institutions

Financial institutions sanction support or term loans to the firm after approving the prospectus draft and the proposed plan for public issue. There are three

major Financial Institutions in India - IDBI, IFCI,and ICICI. Sometimes, all three organizations jointly finance a venture under a participating finance system; in such cases, one of them is usually chosen as the "Lead Financial Institution", which executes on behalf of the other two financial institutions.

h) Publicity and Advertising Agents

A Public issue is a platform for savers and investors which motivates and encourages them to invest in a new issue of a firm. It becomes imperative for the general public to be aware of the firm, its actions, future plans etc. Therefore, it is necessary for a firm going for the new issue to promote the new listing through different channels of promotion like Press Releases, Newspaper and Television Advertisements, Conferences, Brochures, Leaflets, Posters and Audio-Visual Shows.

i) Government Statutory Agencies

There are several agencies directly associated with a public issue; some of these are statutory/government agencies like:

(1) SEBI, which regulates the new issue.

(2) Registrar of Companies with whom prospectus has to be filed and recorded before the new issue, under Section 60 of the Companies Act, 1956.

(3) Reserve Bank of India, whose consent has to be obtained for non-resident investment, if any, in the companies.

(4) The Stock Exchange, where companies' shares/debentures are to be listed.

(5) Industrial Licensing Authorities, from whom industrial license has to be obtained for the new project or other constitutional bodies like Directorate General of Technical Development (DGTD) etc.

(6) Pollution Control Authorities, whose permission may have to be taken as mentioned in the prospectus.

j) Other Agencies

In addition, companies also interface with other agencies like auditors, taxation experts and legal advisers whose names or statements are revealed in the prospectus.

1.1.3 Classification of Issues in the Primary Market

New issues listed in the primary market by Indian companies can be categorized as public issue, rights issue, bonus issue and private placement. The classification of issues is explained below:

(a) Public Issue

(i) Initial Public Offer (IPO)

(ii) Further Public Offer (FPO)

(b) Rights Issue

(c) Bonus Issue

(d) Private Placement

(i) Preferential Issue

(ii) Qualified Institutional Placement

1.2 INITIAL PUBLIC OFFERING

A company may raise funds from the new issue market using an initial public offer, rights issue or private placement. An Initial Public Offer is unique in many ways as it brings about structural changes in a firm, impacting the functioning of promoters and management. Meeting the expectations of shareholders is a humongous

task for a newly public company. Statistics show that firms look at the new issue market as an enticing source of finance through IPO.

The regulator Security and Exchange Board of India has advanced an IPO code "SEBI Disclosure and Investor Protection Guidelines". SEBI has also taken several steps towards procedural improvement in the way public offers are made in the new issue market.

Corporates can obtain capital to meet their goals through the sale of equity or bonds in the new issue market. Promoters need capital to finance expansion plans; IPOs bridge these gaps by providing necessary capital.

An Initial Public Offering is defined as "One through which an unlisted firm makes either a fresh issue of stocks or an offer for sale of its existing stocks or both for the first time to the public". Initial Public Offerings are also issued by smaller and younger firms looking for capital to expand their businesses, as well as by large private companies planning to become publicly traded firms.

Money invested by the public in an IPO goes straight to corporates, while money from the stock of a new issue traded in the secondary market rotates among investors. An IPO, hence, permits a company to tap into a large number of equity investors to collect funds for future development.

Corporates issuing new equity need not pay back the money invested by shareholders; but new investors in the stock have a right in upcoming profits distributed by the company, while stockholders have a right on assets of the firm in case of closure of the company.

An Initial Public Offering has been defined by SEBI as "When an unlisted company makes either a fresh issue of shares or convertible securities or offers its

existing shares or convertible securities for sale or both for the first time to the public, it is called an IPO".

1.2.1 Stages in Listing of IPOs

Initial Public Offer is an instrument through which a private limited firm gets listed on the stock exchange by offering its stocks to investors in the primary market. is the most common method used by the issuer company for listing an IPO in the primary market is book building.

The objective of an IPO can be to expand existing business activities of the firm or to launch new ventures or any other purpose, as stated by the firm. There are certain procedures by which a firm floats an Initial Public Offering (IPO). The procedure of listing starts with the firm's decision to go for an IPO, and ends with transfer of funds to the issuer company. The stages of listing of an IPO are shown in the figure 1.1:

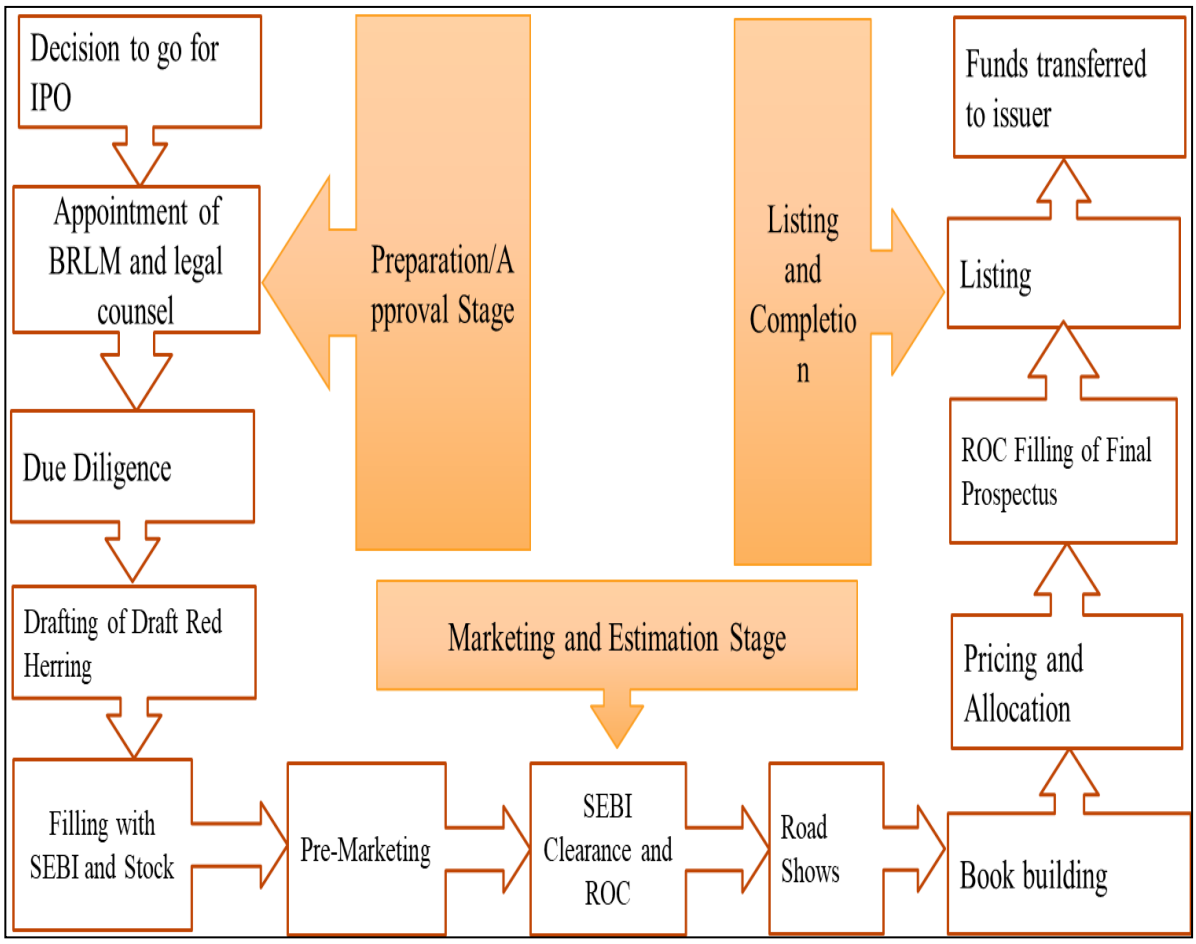


Figure 1-1 Different Stages of Listing of Initial Public Offering through Book Building Process

1.2.2 IPO Grading in India

IPO grading is the process of assigning grades by a "Credit Rating Agency" registered with SEBI to an IPO of convertible stocks or new equity shares. The grade signifies the relative valuation of fundamentals of a new listing (IPO) in relation to previously listed stocks. Disclosure of "IPO Grades" obtained from a Credit Rating Agency is mandatory for firms aiming to list their IPO. The grading of Initial Public Offerings is done based on five fundamental factors: "Management of the firm, Future earnings of the firm, Accounting practices adopted by the firm, Foreseeable financial risks and Quality of corporate governance practiced by the firm".

Grading is normally allocated on a five-point scale, where '1' signifies a firm with poor quality of fundamentals and '5' indicates strong fundamentals.

Table 1.1 Method of Grading IPOs

Grade of IPO	Interpretation
Grade I	"Poor fundamentals"
Grade II	"Below-Average Fundamentals"
Grade III	"Average Fundamentals"
Grade IV	"Above-Average Fundamentals"
Grade V	"Strong Fundamentals"

Source-SEBI Website

Grading was introduced by SEBI as an attempt to provide added information to investors and to enable them to evaluate equity issues listed through an IPO. Grading of the IPO can be completed either before applying with the draft offer documents or thereafter. The firms applying for listing must incur costs of the process of grading the issue. A firm that has filed the "Draft Offer Document" of its IPO with SEBI on or after 1st May 2007, requires grading from a minimum of one CRA. Regardless of whether the grade given by a rating agency is satisfactory or not, the firm has to disclose this grade under ICDR Regulations. However, the issuer has an option of going for alternate grading by another agency. SEBI has made IPO grading of firms going for issue an optional procedure with effect from February 04, 2014.

The IPO grade doesn't give investors any recommendations to buy or not to buy the IPO. The investment decision can be made only after an investor reads and understands the disclosure in the prospectus, price of the issue and the risk factor involved along with the grade of the IPO.

SEBI doesn't play any role in assessing the grade provided by a grading agency. The agency's grading procedure should be independent and impartial.

1.2.3 New Provisions for Initial Public Offerings

a) Green Shoe Option

"Green Shoe Option" was introduced by the Indian market regulator SEBI in 2003. This mechanism was initiated to stabilize the after listing price of an IPO. An Indian company going for listing in the new issue market by book building process can select the "Green Shoe Option". The option allows the underwriter to sell additional equity shares to the public. About 15% of stock can be issued in excess in GSO, which can be used to stabilize the price. From an investor's viewpoint, an issue with this option increases the chances of getting a subscription of shares. Also, the post listing price of such an issue would be more stable compared to the market volatility. The main objective behind introducing this mechanism was to form a safety net for the initial public offer of a company.

b) Safety Net

In a "Safety Net" system or a buyback procedure, the issuer firm in consultation with the lead merchant banker reveals in the RHP that if price of the issue firm post listing goes below a certain level, the firm will have to purchase back a limited number of stocks at a pre-stated price from each shareholder.

c) Open Book/Closed Book

In an "Open Book Building" system, the merchant banker and issuer firm ensure that demand for the issue is displayed on the website of different Stock Exchanges. In this system, investors are directed by the movements of bids for subscription during the period of open bidding. "Book Building" procedure offers an

"Open Book Building" system. In the "Closed Book Building" system, the bidding process is not available for public. Investors anticipate the price and make a bid without any information about the bids made by other investors

d) Hard Underwriting:

When an underwriter agrees to buy his obligation before the issue opens, it is known as hard underwriting. In this system, the underwriter assures a fixed amount from the issue to the issuing firm. In case stocks are not subscribed by investors, the issue is transferred to underwriters and they have to subscribe to the shares. The underwriter accepts much higher risk in hard underwriting compared to soft underwriting.

e) Soft Underwriting:

When an underwriter agrees to purchase stocks at a stage after the issue is closed, it is known as soft underwriting. The underwriter takes risk for a short window of time.

f) Differential Pricing:

When issuers offer the new issue for subscription at different prices to diverse groups of investors, it is termed as 'differential pricing'. The issuer can issue the subscription to a retail investor at a maximum discount of 10 percent compared to other groups.

1.3 THE SECURITIES AND EXCHANGE BOARD OF INDIA

The Securities and Exchange Board of India was established on April 12, 1992, in accordance with the provisions of the Securities and Exchange Board of India Act, 1992. Its Preamble states that SEBI must "protect the interests of investors in securities and to promote the development of, and to regulate the securities market

and for matters connected therewith or incidental there to." According to this definition of SEBI, it must be active and in reach to serve the needs and interests of investors and institutions that comprise India's financial and capital markets and their constituent investors, issuers of stocks and market intermediaries.

SEBI (Issue of Capital and Disclosure Requirements) Regulations, 2009 requires every single issuer, whether it is an unlisted firm keen to list an initial public offer or a listed firm desirous to go for a rights issue, for value exceeding Rs. 50 lacs or a public offer, has to file a draft offer document with SEBI through a merchant banker(s). The merchant banker(s) communicate with SEBI on behalf of the issuing firm.

1.3.1 Offer Documents (ODs)

These are documents which contain information regarding the firm, the promoters, financials of ventures, terms of the issue, objectives of raising money etc. and are used to appealing for subscription of the issue. “Offer Document” is also called “Prospectus” in context of a “Public Issue”, or “Offer for Sale” and “Letter of Offer” in the context of a rights issue.

Different terms used for “Offer Documents” depend upon the stage of issue or nature of issue (where it is used). Terms used for “Offer Documents” are defined below:

a) Draft Offer Document:

An “Offer document” filed with SEBI which specifies any changes before filing to the “Registrar of Companies (ROCs)”. The “Draft Offer Document” is made

available publicly, both online and offline, including in the SEBI website, allowing public to give remarks & comments.

b) Red Herring Prospectus (RHP):

It is an "Offer Document" used in the book building process. It comprises all related details, except offer price or issue size being offered to public. It is submitted to the "Registrar of Companies" prior to the opening of the issue.

c) Prospectus:

It is an "Offer Document" in the context of a "public issue", which specifies all details of the issue including offer price of shares floated and issue of the IPO. The Prospectus is filed with the "Registrar of Companies" prior to opening of the issue if it is a"fixed price issue"; if it is through the book building process, the "Offer Document" is filed later.

1.3.2 Book Building Process

The Book Building process facilitates price discovery. The issuer reveals a price range or floor price before introducing the issue. Based on subscription interest shown by investors at various prices (within the price range indicated by the issuer), the "Book Running Lead Manager (BRLM)" in discussion with the firm decides a rate at which the issue would be offered by the firm to the investors. The price range for a public issue provides a boundary to the subscribers, to apply within the said band amount. The spread on floor price and cap on the price band cannot exceed 20 percent. The price band for a new issue can be revised.

The price band or floor price within which bids for subscription of an issue can move are unveiled a couple of days prior to the listing day. If revised, the bidding period for a new issue is extended by an extra period of three days; the total bidding

period for an issue should not exceed thirteen days. Investors bid for the issue by quoting price of the share and the lot size. After the completion of the "bidding process", the "cut-off" price is determined on basis of demand for the securities by investors. The final prospectus consists of details like the issue size, final "issue price" and is filed with the "Registrar of Companies (ROC)" to complete the IPO. Retail individual investors can only bid at "cut-off". An investor is considered to be a retail individual investor only if he applies to an issue of worth up to 2,00,000. Such applicants need to tick the "cut-off" option, which shows their inclination to subscribe at any price revealed within the given price band. A price bid (where a specific price is specified) can be invalid if the price specified by the applicant of the issue is lower than the discovered price.

1.4 REGION WISE HOUSEHOLD INVESTMENT PATTERN IN INDIA

There are six zones in India: central, eastern, northern, north-eastern, southern and western region. Table 1.2 indicates region wise capital market investment patterns of investors. It can be seen that investments in mutual funds are most trusted across all regions. The highest investment percentage is in the secondary market in eastern, north-eastern and western regions while in investments in the central region are in the bound market. The northern region has the second highest percentage of investments made in IPOs. Analysis of patterns show that investment in IPOs is very less in comparison to mutual funds and secondary market across all regions except the northern region.

Table 1.2 Distribution of Region wise Households Capital Market Investment (%)

Regions/Investment Category	Mutual Fund	Bound	Debenture	IPO	Secondary Market	Derivatives
Central Region	2.62	0.68	0.13	0.03	0.49	0
Eastern Region	17.73	2.1	0.29	0.83	11.82	0
Northern Region	4.92	1.7	0.22	2.15	2.02	0.1
North-Eastern Region	23.14	0.09	0.02	0.02	5.76	0
Southern Region	9.98	3.72	1.9	2.44	3.63	1.03
Western Region	13.89	5.4	4.07	2.95	7.21	1.85

Source-NCAER Survey

1.5 INDIVIDUAL INVESTORS AND INVESTMENT INTENTIONS

From an individual's perspective, investment is the appreciation of money with certain expectations. Investments made by retail individual investors can be classified into two categories: financial assets and non-financial assets. Assets which are non-physical and raise value from a contractual claim are called financial assets. Example: Stocks, bonds, bank deposits etc. Financial assets can be traded in "financial markets" and are more liquid in comparison to other tangible assets. Assets which are tangible and have a valuable economic life (where value depreciates in most cases) are called non-financial assets; examples are machinery, precious metals, tools etc. Of late, the need to invest has increased on account of higher rates of inflation, higher income, interest rate and tax incidence.

1.5.1 Definition of Retail Investor

According to SEBI, Retail Investor is defined as per DIP (Disclosure and Investor Protection) guidelines as follows: "Retail Individual Investor in a public

issue who applies or bids for securities or for a value of not more than Rs.2,00,000" with effect from September 2011, the latest amendment. They are investors who purchase securities for their personal use, not for any organization. Retail investors trade in lesser amounts, compared to institutional investors.

A retail investor is defined as "An investor who invests lesser amounts of money for himself rather than on behalf of anyone else". They are different from institutional investors in terms of investment; larger firms or institutions invest on behalf of their clients while retail investors participate in the financial market to invest for themselves. Some brokerage houses specialize in serving retail individual investors while some attempt to attract investments from institutions or firms that involve in large trades.

According to the "Securities and Exchange Board of India", a retail investor is defined as an investor who applies for subscription of a new issue for an amount of not more than 2 lakh rupees. Earlier, the investment limit for subscription was 50,000. This was later increased to 1 lac and in the latest amendment of SEBI Regulations (Issue of Capital and Disclosure Requirements), 2009 the limit has been raised up to 2 lacs for investors who fall under the retail investor category.

1.6 NEED FOR THE STUDY

IPOs are the first issue ever made by any firm. Therefore, past performance data related to the equity market would not be available. The variables that influence retail investors when subscribing to an initial public offering are yet to be understood. The focus of this study is on the identification of these variables. The intention is to identify the nature of market psychology (of retail investors) as observed in response to an Initial Public Offering. Specifically, in the context of the primary market,

household investors participate less, increasing the percentage of inactive demat account holders and leading to withdrawal of retail investors from the primary market towards safer financial products like bank fixed deposits, real estate investments, and mutual fund investments (NCAER Survey). The attraction of retail investors towards unproductive assets like gold and silver show their distrust in the primary market. Despite of an association between the primary and secondary markets, there seems to be something wrong with the new issue market. Free pricing has been misused by younger firms in some cases; they have collected easy funds from the primary market by misleading innocent investors resulting in a high amount of investment of retail investors stuck in illiquid new issues. Studies have concluded that retail investors have less knowledge about products available in the primary market and the dearth of information about new issues influences their decision to not apply for subscription. It is thus necessary to study and examine the degree of awareness of retail investors, issues they face while investing in IPOs and the satisfaction level of retail investors in the primary market.

1.7 SIGNIFICANCE OF THE STUDY

Various methods are adopted by researchers to solve specific research problems involving the primary market. It is necessary to find the factors influencing listing day returns of an IPO (Ruud, 1993). According to Deb and Marisetty (2010), the presence of retail investors is high in India. Therefore, it is important to identify factors which influence retail subscription in the Indian IPO market.

Awareness levels and behavioural biases have a great influence on the decision-making process of retail investors as well as on investment performance. Literature has evidence that the average performance of retail investors in stock market is poor;

price volatility, corporate mismanagement and price manipulation have been the top three concerns of retail investors in the Indian primary market. Furthermore, analysis has been done to understand the impact of demography on the awareness level of retail investors. The influence of demography on the concerns of retail investors from the primary market has also been analyzed in this study.

1.8 STATEMENT OF THE PROBLEM

Statistics show an increase in the number of Demat accounts with each passing year, signifying increased participation of investors in the primary market. But whether investors and specifically retail investors make positive returns matching their expectations from the equity investments remains a question. Some questions raised by the researcher are related to retail investors who have been duped by some firms which have vanished after collecting large amounts of money from small retail investors. (Deb & Marisetty, 2010). The higher growth of number of demat account holders in a depository like NSDL is explained to be a proxy for the number of participants in the primary market. (Rao & Ranganathan, 2006b). The Economic Survey 2005–06 also echoed this view. With the rising number of scams, the Securities and Exchange Board of India (SEBI) has come up with many modifications in regulations to control financial markets and protect retail investors. Banks exploit individual investors' lack of financial literacy and sophistication by increasing product complexity, which results in reduction of investor returns and surge in bank returns(Célérier & Vallée, 2014). Despite many efforts, SEBI receives a large number of complaints every year. Through trend analysis of the participation of retail investors, we know that with an increasing number of demat account holders in the equity market, percentage of participatory demat account holders are declining.

Participation of retail investors in the equity market means they must buy and sell securities in substantial number. The new issue market plays a significant role in bringing investments into stock markets. Most new investors first enter the capital market through the new issue market; the Indian IPO market has been dominated by retail investors (Aggarwal, 2000). Therefore, retaining retail investor confidence in the new issue market is important.

1.9 CONCLUSION

The primary market helps firms who need investment to expand their businesses, diversify their operations and modernize their business techniques. To raise funds, firms issue shares which are called Initial Public Offering. Most important functions of primary market are Origination, Underwriting, and Distribution. The Listing of an IPO takes place through a systematic process, which includes Book Building. The “Securities and Exchange Board of India” was established on April 12, 1992, in accordance with the provisions of the “Securities and Exchange Board of India Act, 1992”. It regulates the new issue market. The Preamble of SEBI states that it “protect the interests of investors in securities and to promote the development of, and to regulate the securities market and for matters connected therewith or incidental there to."

Grading of IPOs has been introduced by SEBI to provide additional information to investors, enabling them to evaluate IPOs listed in the primary market. It has been made mandatory for a firm applying for listing to take grading from at least one of the credit rating agencies from 1st May 2007, under the ICDR Regulations. However, SEBI has made IPO grading an optional procedure with effect from February 04, 2014. It has also introduced new mechanisms like green shoe

option, safety net and open book/closed book method to improve the performance of the primary market.

The focus of the current study is to understand the awareness level of retail investors about IPOs and the influence of their demographic profile on awareness of the primary market. This study aims to examine the presence of various behavioural biases in retail investors and their influence on investment intentions. It looks into factors motivating them to make decisions of investment in IPOs. The focus is also to know issues retail investors face while making investments in IPOs.

The mentioned variables are elaborately presented in the following chapters. The next chapter reviews related literature which supports the research model and puts forward the hypotheses.

CHAPTER-II

REVIEW OF LITERATURE

2 REVIEW OF LITERATURE

The present chapter studies various literature relevant to the different dimensions of the study. This chapter is categorized into three segments:

The first segment of the chapter covers the concerns and issues of retail investors while investing in IPOs.

The second segment of the chapter deals with the retail investor's awareness level, the presence of behavioural biases in retail investors and motivating factors for making an investment.

The third segment of the chapter presents literature related to IPO underpricing, determinants of underpricing and literature related to performance of IPOs.

Literature has been collected from several research papers of national and international journals of repute. The goal has been to identify different aspects of behavior of retail investors like their awareness level, investment intentions, issues the retail investors face while making an investment in IPOs, underpricing of IPOs and their performance.

More than 170 research articles have been thoroughly studied to gain a critical understanding of the different dimensions of variables used for the study. All articles and research papers used for the study have been collected through online sources. The sources used for collection of these papers are namely Taylor and Francis, JSTOR, Springer, ProQuest, Wiley, etc. The keywords used to explore the articles were "retail investor", "behavioral biases", "IPO", "performance of IPO",

"individual investor", "behavioural finance theories of economics", "awareness level of retail investors" etc.

2.1 LITERATURE ON RETAIL INVESTORS CONCERNS AND ISSUES RELATED TO IPOs INVESTMENT

Baker and Wurgler (2007) In their study they used the "top-down" approach of behavioral finance to know the influence of investor's attitude on individual, firms and stock market. The authors documented that an investor's attitude can be measured. High waves of sentiment are important and have a larger impact on the individual investors, firms and on the stock market. It is concluded that those firms which are difficult to arbitrage are mostly affected by attitude which in turn has an impact on the cost of capital.

Barber and Odean (2008) analyzed the "attention-driven buying behavior" of individual investors. Many investors deliberately try to purchase only stocks that have attracted them, rather than sell other stocks. Stocks showing "high abnormal trading volume, with the high day trading return, and in news" attract individual investors and they mostly try to purchase those stocks and the pattern of investment is same for small stocks and large capital stocks. Researchers empirically tested that attention-driven buying style does not produce higher returns for individual investors. They concluded that informed investors take the same decision of selling stocks which have negative signal and buying stocks with positive signal while others make investment decisions of random purchases and random sales.

Barber, Lee, Liu, and Odean (2009) evaluated the monetary significance of losses which are experienced by retail investors. Data collected by the researchers is

from January 1995 to December 1999 through transactions done by all traders on "Taiwan Stock Exchange". The data included the "date and time of the transaction, a stock identifier, order type, transaction price, and a number of shares and the identity of the trader". During the sample period, 56% to 59% of the total stock was owned by retail investors. The results suggested that the combined portfolio of individual investors negatively performed and suffered a loss of 3.8 "percentage points" whereas institutions enjoyed returns with positive performance and upheaved 1.5 "percentage points" of the investment. Authors concluded that retail investors' losses due to trading were equal to 2.2% of total Taiwan's "Gross Domestic Products" or due to retail investors' losses, 2.8% of total personal income. Thus, the overall conclusion arrived at was that the reason for negative performance was lack of training in investment, undiversified portfolio and poor trading decisions.

Barber and Odean (2011), documented that the performance of retail investors in the stock market is poor. The reason for low performance of investments was mentioned as the transaction cost or trading cost. Evidence specifies that retail investors are less informed investors. A large part of individual investors hold an undiversified portfolio and they trade actively and speculatively which leads to the loss of money. Authors describe that "average holding period" of stock for retail investors are longer than one week and the reason for underperformance of individual investors are asymmetric information, overconfidence, sensation seeking news and unfamiliarity. The study concluded that transaction cost has a negative impact on individual investors' earnings.

Barua, Raghunathan, and Varma (1994) examined the government policy regarding favourable terms of allotment of shares for small investors. Authors argue

that such favourable allotment policy is causing several lacunae such as “higher servicing costs, higher issue price and lesser vigilance” in the operations of listed firms. Authors suggest that this biased policy should be eliminated from the capital market and it would be helpful in healthier functioning of the equity market, supporting investor protection.

Boulton, Smart, and Zutter (2011) have used a varied range of earnings, and quality procedures and found that higher IPO underpricing exists in those countries which have a poor quality of accounting information. This confirmation is constant for underpricing with “asymmetric information” descriptions. Previous studies have found that “poor accounting information can lead to a higher cost of capital”. Authors state that expense on listing of an IPO increases when investors face problems while interpreting the financial information of the firm. They concluded that across markets, the quality of “accounting information” has more contrasts, compared to within the same market. Moreover, it is concluded that little “accounting information” is accessible about an IPO, prior to its listing. Prospectus of an Initial Public Offering usually provides pre-IPO financial information for a period of little more than two years.

Chakrabarti has revealed the importance of retail investors’ contribution to the primary market for growth of the company’s Initial Public Offering on listing and post listing periods. Conclusions from the study advocate the need for increase in share of retail investors in Indian Initial Public Offerings. Regulator SEBI may consider introducing guidelines and instruments that boost more interest from retail investors to contribute to the Indian Initial Public Offerings.

Feldstein and Yitzhaki (1982) have concluded from their study that the price of Equity owned by high net worth individuals go up considerably faster than equity owned by small investors or investors with lower income level. The authors specify that high net worth individual investors have diversified portfolios; this helps them to designate more time or use more resources for the equity investment. This is one of the reasons for higher returns received by high net worth individuals for their investments.

Ghosh (2002) studied the reason behind low activity in the primary equity market and suggested some measures that can help in curing slowdown of the primary market in the future. The study has recognized the presence of high amount of underpricing in the Indian new issue market. The dissimilarity of underpricing by a diverse class of firms is also important if large firms are underpricing and subsequently, small firms are overpricing. Thus, the individual investor might be cautious of the equity market because of the assurance problem. An investor's assurance has great importance; if it is not protected sufficiently, it would be a great concern . Underpricing is one of the irregularities in the new issue market, the main reason being asymmetric information. Findings specify that young companies with much ambiguity might have taken advantage of investor confidence during the positive market trend. To take advantage of the investor's confidence towards equity market and raise funds within a very brief period for their future expansions, young firms list their IPOs in the equity market. These firms do not provide complete information regarding the financial condition of the firm during the offer period. The author suggested that providing information to investors before the offer date is

necessary and less time should be taken for the listing of a new issue after the offer date.

Grullon, Kanatas, and Weston (2004) analyzed the advertisement activities of firms and their impact on "investment intentions" of individual investors as well as an institutional investor. Results showed that firms that invest high on advertising and promotional activities have a higher number of institutional and individual investors and the liquidity of those firms significantly improves. The authors argue that promotional activities increase the influence of a firm on the investors and they prefer to buy shares of familiar firms. Advertisement helps to appeal a disproportionate number of individual investors who take their investment choices constructed on acquaintance rather than fundamental information about firms.

Gupta (1996) has concluded from the small investor protection viewpoint that the safety of small investors is important for several reasons in the primary market. A huge number of small investors participate in the primary market. First equity investment made by most of the small investors is by way of the primary market. So, it is very important to retain small investors' confidence in primary markets.

Gupta et al. (2005) conducted the "Indian Household Investors Survey-2004", to find investors preferences, problems faced by investors and policy issues. The study was constructed on direct interviewing of a sample of 5,908 family heads over 90 cities across 24 states. The study found that price volatility, corporate mismanagement/fraud and price manipulation have been the household investor's top three fears in India.

Iyer and Bhaskar (2002) revealed in their study that investors can learn to observe and analyze the market psychology and make use of it to invest. The authors concluded that Indian financial markets are directed and controlled by few larger players who have information accessibility compared to others and the market movement is concentrated in few securities and different behavioural biases also play an important role in the equity market.

Kukreja (2012) in his research titled "Investors' Perception for Stock Market: Evidence from the National Capital Region of India" performed a descriptive study. For this study a total 120 samples were taken and "systematic sampling technique" was used. The author reported from this study that, "age has a significant impact on investment intention, and educational qualification has a significant impact on tax advantages".

Rao and Ranganathan (2006a) in "Indian Stock Market: Some Issues" mainly evaluate the problems and concerns of "retail investors" in the Stock Market of India. It is understood from the study that for information about equities, retail investors depend more on media and very less on the balance sheet of a company. As per the report, percent of household investors who go through prospectuses of companies is only about 34 percent. Some investors tend to follow press reports about FIIs investment, while FIIs concentrate on specific sectors only for investment. Due to the sharp increase in prices of relatively non-prominent companies, it simultaneously leads to attracting retail investors towards those younger firms which could increase investors overall risk. Authors recommend issuance of IPO can be made a two-tier affair; the total issue could be kept for "retail

investors" at the first stage and at the second stage the unsubscribed portion from "retail investors" could be open for other groups of investors.

Surendar and Rao (2011) studied retail investors' perception towards IPOs in India. They revealed that retail investors' beliefs are similar on most aspects related to IPOs; at the same time, the study found that retail investors face some problems while making investments in IPOs. The major problem described by retail investors was the availability of only 35 percent reservation in IPO for retail investors. Majority of retail investors want SEBI to put greater responsibility on merchant bankers and hold them accountable for the promoter's doubtful acts. Also, retail investors want SEBI to make legal provisions to stop promoters for their offenses and to act against them under criminal laws.

Swarup (2003) article "Measures for Improving Common Investor Confidence in Indian Primary Market: A Survey", focuses on decision making of retail investors in the primary market. The study specifies that "retail investors" give prominence to their own decision for investment as compared to "brokers advice". Investors also think "market price as a healthier indicator than analyst recommendations". The author also recognizes factors affecting new issue market conditions in India. "Issue price, information availability, market price after listing and liquidity emerge as crucial factors". The study suggested that there should be assurance of some return to investors as the risk associated with investment in the primary market is very high. After listing, lower market price and high issue price cause unpleasant experience to investors. Accordingly, some measures have been recommended in terms of "regulatory, policy level and market-oriented" to increase the confidence level of an investor in the new issue market.

Tripathi (2008) explained that several company fundamentals significantly affect stock prices in India. Factors such as P/E ratio and leverage, size of the firm, book to market equity are various factors which can well explain cross-sectional variation in return on equity in India. Study discloses that investors have decreased investment time horizons and the reason for this is higher volatility in the stock market.

2.2 LITERATURE ON BEHAVIOURAL FINANCE, AWARENESS AND MOTIVATING FACTORS FOR RETAIL INVESTORS

Al-Tamimi (2006) explained the significant determinants that motivate individual investor's behavior in the "United Arab Emirates". The author concluded that five key factors that motivate individual investors to make investments decisions are "self-/firm image coincidence, neutral information, accounting information, personal financial needs, and advocate recommendations".

Bloomfield, Libby, and Nelson (1999) concluded from their study that individual investors with less awareness level are highly overconfident while making an investment in the equity market. As long as firms provide more information regarding equity to high net worth or institutional investors, only they could negatively impact the investment of less aware investors who would not know the extent of their informational drawback.

H. Chen and Volpe (2002) concluded from their study that college students' awareness level of personal investment is little; respondents from businessmen

category have more awareness level than the non-businessmen category, and in respondents who were job holders belonging to accounting/finance fields were most aware of personal investment.

De Bondt (1998) expressed many individual investors trade shares on instinct or on arbitrary tips from associates, without any prior planning. The rationale behind is that individuals are highly optimistic about everything that is related to their personal life. Issue determined by the researcher is that investors' sentiment traces the stock market. As a result, investors are interested to buy shares during upward markets trend and to sell shares during downward markets.

Dharmaja (2012) acknowledged the factors which influence the decision making of retail investors in the primary market. For the study, the author used a sample of 200 investors from the city of Coimbatore in Tamilnadu. It is documented that majority of retail investors are influenced by the "accounting information" of firms and "intermediaries' recommendation" is least influencing factor for individual investors while showing investment intention.

Graham, Harvey, and Huang (2009) analyzed the impact of competence of investors on frequency of trade. It is explained that retail investors who feel more competent involve in trading more frequently and invest in more diversified financial products. It is concluded from the study that male retail investors belonging to the highly educated group make an investment in larger portfolios and consider themselves more knowledgeable in comparison with women retail investors having smaller portfolios, with lower education. So, retail investors who are highly self-confident tend to regard themselves as competent and trade frequently.

Kafayat (2014) examined the impact of overconfidence, over-optimism bias and self-attribution bias on retail investors in "Islamabad Stock Market" while making rational decisions. The outcome from the study shows that biases like overconfidence, over-optimism bias and self-attribution bias are negatively associated with retail investors' decision making.

Kengatharan and Kengatharan (2014b) had analyzed the behavioural biases which have influenced retail investors' decision making at the "Colombo Stock Exchange". Moreover, the relationship between behavioral biases and performance of investment were also analyzed. The outcomes showed that "herding, prospect, heuristics (overconfidence and availability bias), and different market factors" all have an impact on decision making of retail investors at the "Colombo Stock Exchange". The variables herding, overconfidence and heuristics have a negative impact on performance while anchoring factor has a positive impact on investment performance.

Luong et al. (2011) had analyzed behavioral factors which influence retail investors' "decision-making" and the same behavioral factors impact on investment performance at the "Ho Chi Minh Stock Exchange". The factors detected in retail investors were availability bias, overconfidence, prospecting, anchoring, herding and market factors. The outcome of the study shows that altogether behavioural factors have a moderate influence on retail investors' decision making while "market factors" have the significant and highest positive impact on decision making. Only herding, prospect and overconfidence have an impact on performance of the investment.

Manjunatha and Gopi (2013) in their study explained factors inducing retail investors to make an investment in Indian primary market and findings from the study suggest that wealth-maximization criteria is the most important factor for retail investors while making an investment decision in the new issue market. Sometimes, retail investors use diverse criteria when selecting investment avenues. The analyst's recommendations, brokerage houses recommendations, issue price, promoter's reputation and IPOs grading also motivate retail investors to apply for the subscription of an IPO. Moreover, the retail investor may assess all motivational factors differently according to their perceptions.

Murali (1999) carried out operational analysis of the Indian primary market from the year 1989 to 1995. The study is exceptional in the history of New Issue Market (NIM) in India, for its prominent role both in terms of number and volume. A sample of 2333 firms' equity issues data had been used for the study. The study stated that the national capital market, particularly the new issue market (NIM), became the major channel for funding corporate investment in India. The researcher concluded that subscription interest showed by investors for IPOs of different firms differ due to different factors like fundamentals of the firm and alternate investment prospects available to the investors. The interest of investors towards the new issue market was high during this study period. Initial Public Offerings which listed during this period were oversubscribed on an average by six times.

Odean (1998a) acknowledged that individual investors who are overconfident exhibit themselves to be superior from others in choosing the best firm for making investment as well as the right time to invest and exiting from the stock market. However, overconfident individual investors received less returns from their

investments. The author also concluded that overconfident investors hold less diversified portfolio compared to rational investors.

Park, Konana, Gu, Kumar, and Raghunathan (2010) A natural explanation indicates that confirmation bias leads to investors' overconfidence and being too optimistic, which results in lesser returns on investments. Researchers also explained that perceived knowledge of investors negatively impacts confirmation bias and investors with a sophisticated level of perceived knowledge are less motivated towards others to confirm their own opinions.

Pichler and Stomper (2009) explain that the lack of information in public about the equity market is causing failure of the market and the pricing and distribution of unseasoned securities by a mechanism such as book building or auctions. The result suggested that treasury auctions are considered because the issue price will depend only on bids which are submitted in the auction, not on information from outside sources. Most commonly used process for issuing equity securities which is book building permits the pricing of such issues to depend both on participants of auctions, indication of interest and on information revealed through when-issued trading.

Pollack argued that bankers running book built Initial Public Offerings need to appreciate the advantage of retail investors' participation in their IPOs because retail investors existence may confirm stability and also constructive returns for their desirable institutional investors. The author suggested that Indian New Issue Market specifies that retail investors are gradually underestimating or overlooking overbidding in the IPO market. The conclusion of the author from the study is "companies need to appreciate the advantage of having retail investors' participation

in their IPOs, since their presence may ensure not only stability of the firm but also positive returns for their desired institutional investors".

Jaya Mamta Prosad, Sujata Kapoor, and Jhumur Sengupta (2015) explore the presence of behavioural biases in Indian retail investors and the influence of those biases in their investment behaviour. Herding, overconfidence, over-optimism and disposition biases are presents in Indian retail investors. It is documented from the study that demographics of retail investors and trading sophistication influence behavioural biases. Highest inducing factors amongst the variables are the age of the investors, the profession of the investors and trading frequency. It is understood from the study that men retail investors are comparatively more overconfident than women investors. Another exciting observation is that investors who have high trading experiences and trade frequently are prone to all the biases. It is concluded from the study that overconfidence is the highest ranked bias among all four biases present in the investors of the Indian equity market.

2.3 LITERATURE ON LISTING DAY RETURN AND PERFORMANCE OF IPOS

Bhabra and Pettway (2003) studied information contained in the offering prospectus and analysed whether information given in the prospectus predicts about future strategic decision or performance of the firm. A random sample of 242 Initial Public Offerings was selected for the study and data was gathered directly from the company's prospectus. Results revealed that performances of the firm who merge with other firms or reissue their shares, are better in comparison with those firms who did not reissue their shares. Researchers concluded that profitability of the firm

before listing, size of the firm, offer size and underpricing determines first-year abnormal returns of the firm.

Brau and Fawcett (2006) Found that the purpose behind the listing of firms is to facilitate acquisitions. The researcher concluded from the data survey that initial day return helps to recompense investors for taking risk of making investments in IPOs; there are also different causes for initial day return of a new issue like to acquire the favour of institutional investors, to reach a wide base of the owner and to rise post-issue trading volume of equity. CFOs of new firms are more skeptical of underpricing compared to CFOs who have effectively completed an IPO. CFOs of new firms give higher ratings to new issues for increasing demand on an opening day. Larger firms concentrate more on building and sustaining a strong reputation in the capital market.

Bubna and Prabhala (2013) Studied the procedure of anchor investor in book building, it's significances for the bidding process, initial day return, and returns in long-term serve by anchor investors. Authors found that anchor investors mostly encourage short-run Initial Public Offering underpricing through their impact on bidding. Firms having anchor investors for their new issues entices aggressive bidding from institutions, signifying that anchors play a positive certification role. Authors observed that lower volatility of returns in anchor-backed IPOs, surprisingly anchors have less impact on retail investor bidding process, although the original inspiration for having anchors was to moderately ease the asymmetric information faced by retail investors. They concluded that long-term performance of anchor-backed Initial Public Offerings are better than new issues without anchors based for time periods of up to one year.

Dalziel, White, and Arthurs (2011) found that fund performance is higher both at the time of offerings and thereafter when pre-IPO proprietors hold their stakes in the Initial Public Offerings. It shows a positive indication of equity market which improves IPO performance. This work delivers an advisory tale to family members of firms who are opposed to going public in view of keeping control of the enterprise. The authors found that family firms can reach long-term development by the listing of IPOs.

Firth (1998) considered the role of forecasts of profit published in the prospectuses of firms going for listing. The author used data on new issues in Singapore during the period of 1979-1992 and various tests conducted to examine the association between profit forecasts appearing in prospectuses of firms and market valuations. It is concluded that the perfect forecast mentioned in the prospectus is positively related to IPOs returns after listing. The results recommend that earnings prediction is a significant signal of the company for investors. Investors use earnings forecasts as a signal for valuing initial public offerings. Studies have originated a positive relationship between retained ownership and market value of new issues (IPOs).

Hill and Wilson (2006) had analyzed the relationship between "initial day return and value gains" of listing. Researchers use 502 IPOs of UK firms for the study purpose. Results from the study suggested that the issuing company directors and underwriters both are the beneficiaries of IPOs initial day return and it helps them to raise net benefits for the long term.

Jain and Kini (1999) reviewed the five-yearpost-listing performance of 877 firms listed from 1990 to 1997. Authors evaluated the determinants for post-listing

performance in the study. Explanatory variables used for the study consists of industry type, pre-issue demand, uncertainty about IPO, offering characteristics, pre-listing performance, and strategy of the company. Results supported the common observation that new firms should reach a sufficient scale of business before going for the listing in the primarymarket because the listing of the firms in the primary stage of operations is usually not rewarding for the firms as well as for investors. Reputed investment bankers preferred better firms for listing; they are also consistent in monitoring issue that has a positive impact on growing the probability of survival.

Jong, Huijgen, Marra, and Roosenboom (2012) studied the characteristics of product market and its impact on the decision to go public. Researchers used Sample of 337 firms that listed at the London Stock Exchange during the year 1994-2006. The study advocates that the firms which have operations in more profitable and low barriers industry are likely to go public most of the time. Reason for the listing of most of the firms is to expand their place in the product market and discourage new competitors into the industry.

Katz (2009) studied the influence of private equity sponsors on the IPO performance. Result reveals that PE-backed IPOs post-listing performance is better than those IPOs that do not have Private Equity sponsorship. Moreover, results also exhibit that firms with PE sponsor as major shareholders after listings showed positive long term performance. Furthermore, equity performance of firms with larger sponsors show positive long-term equity returns.

K. J. S. Kumar (2010) examined the performance of IPOs issued during the financial year 2004-2008. The author revealed that performance of majority of IPOs listing during the financial year 2003 to 2008 was below par. The performance of

"public-sector" IPOs is better than "private sector" IPOs. It is concluded from the study that more than 92 percent of the public sector IPOs listed between 2004-2008 were performing positive while more than 70 percent private sector IPOs were trading negatively during the same period.

K. Kumar and Vikkraman (2008) studied "Investor Preference on IPOs in India". The study intended to examine the performance of IPOs for five years (2004-2008). Authors concluded that making investments in IPOs is safe and risk-free in terms of liquidity and profitability for short-term performance. The IPOs performance has been appraised based on earnings on the "day of listing, next day, three months, six months, 12 months, 24 months, 36 months, 48 months and 60 months" of the listings. It is clear from the conclusion that the short-run performance of IPO is better compared to longer run but some large IPOs including those from trustworthy business houses were unsuccessful in reaching the expectations of the investors.

Krishnamurti and Kumar (2002) concluded that new firms with less operational experience and negatively performing firms are allowed to get listed at par value. Authors suggested reason behind underpricing in Indian Initial Public Offerings as offer pricing errors done by merchant bankers due to not having accurate assumption of demand of new issue and delay between the offer price setting and offer opening date. The degree of subscription determines the underprice and is obliged to reimburse investors for bearing additional risk.

Levis (2011) studied a sample of 1595 Initial Public Offerings which are listed on two London Stock Exchanges during January 1992 to September 2005. He examined the post-listing performance of "PE-backed IPOs" and compared it with

performance of “VC-backed IPOs” and “non-sponsored IPOs” during the period of study. It is concluded that PE-backed Initial Public Offerings are substantially less underpriced compare to “NB and VC-backed” IPOs; timing of IPO (hot or cold market) has not determined first day returns of “PE-backed IPOs”. The study concluded that “PE-backed IPOs” are more profitable and effective when compared to IPOs backed by other counterparts.

Lerner (1994) examined the timing of listing of IPOs by privateventure-backed firms and concluded that venture capitalist makes IPO listing at the time when the market is at the peak and the industry had performed well. Returns of the first day for IPOs backed by more experienced venture capitalists are lower compared to the first-day return of IPO’s which are backed by a less experienced private venture capitalist.

Loughran and Ritter (1995) studied the performance of 4753 new issues listed in the United States from 1970 to 1990. The study revealed that issued stock during the period of 1970 to 1990 underperformed compared to non-issuing firms till five years after offer date. The “average annual return” till the fifth year after the listing has been only five percent for firms issued Seasoned Equity Offering (SEO). It is concluded from the study that issuer firm has to invest forty-four percent additional money compared to non-issuer firm to have the same assets five years later.

Loughran and Ritter (2002) specified that in the first day of issue of Initial Public Offerings, investors may expect a new issue at premium price as an indication of a high-quality issue offering and due to high demand for the new Initial Public Offering can attract more investors towards IPO, it will become a reason for upward

movement of issue in secondary market. The authors recommended that trading volume on the first day increased over time, roughly doubling up from 1980 to 1990 and roughly again it doubled during the internet bubble period. They suggested that "Corruption as a motivation for underpricing has increased in importance over time for several reasons".

Meera Mohiadeen (1999) conducted research on the topic "A study on New Issue Management Services of Lead Merchant Bankers in India". This study was constructed on both primary data and secondary data. Data for primary analysis was collected by using a structured questionnaire from a sample of twenty-six "lead merchant bankers". The study documented that "all private merchant bankers depended on the services of the brokers, sub-brokers,and underwriters for the success of the issue". It is concluded from the study that there is no difference in the performance of IPOs handled by "group lead merchant bankers" in comparison to IPOs that handled issues individually. Furthermore, it is documented from the study that relationship between issue price and market price has been significant and positive in case of IPOs handled by "public sector merchant banker", but was found negative in the condition of IPOs succeeded by "private sector merchant bankers".

Nandha and Sawyer (2002) studied Indian new issue market and examined the impact of market microstructure on the determinants of underpricing. They considered 381 issues as a sample, for the study in which 261 par and 120 premiums were taken, over the financial year 1994-95. The outcomes showed that initial day's returns of the Indian equity market in this period were higher than other developing countries markets. They were higher for par issues than for premium. Researchers

concluded that “earning per share” projections are important factors of underpricing, but the size of the firm is negatively influencing the underpricing.

Pethe and Karnik (2000) concluded that positive performance of stock market in terms of increase in stock prices could not lead to restoration of the economy. The study does not reveal “any kind of long-run stable relationship between stock prices and the macroeconomy”. Stock market performances are still demand driven and industry-led, if the industrial performance is positive it leads to demand for equity share of industry. The authors suggested some necessary reforms for the equity market like: to have a de facto legal framework in place, which would advance greater productivity and transparency to the stock trading activity which would be helpful in enhancing investor’s confidence, apart from this information revelation rule and tight regulatory framework are the need for advancement of the stock market.

Ritter (1991) had analyzed the returns after three years of listings of IPOs and found that underperformance does not exist after three years of going public. He concluded from the study that Investors of the sample 1526 Initial Public Offerings were over-optimistic about performance of the firms. He makes an effort to know the reason for underperformance of the firms after going public and concluded that the market is overestimating the growth opportunities of IPOs. He empirically concluded that investors, who invested one dollar at the end of listing day of the IPO’s on the “New York stock exchanges” and held it for three years would have left the investor with eighty-three cents only. The study indicated towards constant conception that majority of the firms go for listing at peak performance of the industry and market.

It can be summarized from the literature that awareness of retail investors positively influences their investment decision making; demographic characteristics of retail investors have an association with investment intention and retail investors face some issues while making an investment in the primary market. Apart from the above-mentioned variables, presence of underpricing in the Indian IPO market was found and literature suggests that short-term return is positive while long-term return is negative from Indian IPOs.

2.4 RESEARCH GAP

Ample amount of research has been conducted related to short term and long term returns of IPOs in the primary market, pricing of the IPOs and its influence on investors returns (Lee, Jiang, & Indro, 2002; Ritter, 1991). It is evident from literature that firms going public mostly experience first-day closing price to be more than the offer price, called "listing day return" (Hebb & MacKinnon, 2004). "Difference between the first-day closing price and offer price is taken as the listing day return or underpricing" (Ritter, 1987). Majority of researchers confirm the "underpricing of the IPO on the listing day" (Allen & Faulhaber, 1989; Loughran & Ritter, 2004). Koh and Walter (1989) concluded from their study that oversubscription may predict listing day returns of IPO. There are research papers to check the influence of IPOs demand (time subscribed) from different investors groups (RII, NII,and QIB) and their influence on listing day returns(Khurshed, Pande, & Singh, 2010). Deb and Marisetty (2010) investigated the influence of IPO grading on initial day return, retail investors' subscription and qualified institutional subscription level. The authors have mentioned offer price range as an important

measure for the post listing performance of IPOs. Pensiero and Krishnamurti (2014) concluded from their study that price band of an IPO plays a vital role in the book building process and is an important variable which attracts potential investors for the bidding. When an investor applies for IPO, he or she has to bid for the pre-determined minimum order quantity (lot size) fixed by firms and "investors have to put in the full amount mentioned in their bid application" (Khurshed et al., 2010), which constitutes of multiplication outcome of the upper band of the offer price and lot size. The outcome of the amount from minimum order quantity and price band has been taken in the study as the minimum amount retail investors have to keep while applying for an IPO. There is a lack of research where on how the minimum amount of investment required for applying for IPOs influences retail investors' demand for IPOs (time subscribe). There are very few researches conducted in the area of investment strategies used by retail investors related to the primary market. Jaya Mamta Prosad et al. (2015) have examined dependency of behavioural biases like overconfidence, herd bahaviour and excessive optimism on investors demographics of retail investors. Impact of behavioral biases on investment performance has been carried out by (Park et al., 2010). Swarup (2003) Concluded that "the majority of retail investors first enter capital market through investment in primary market" but there is continuous slump on the retail investor's participation in the primary market and the reason for lack of confidence in the primary market is decreasing investor confidence. There is lack of research where researchers focus towards the presence of behavioural biases in retail investors and their impact on retail investors' decision making while applying for subscription of an IPO and retail investors level of satisfaction with the IPO investment. There are very few studies in

which researchers focus towards awareness level of retail investors and how demography impacts their awareness level. There is very little research which covers the concerns of retail investors while investing in IPOs.

2.5 RESEARCH QUESTIONS

Literature suggests a lack of research where researchers investigated about the demand of retail investors (retail investor subscription) influence on listing day returns; how the minimum amount required for an IPO investment predicts retail investors demand of IPOs (retail investor subscription). From the literature, it is opined that there is lack of research where researchers can study the awareness level of retail investors related to IPOs, the presence of behavioural biases in retail investors while making an investment in IPOs and its impact on an investor's decision making. Another underexplored area in research is related to the concerns of retail investors while making investments through IPOs. With these gaps in literature, the following research questions arise:

1. What are the determinants which influence listing day returns of Indian IPOs?
2. What are the explanatory variables which influence the retail investors' demand of IPOs?
3. How do behavioural biases influence investment intentions of retail investors in the primary market?
4. Do demographics influence the awareness level of retail investors?
5. Whether demographics affect retail investors concerns during IPO investments?

2.6 RESEARCH OBJECTIVES

On the basis of the above research questions the following research objectives have been formulated:

1. To identify the determinants which influence listing day returns of Indian IPOs.
2. To determine independent variables which influence the subscription level of retail investors.
3. To evaluate the mediating effect of investment intentions between behavioral biases and investment satisfaction.
4. To assess the effect of demographics of retail investors on awareness level of respondents.
5. To identify the effect of demographics on retail investors concerns during IPO investments.

2.7 SCOPE OF THE STUDY

Funds can be raised through an IPO, FPO, private placement or right issue. However, the present study focuses on Initial Public Offerings. The target population in this study is retail investors, who have experience of investment in IPOs for at least 2 years. Primary data has been collected exclusively from four cities representing eastern, southern, western and northern zones of India. This research has absolutely dealt with Initial Public Offerings (IPOs) only. Follow on Public Offerings (FPO) has not been used for the study as the number of FPOs was very less during the sample period (15, chittorgarh.com). Due to difficulty in availability

of data, some of the accounting explanatory variables have not been used for secondary data analysis.

2.8 RESEARCH HYPOTHESES

1. Mediating impact of investment intentions between behavioural biases and investment satisfaction.

H_{1-} Behavioural biases have a significant positive relationship with investment satisfaction.

H_{2-} Behavioural biases have a significant positive relationship with investment intention.

H_{3-} Investment intention is the mediating variable between behavioural biases and investment satisfaction.

2. Difference between the awareness levels of respondents belonging to different demographic groups.

H_4- There is a significant difference in the awareness level of retail investors belonging to different gender groups.

H_5- There is a significant difference in the awareness level of retail investors belonging to different age groups.

H_6- There is a significant difference in the awareness level of retail investors belonging to different cities.

H_7- There is a significant difference in the awareness level of retail investors belonging to different qualification groups.

H_8- There is a significant difference in the awareness level of retail investors belonging to different occupation groups.

H_9- There is a significant difference in the awareness level of retail investors belonging to different experience groups.

3. Difference between concerns retail investors are feeling while investing in IPOs belonging to different demographics.

H_{10}- There is a significant difference in the level of concerns from IPO investment between different gender groups of investors.

H_{11}– There is a significant difference in the level of concerns from IPO investment between the different age groups of investors.

H_{12}–There is a significant difference in the level of concerns from IPO investment belonging to different cities of investors.

H_{13}– There is a significant difference in the level of concerns from IPO investment between different qualification groups of investors.

H_{14}– There is a significant difference in the level of concerns from IPO investment between different occupation groups of investors.

H_{15}– There is a significant difference in the level of concerns from IPO investment between different experience groups of investors.

2.9 CONCLUSION

It is concluded from literature that behavioural biases are important and have a large impact on retail investors, firms and on the stock market. Behavioural biases like overconfidence, herding, anchoring and over-optimism play a significant role in retail investors' investment intentions and their impact on investment performance.

The awareness level of retail investors also plays a key role in Investment decision making. It is inferred from literature that stocks with high abnormal trading

volume, stocks in news and stock with high intraday returns attract retail investors and they mostly try to purchase these stocks; but it is empirically tested that attention-driven buying style does not produce higher returns for retail investors and their average performance in the stock market is poor. Underpricing is one of the anomalies in the new issue market and the main reason for it is asymmetric information. Literature revealed that price volatility, corporate mismanagement, and price manipulation have been the retail investors' top three concerns in Indian primary market. Issue price, market price after listing, information availability and liquidity are the crucial factors which affect the primary market condition in India. Next chapter presents the research design in which variables identified for the study, the source of data, analytical tools used for analysis and chapterisation of the study will be discussed.

CHAPTER-III

RESEARCH METHODOLOGY

3 RESEARCH METHODOLOGY

This chapter discusses the research methods used for the present study. It talks about the type of research; research design; sources of data; tools of analysis and the scope of the study.

3.1 TYPE OF RESEARCH

The study is descriptive and analytical in nature. It is descriptive as the research involves survey for the purpose of description of facts about what is happening in the IPO market. It is analytical as the research has used already available facts and information for the critical examination of retail investors and the primary market in India. "The major purpose of descriptive research is description of the state of affairs as it exists at present" (Kothari, 2004, p. 2). "In analytical research, the researcher has to use facts or information already available, and analyze these to make a critical evaluation of the material" (Kothari, 2004, p. 3).

3.2 RESEARCH DESIGN

A "Cross Sectional Design" has been adopted for this study. The design is cross sectional because the data for the study has been collected at one point of time for different variables. (Bryman & Bell, 2011, p. 53).

3.3 SOURCES OF DATA

The study has used both primary and secondary sources of data. The primary data has been collected using a structured questionnaire consisting of close ended questions and the secondary data has been collected from databases like Prowess, Prime database and Nifty website.

3.3.1 Secondary Data

3.3.1.1 Variables

The variables (dependent and independent) and the proxy used for them in the present study are shown in the table 3.1. These variables have been selected on the basis of studies available in the same field of research as described in table 3.1.

Table 3.1 Variables Used for the Study.

Dependent Variable	**Proxy**	**Literature Support**
Listing Day Return (Underpricing)	MAAR (Market adjusted abnormal return)	(Sohail & Nasr, 2007), (Miller & Reilly, 1987), (Ritter, 1987), (Rock, 1986) (Beatty & Ritter, 1986)
Retail Investors Subscription	LNRETAIL_SUBSCRIPTION	(Deb & Marisetty, 2010), (Khurshed et al., 2010), (Koh & Walter, 1989),
Independent variables		**Support**
Qualified Institutional Buyer Subscription	LNQIB_SUBSCRIPTION	(Khurshed et al., 2010), (Kaustia & Knüpfer, 2008)
Minimum Amount	MINIMUM_AMOUNT	
Issue size	LNISSUE_SIZE	(Bansal & Khanna, 2012), (Ghosh, 2005), (Gu, 2003)
Retail Subscription (Times Subscribed)	Retail_Subscription	(Khurshed et al., 2010), (Menyah, Paudyal, & Inyangete, 1995) (Koh & Walter, 1989)
Issue Expenses	LNISSUE_EXPENSES	(Deb & Marisetty, 2010), (Alavi, Pham, & Pham, 2008)
IPO Activity Period (dummy)	ACTIVITY_PERIOD	(Helwege & Liang, 2004) (R. G. Ibbotson, Sindelar, & Ritter, 1988)
No. of Lead Manager	LEAD_MANAGER	(Kooli & Suret, 2002), (Sherman, 2000)
Age of IPO	AGE_FIRM	(Chahine & Filatotchev, 2008),

firm		(Ritter, 1984)
Ex Ante Uncertainty	EAU	(Bansal & Khanna, 2013), (Hochberg, Ljungqvist, & Lu, 2007), (Welbourne & Cyr, 1999)
Listing Delay	LISTING_DELAY	(Slama Zouari, Boudriga, & Boulila, 2011), (Fan, Wong, & Zhang, 2005)
Return on Net Worth	RONW	(Murthy & Singh, 2014), (Deb & Marisetty, 2010)
Earnings Per Share	EPS	(Loughran & Ritter, 2004), (G. Chen, Firth, & Kim, 2004)

Listing Day Return

Listing day return is the excess of listing day closing price over offer price. As mentioned by (Ritter, 1987) "the outcome of the difference between IPO listing day closing price and offer price has been taken as the listing day return". It is to test the degree of Listing day returns in newly listed IPOs of India. Market-adjusted abnormal return (MAAR) has been calculated for the IPO listed from the financial year 2008-09 to 2018-19. MAAR is calculated by using equation no 1 in line with (Miller & Reilly, 1987).

$$MAAR_{it} = \left\{\frac{1 + Rit}{1 + Nit} - 1\right\} \ldots\ldots\ldots\ldots\ldots\ldots (Equation\ 1)$$

Where, in equation (1), $MAAR_{it}$ is the "market-adjusted abnormal rate of return" for the newly listed stock (*i)* at the day of listing (t), (R_{it}) replicates the percentage change in the closing price of listing day *vis-à-vis* offer price. (N_{it}) is calculated as the "percentage change in closing market index (Nifty) value on a listing day to a market index (Nifty) on the date of closure of issue of IPO subscription". The initial day market adjusted returns of new listed IPOs has been

calculated Eq.(1), which is in line with (Sohail & Nasr, 2007). CNX Nifty closing price has been used to analyze the Nifty index return. Formulae used for the calculation of R_{it} and N_{it} are given below*;*

$$R_{it} = \frac{listing\ day\ closing\ price - offer\ price}{offer\ price} - - - - - - - (I)$$

$$N_{it} = \frac{Nifty\ closing\ price\ on\ listing\ day - Nifty\ closing\ price\ on\ offer\ closing\ day}{Nifty\ closing\ price\ on\ offer\ closing\ day} \quad \text{----(II)}$$

Chalk & Peavy III (1987) and M. R. Ibbotson & Mark (1994) found from their study that smaller firms' IPOs Listing day returns more often compare to larger firms but some of the researchers provide evidence from their study that the Listing day returns should be higher for the firm with high capital (Allen & Faulhaber, 1989; Chemmanur, 1993).

Minimum amount

Pensiero and Krishnamurti (2014) found that the price band of an IPO plays an important role in the book building process and it attracts potential investors for bidding. When an investor applies for IPO, he/she has to bid for the pre-determined minimum order quantity (lot size) fixed by firms and "investors have to put in the full amount mention in their bid application" (Khurshed et al., 2010) , which is the outcome of multiplication of upper band of the offer price and lot size. The outcome of the amount from minimum order quantity and upper price band has been taken in the study as minimum amount retail investors have to keep while applying for an IPO.

Issue size

"Issue size is the amount of capital the company wants to raise through IPO" (Gu, 2003). It is also mentioned as a newly listed firm's capitalization. Bansal and Khanna (2012) concluded from their study about Indian IPOs that issue size has a significant negative impact on the listing day returns. Ghosh (2005) documents from his study the negative relationship between the size of the new listings and listing day return.

Issue Expenses

While going for the listing of an IPO, the company has to spend money on the different processes viz. - spending on the research team, legal fees and promotion of the IPO etc. Present study takes it as a percentage of total issue amount, used as an independent variable to know its impact on underpricing. Deb and Marisetty (2010) found from their study that issue expenses are not significant in case of long-term performance of IPOs.

IPO Activity Period

The existence of a hot market and its impact on initial returns are supported by many scholars (R. G. Ibbotson, Sindelar, & Ritter, 1988; Lowry, Officer, & Schwert, 2010). The present study tries to investigate whether the timing of IPOs influences the listing day returns of a new issue or not. IPO issue period (2008-09 to 2017-18) has been divided into 40 quarters, and the listing frequency of IPOs in each quarter has been taken into account. A quarter with listings of 5 or more than 5 IPOs has been classified as a high activity period. From a total sample of 228 IPOs of 40 quarters it has been found that - 187 IPOs have been listed under high activity period and 41 IPOs have been listed in low activity period. Activity period is used as

dummy variable in the multivariate model; IPO listed during high activity period has been represented by '1' and IPOs listed during low activity period represented by '0'. This methodology of distribution of IPOs according to the quarterly listing frequency is consistent with (Helwege & Liang, 2004) (APPENDIX E).

No. of Lead Managers

The lead manager also called book running lead manager initiates the process for the listing of IPO. The lead manager helps management of the company in the promotion of the IPO and plays a vital role in preparing draft offer document and getting the approval of SEBI for the listing of the IPO. Sherman (2000) concluded from their study that number of lead managers for an IPO has no significant impact on the level of underpricing. Kooli and Suret (2002) suggested that the number of lead managers for an IPO have a positive influence on listing day returns.

Age of IPO Firm

Age of the listing company is assessed as the listing year of the company and the date of incorporation of the company. Age replicates the magnitude of the working history of the listed firm. Ritter (1984) argues that firms with longer operational history provide more information to the public. They have published financial data for a longer time period; therefore, it becomes easy to screen their financial position by finance experts and financial intermediaries. Mostly, the firms having more experience of operations generate less "ex-ante uncertainty" of firm value therefore underpricing has to be lesser for mature firms. Later (Chahine & Filatotchev, 2008; Loughran & Ritter, 2004) confirm that "firm age has been a negative influence on the listing day return".

Ex Ante Uncertainty

The standard deviation of first four weeks (20 trading days) daily aftermarket return has been used to derive ex-ante uncertainty (EAU) (Ritter, 1984). Beatty and Ritter (1986), concluded that the "listing day return in the new issue increases with the high level of ex-ante uncertainty of the firm value". Welbourne and Cyr (1999), confirm "positive relationship between ex-ante uncertainty and listing day return". It is now extensively acknowledged that "higher level of uncertainty leads to higher listing day return" (Hochberg et al., 2007). Bansal and Khanna (2013) analysed the influence of ex-ante uncertainty on listing day return in Indian IPOs and reported that "ex-ante uncertainty has a significant and positive impact on the listing day return".

Listing Delay

The difference between listing date to the issue date of IPOs is listing delay. Slama Zouari et al. (2011) have analyzed the impact of the time lag between the listing date of the IPO to issue date and concluded that listing delay has no impact on the listing day return.

Times Subscribed

Investors applications for making an investment in IPOs going to be listed is called subscription and level of subscription for the purchase of IPOs for investment are shown as the times subscribed. Koh and Walter (1989) examined the influence of oversubscription on the new listings of Singapore equity market and they reported significant positive influence of oversubscription levels on the underpricing of IPOs. Moreover, they concluded that small investors who are represented as uninformed investors have less influence on underpricing compared to the larger investors who are more informed investors. There are different groups of investors who apply for

the IPOs in which qualified institutional buyer, non-institutional investors, and retail investors are included. Data for subscription level of different groups are available separately and in this research retail subscription and qualified institutional buyers have been used.

Return on Net Worth

RONW is the degree of profitability of a firm expressed in terms of percentage. It is an outcome of the division of net income of a firm to funds contributed by the shareholders of the firm in terms of paid up capital and undistributed profit. Information about return on net worth has presented in "red herring prospectus". Data of return on net worth have been collected from the prime database. Most recent data prior to going public has been used. Murthy and Singh (2014) used return on net worth as an independent variable to predict short-run excess gain and concluded that return on net worth negatively influences short-run excess gain. Deb and Marisetty (2010) investigated return on net worth influence on retail investors' subscription and found that it is not significant in predicting retail investors' subscription.

Earnings Per Share

Earnings Per Share is a share of a firm profit earned on each outstanding shares of the company. It indicates the level of profitability of any company. Information of EPS has been derived from the prime database. Most recent data prior to going public of the firm had been used for the analysis. G. Chen et al. (2004) has used EPS for determining listing day return of the new issue.

3.3.1.2 Sample

The IPOs of 228 Indian companies, listed at National Stock Exchange (NSE), through the process of book building have been used for the study. Data for the study consist of IPOs listed during the financial year 2008-09 to 2017-18. In this sample period, total 231 IPOs have been listed through book building process in the National Stock Exchange, in which complete data for 3 IPOs were not available. Those 3 IPOs have been eliminated from the study (APPENDIX B).

Sample data have been collected for various relevant sources. Red Herring Prospectus (RHP) and final prospectus of the firm going for an IPO has been collected from the SEBI website and prime database. The daily trading data of IPOs listed from the financial year 2008-09 to 2017-18 have been collected from NSE website. Issue size, issue expenses, earning per share, return on net worth and all the subscriptions data containing retail investors' subscription detail, qualified institutional buyer subscription detail, and non-institutional buyer subscription details have been collected from the prime database. Data related to number of lead managers for IPO listed during the financial year 2008-09 to 2017-18 and age of the firm have been collected from prowess database. Quarterly distribution of IPO has been enclosed as (APPENDIX D).

3.3.2 Primary Data

Primary data has been collected using structured questionnaire with close-ended questions from the four regions of India, i.e., Mumbai, Delhi, Kolkata, and Hyderabad. (APPENDIX A)

3.3.2.1 Target Population and Sample

The target population for the study comprised of all the demat account holders who come under retail investors category in India. The size of the total demat account holders in two depositories was "153.3 lakh at NSDL and 119.2 lakh at CDSL at the end of January 2017" (The Economic Times).

The sampling unit of this study constituted individual demat account holders from NSDL or CDSL who come under the category of retail investors. It is not possible to get an exact number of retail investors in the equity market. The population of retail individual investors is unknown for the study, and therefore it is not possible to adopt random sampling technique due to unavailability of the complete retail investor list. Therefore, the study has adopted a non-probability sampling technique.

a) Purposive Sampling (Non-Probability sampling technique) has been found appropriate and used for this study.

b) Data has also been collected from respondents online through google form. Soft copies of the questionnaires were sent to the available mail ids, which are collected from brokerage houses, relatives and friends.

c) Retail investors who visited brokerage houses located in the cities of Mumbai, Delhi, Kolkata, and Hyderabad were approached for getting feedback in person.

d) Primary data was also collected from retail investors attending Investor Awareness Programs organized by Depository participants at various locations in Kolkata and Mumbai.

The following criteria have been followed while selecting a sample for the study.

a) An individual having an active beneficiary type Demat Account with any of the two available depositories (i.e.) CDSL and NSDL.

b) An investor who has been trading in securities, at least for last two years at the time of administration of the questionnaire.

c) Investors located in Mumbai, Delhi, Kolkata, and Hyderabad as these four cities have the highest number of Demat accounts in their respective zones.

d) Investors visiting brokerage Houses, bank branches or participating in Investor Awareness Programs.

Table 3.2 Details of Data Collected from Four Cities

City	Response Collected	Response Rejected	Response Finalized	Percentage of correct response
Mumbai	255	21	234	91.76
Delhi	233	28	205	87.98
Kolkata	234	22	212	90.60
Hyderabad	205	18	187	91.22
	927	89	838	90.39

Table 3.2 presents a description of data collected and the final responses used for the study. The total sample collected from four cities was 927. Due to missing values, 78 respondents were eliminated. After that, the number of sample size decreased to 849. ***After removing missing values, 6 univariate outliers and 5 multivariate outliers were detected, in a sample of 849.*** Therefore, 11 respondents got removed from the available sample of 849, that made the total of 838 as the final sample for the study. Responses deducted due to outliers have been discussed in 'sample characteristics' (chapter 5). Number of the sample which has been finally used for analysis is 838.

A Sample size of 838 has been used in the study. Research done in the same type of field have used sample sizes of 401 by Jaya M Prosad, Sujata Kapoor, and Jhumur Sengupta (2015) and 377 sample by Sahi (2017). According to Hair (2010), "the size of the sample should be determined based on the number of attributes used for the study, and suggested ten subjects for each attribute". This study has used 34 observed variables. Therefore, the study should have a minimum of 340 subjects to meet the sample size criterion. The present sample size is more than the mandatory criterion. Therefore, the sample size for the study is adequate and justified.

3.3.2.2 Design and Measurement of the Questionnaire

Primary data was collected using a self-administered close-ended questionnaire. It contains two sections;

- Section one examines behavioural biases (overconfidence, herd behaviour, and optimistic behaviour), investor awareness, investment intentions, investment satisfaction and concerns (challenges) for retail investors while investing in IPOs.
- Section two examines the personal information demographics of the respondents namely gender of the respondents, age, city of residence, qualification and occupation of the respondents.

Table 3.3 Variables used for the Study.

Variable	**Source**
Behavioural Biases 1.Over Confidence	(Strahilevitz, Odean, & Barber, 2011), (Kahneman & Riepe, 1998; Park et al., 2010) (Luong et al., 2011), (Kengatharan &

2. Herd Behaviour 3. Optimistic Behaviour	Kengatharan, 2014b) (Chuang & Lee, 2006), (Kafayat, 2014), (Lee et al., 2002)
Investor Awareness	(Banumathy & Azhagaiah, 2016), (Lusardi & Mitchell, 2011), (Guiso & Jappelli, 2005), (Hong, Kubik, & Stein, 2004)
Investment Intention	(Kengatharan & Kengatharan, 2014b), (Kafayat, 2014)
Investment Satisfaction	(Wang, Shi, & Fan, 2006)
Concerns for retail investors	(Boulton et al., 2011), (Gupta et al., 2005), (Barua et al., 1994)

3.3.2.3 Description of Variables Used for the Study:

Variables used for primary data analysis contain the demographic profile of investors followed by behavioural biases, investors' awareness, investment intention, concerns of retail investors and satisfaction from investment performance. Explanation of all the variables used for the primary data analysis is given below.

Demographics of the Respondents

Retail investors' behaviour in the equity market is influenced by demographic factors and the environment around them to a considerable extent. The investment intention is positively associated with socioeconomic variables like education, income, age and wealth. (Guiso & Jappelli, 2005) .

Demographics include factors associated with an individual's personality, such as "gender, age, education, and occupation". Investment behaviour of a retail investor depends upon numerous factors. Therefore, investment profile is determined

based on specific information provided by investors which helps in selecting correct IPO for investment. It changes from time to time as per the requirements of the investors.

Behavioural Biases

a) Overconfidence:

"It is defined as the tendency of the investors to overvalue the accuracy of their knowledge about the price of the security" (Odean, 1998b). Overconfidence occurs when investors overestimate the trustworthiness of their investment skills, the accuracy of available information, knowledge of the financial market and, or highly hopeful about the positive performance of the security market and when investors are highly confident about their capability to control the situations (Glaser & Weber, 2007).

Overconfident investors tend to make more investment mistakes such as excessive trading of securities and such decisions lead to less thoughtful investment decisions and ultimately it causes lower or negative returns on investment (Barber & Odean, 2001)

b) Herding:

Herding is the behaviour of the retail investors to keep an eye on investment strategies of others and to follow the masses. Herd behaviour in the equity market is recognized as the inclination of retail investors to follow the investment actions of other investors. In the financial markets, investors having herding bias follow the masses for their Investment decisions for e.g., decision of buying of security or selling of a security. Literature provides the evidence that individual investors are more inclined to herd behaviour in their Investment decision than institutional

investors and also about the presence of this bias in developing and developed countries (Caparrelli, D'Arcangelis, & Cassuto, 2004; Chang, Cheng, & Khorana, 2000) as well as in India (Jaya Mamta Prosad et al., 2015).

c) Optimistic Behaviour:

It is a mental attitude reflecting the belief that the result of some specific effort will be positive, satisfactory, and desirable. The optimist investors overvalue their skills and thus have unrealistic optimistic assessment about the future performance of their investment decision (Kahneman & Riepe, 1998). Shiller (1987) initiated the empirical study on over optimism bias in stock market. Presence of this bias in retail investors has been identified by Toshino and Suto (2004). Researchers explore the existence and influence of this bias on stock markets (Barone-Adesi, Mancini, & Shefrin, 2013; Shefrin & Statman, 2011a).

Investor Awareness

The term "investor awareness" is very common around investor communities and equity markets. It can be mostly defined as familiarizing retail investors about equity investments to make them understand the financial market, products of the financial market, especially risks and rewards of the market (Acquah-Sam & Salami, 2013). According to Noctor, Stoney, and Stradling (1992) investor awareness is defined as "the ability to make informed judgments and to take effective decisions regarding the use and management of money". These days, the financial markets are very diversified. This indicates that "retail investors have a broader range of investment products to choose from, and there is a large number of financial instruments for them to invest their money in financial markets" (Warren, Stevens, & McConkey, 1990). In a country like India which has diverse economic and social

profiles "investor awareness is appropriate for resource-poor people who work at the margin and are defenseless to persistent downward financial pressures of their investment" (Seth, 2010). In the highly complex primary market, lack of financial awareness or less awareness about primary market and the inability of the retail investors to invest optimally could negatively influence the financial outcomes of individuals (Agarwalla, Barua, Jacob, & Varma, 2012).

Investment Intention

The investment decision is a significant process involving taking of risk for expected return. The primary market is known for its unpredictability and volatility as various factors influence the prospects of the primary market. Therefore, retail investors have to be careful while taking investment decisions in the primary market. An investment intention is expressed by investors after seeking the advise of his/her investment advisor.

Researchers concluded that "awareness level of individual investors is an important aspect that influences the investment intention" (Dakshayani, 2016; Das, 2011). Kavitha (2015) concluded that a high level of retail investors' financial awareness has been related with improved intent and capability to invest in the security market.

Investment Satisfaction

Customer has some expectations while they purchase a product; investors who invest in different financial products too, have expectations in terms of good service and positive returns with less risk. If the investors' expectations get fulfilled after investing in IPOs, it increases the satisfaction level of investors. This variable is used to gauge the investors' satisfaction from their investment decision. It is said

that the "investment decision is made in terms of the expectation that the investment will become less risky and generate a higher level of return" (Bodie, Kane, & Marcus, 2001). Anchoring behaviour and heuristics in retail investors have a positive significant impact on the satisfaction level of investors (Kengatharan & Kengatharan, 2014a).

Concerns of Retail Investors

It has been found that retail investors face difficulties while making an investment in the equity market. The concerns are not discussed widely but still, some researchers have studied this issue. Price volatility, corporate mismanagement/fraud, and price manipulation have been the top three fears of retail investors in the Indian security market (Gupta et al., 2005). The investment performance of the retail investors in the stock market is meager and low-performance price is endured by retail investors due to the transaction costs. Barber and Odean (2011) concluded that transaction cost has a negative impact on individual investors earnings An Initial Public Offerings prospectus usually provides pre-IPO financial information of little more than two years which may not show the correct financial position of the firm (Boulton et al., 2011). Indian financial markets are directed and controlled by a few large players who have private information which is inaccessible to others (Iyer & Bhaskar, 2002).

3.4 TOOLS OF ANALYSES

Secondary Data

Market Adjusted Abnormal Return (MAAR) has been used to arrive at listing day returns or underpricing of IPO (According to Ritter and Welch (2002) academia

uses underpricing and the listing day returns interchangeably). Multivariate regression has been used to know the impact of predictors like issue size, issue expenses, IPO activity period, number of lead managers, age of IPO firm, ex-ante uncertainty, total subscription and return on net worth on underpricing of IPOs listed during the financial year 2008-09 to 2017-18. Multivariate regression (OLS) has been used to study the determinants of subscription level of retail investors and variables like issue size, age of the firm, IPO activity period, ex ante uncertainty, return on net worth, earning per share, subscription level of qualified institutional buyer and subscription level of non-institutional buyer.

All the calculations for dependent and independent variables have been performed using MS-EXCEL and multivariate regression analysis has been performed by using Eviews software.

Primary Data

Descriptive statistics, Cross-tabs, Analysis of Variance (ANOVA), Exploratory Factor analysis (EFA), Confirmatory Factor analysis (CFA) and Structural Equation Modeling (SEM) were included as techniques for primary data analysis. The data was analyzed by using statistical packages consisting of "MS Excel, Statistical Package for Social Sciences (SPSS 20) and Analysis of Moment Structures (Amos 20)".

3.5 PERIOD OF THE STUDY

The period of study of secondary data is from April 2008 to March 2018. Primary data from the retail investors has been collected from February 2017 to August 2017.

3.6 SCOPE OF THE STUDY

There are investment instruments other than IPOs in the primary market, but the scope of this study was limited to IPOs which are listed on NSE through the book building process. Data of 10 years of IPOs listed on the NSE has been used for this study. Many variables have been used in previous researches to explain underpricing and subscription level. In the present study, only thirteen explanatory variables have been used for two models due to constraints in availability of data and normality of data. The present study confines to the retail investors and their perceptions about the primary market only. The data collected for the primary analysis was limited to four cities which had the highest number of active Demat Accounts represented by the four regions of India.

3.7 CHAPTERISATION OF THE THESIS

1. The thesis is presented in six chapters. The first chapter introduces the study with overview of the primary market, Initial Public Offerings, Securities and Exchange Board of India, retail investors and household investment patterns in India.
2. Review of literature, research gap, research questions, research objectives, and research hypothesis have been presented in the second chapter.
3. The third chapter deals with the research design, the methodology adopted for the secondary data and primary data analysis.
4. The fourth chapter covers analysis part of the secondary data. Marginal adjusted abnormal return (MAAR) has been used to know the listing day returns in IPOs listed from financial year 2008-09 to 2017-18. Multivariate

regression has been used to identify the explanatory variables which influence listing day returns, and retail subscription level of retail investors in the Indian primary market.

5. The fifth chapter deals with the analysis of primary data. Descriptives of the respondents, crosstab analysis, EFA, CFA, SEM and ANOVA have been used as statistical tools for hypothesis testing of primary data.
6. The sixth chapter presents the summary, findings, conclusion, limitations of the study and direction for future research.

CHAPTER-IV

VARIABLES IMPACTING LISTING DAY RETURNS AND DEMAND FOR IPO

4 VARIABLES IMPACTING LISTING DAY RETURNS AND DEMAND FOR IPO

The present chapter is divided into two sections; the first section of the chapter deals with year wise listing day returns, descriptive statistics of the IPO listing day returns (year wise) and top ten firms in the Indian primary market with a high degree of listing day positive returns and listing day negative returns. The second section presents the analysis to identify the explanatory variables which influence common phenomena of listing day returns in the primary market, and analysis for the identification of explanatory variables which influence demand of IPOs represented by the degree of subscription from retail investors. Total IPOs of 228 companies listed in National Stock Exchange during the financial year 2008-09 to 2017-08 have been used for the purpose of analysis. Analysis has been performed using multivariate regression analysis.

SECTION - I

4.1 DESCRIPTIVE ANALYSIS

Descriptive statistics of independent and dependent variables used for the study in year wise classification of IPOs with listing day returns and descriptive statistics of market adjusted initial returns have been presented in this section. The top ten firms with maximum level of listing day returns (positive and negative) and Industry wise classification of IPOs with listing day returns (positive and negative) have been also discussed.

4.1.1 Descriptive Statistics

It is seen from Table-4.1 that out of the total sample of 228 IPOs listed through the book building process in NSE during the financial years 2008-09 to 2017-18, the companies that registered market adjusted listing day returns has been higher than those which registered market adjusted listing day losses. It is revealed that out of the 228 companies, 139 have performed positively during the sample period, which makes 60.96% of total IPOs and 89 new issues have performed negatively. During 2010-11, the highest number of IPOs were listed in NSE followed by 2017-18 and 2009-10. In the financial year 2016-17, a total of 26 IPOs were listed and 22 of them performed positively which is the highest (84.61%) in comparison with other financial years. Least number of IPOs were listed during the financial year 2013-14, followed by 2014-15 and 2012-13.

Table 4.1 Classification of IPOs With Underpricing and Overpricing from Financial Year 2008-09 to 2017-18

Financial Year	No. of IPO Listed	MAAR (Positive)	MAAR (Negative)
2008-09	17	09	08
2009-10	32	18	14
2010-11	46	28	18
2011-12	26	12	14
2012-13	10	04	06
2013-14	02	01	01
2014-15	06	04	02
2015-16	24	13	11
2016-17	26	22	04
2017-18	39	28	11
Total	**228**	**139**	**89**

Descriptive statistics from the Table-4.2 show that average market-adjusted initial day returns in the financial year 2014-15 was highest with 23.55% followed by 18.89% in 2016-17. Mean value of market adjusted initial day returns for whole sample period has been 12.13%. Positive market adjusted initial day return indicates underpricing (Ritter & Welch, 2002), which means in the whole sample period IPOs were underpriced by 12.13%. During the whole sample period, standard deviation has been 32.21% which indicates that volatility in market-adjusted initial day returns was high. According to Lowry et al. (2010) "a high volatility in initial day returns specifies that the newly listed IPOs have high information asymmetry" and as a result, it is more challenging to value them. Standard deviation has been high during the financial year 2008-09 with 51.97%, followed by 49.90% in the financial year 2011-12.

Table 4.2 Descriptive Statistics of Market Adjusted Initial Returns (Underpricing) from Financial Year 2008-09 to 2017-18.

Year	No. of IPO Listed	Mean (%)	Median (%)	Standard Deviation (%)	Minimum (%)	Maximum (%)
2008-09	17	17.64	0.73	51.97	-34.95	148.18
2009-10	32	7.36	3.39	23.21	-35.15	73.31
2010-11	46	11.72	7.53	30.81	-49.16	96.82
2011-12	26	3.87	-1.1	49.9	-71.73	102.32
2012-13	10	1.13	-3.24	11.05	-13.31	22.87
2013-14	2	7.57	7.57	15.97	-3.73	18.87
2014-15	6	23.55	20.03	30.54	-8.7	66.62
2015-16	24	9.71	1.9	20.69	-22.89	50.91
2016-17	26	18.89	15.09	25.27	-17.23	110.18
2017-18	39	17.92	3.36	29.54	-8.54	139.52
	228	12.13	4.95	32.21	-71.13	148.18

The huge difference between the maximum percentage of positive and negative listing day returns is seen in Table-4.3. The given table presents the top ten companies with the highest level of positive listing day returns and ten companies with the highest level of negative listing day returns. Edserv Softsystems Ltd. has seen highest listing day return for an IPO with 148.18% market adjusted initial day return, followed by Astron Paper and Board Mills Ltd. for an IPO with 139.52%. Indo Thai Securities Ltd. has seen highest negative listing day returns for an IPO with -71.73% market adjusted initial day negative returns followed by Taksheel Solution Ltd. with -64% market adjusted initial day negative return.

Table 4.3 Top Ten Firms with Maximum Level of Underpricing and Overpricing during Financial Year 2008-09 To 2017-18.

S. No.	IPO Name	MAAR (positive) (%)	IPO Name	MAAR (negative) (%)
1	EDSERV SOFTSYSTEMS LTD	148.18	INDO THAI SECURITIES LTD.	-71.73
2	ASTRON PAPER & BOARD MILL LTD.	139.52	TAKSHEEL SOLUTIONS LTD.	-64.00
3	AVENUE SUPERMARTS LTD.	110.18	BHARATIYA GLOBAL INFOMEDIA LTD.	-62.79
4	RESURGERE MINES & MINERALS INDIA LTD.	105.81	VASWANI INDUSTRIES LTD.	-59.01
5	PG ELECTROPLAST LTD.	102.32	OMKAR SPECIALITY CHEMICALS LTD.	-49.17
6	CAREER POINT INFOSYSTEMS LTD.	96.82	SRS LTD.	-46.47
7	ALKALI METALS LTD.	94.29	BROOKS LABORATORIES LTD.	-39.40
8	INVENTURE GROWTH & SECURITIES LTD.	86.72	SHREE GANESH JEWELLERY HOUSE LTD.	-38.32
9	PRAKASH CONSTROWELL LTD.	79.28	EMMBI POLYARNS LTD.	-35.15
10	CENTRAL DEPOSITORY SERVICES (INDIA) LTD.	77.65	BIRLA COTSYN (INDIA) LTD.	-34.95

Table-4.4 below presents industry wise classification of IPOs which were listed during the sample period and the market adjusted positive and negative returns. During the period, total 228 IPOs were listed involving 57 industries. Financial Services/Investments industry listed 19 IPOs which has been highest in all industries; 14 IPOs of Financial Services/Investments industry were performing positively and 5 were performing negatively. Housing/Civil Construction/Real Estate and Information Technology-Software each have two industries listed as part of 13 IPOs.

Table 4.4 Classification of Industry Wise IPO Underpricing and Overpricing during Financial Year 2008-09 to 2017-18.

S. NO.	Industry Type	No. Of IPO	Market Adjusted Underpricing	Market Adjusted Overpricing
1	HOUSING/CIVIL CONSTRUCTION/REAL ESTATE	13	6	7
2	FOOD & FOOD PROCESSING	5	5	0
3	CAPITAL GOODS- NON ELECTRICAL EQUIPMENT	1	1	0
4	CHEMICALS	7	5	2
5	SOLVENT EXTRACTION/VANASPATI/ Edible Oils	2	2	0
6	GLASS AND ALLIED PRODUCTS	1	0	1
7	WOOD AND WOOD PRODUCTS	2	1	1
8	TEXTILES	11	6	5
9	HOSPITALS/DIAGNOSTIC SERVICES	8	5	3
10	POWER GENERATION & SUPPLY	7	2	5
11	INFORMATION TECHNOLOGY-SOTWARE	13	9	4
12	TELECOMMUNICATION	5	3	2
13	MINING/MINERELS/METALS	6	5	1
14	HOTELS,RESORTS,RESTURANTS & TOURISM	2	2	0
15	BREWERIES & DISTILLERIES	3	2	1
16	OIL EXPLORATION/DRILLING/REFINING	1	1	0
17	SHIPPING (INCL REPAIRING/ BREAKING)	2	1	1
18	INFORMATION TECHNOLOGY-HARDWARE	2	0	2
19	MEDIA-ELECTRONIC & PRINT	8	4	4
20	AGROCHEMICALS/PESTICIDES	1	0	1
21	TRAVEL/TRANSPORTATION/COURIER(PASSENGER/CARGO)	8	8	0

22	PUBLISHING	3	3	0
23	ROADS & HIGHWAYS	12	6	6
24	PHARMACEUTICALS & DRUGS	8	6	2
25	DIAMOND CUTTING & JEWELLERY	7	2	5
26	PLASTICS	2	1	1
27	BANKING/TERM LENDING	4	3	1
28	Electric/Electronics Equipment	5	2	3
29	ENGINEERING	10	3	7
30	FINANCIAL SERVICES/INVESTMENTS	19	14	5
31	HOUSEHOLD & PERSONAL PRODUCTS	2	2	0
32	STEEL TUBES/PIPES/WIRES/PRODUCTS	4	4	0
33	BATTERIES	1	0	1
34	INFORMATION TECHNOLOGY-EDUCATION	4	2	2
35	MATERIAL HANDLING EQUIPMENT	1	1	0
36	WATER RESOURCES	1	1	0
37	AUTOMOBILE COMPONENTS/ANCILLARIES	4	2	2
38	CABLES/WIRES/CONDUCTORS	1	0	1
39	PAPER & BOARD	3	1	2
40	CASTINGS/ FORGINGS	1	1	0
41	LAMINATES/DECORATIVES	1	1	0
42	ELECTRONICS-CONSUMER & MEDIA	1	1	0
43	PACKAGING-PLASTIC	1	0	1
44	STEEL/SPONGE IRON/PIG IRON	1	1	0
45	TRADING(INCL.EXPORTS)	3	2	1
46	HOUSING FINANCE	3	2	1
47	AMUSEMENT PARKS/RECREATION	2	2	0
48	DYES & PIGMENTS	1	0	1
49	MILK & DAIRY PRODUCTS	2	1	1
50	TEA/ COFFEE	1	0	1
51	GASES & FUELS	1	1	0
52	INSURANCE	5	3	2
53	CEMENT & CONSTRUCTION MATERIALS	1	1	0
54	MISC.	1	0	1
55	CONSUMER ELECTRONICS	2	2	0
56	DIVERSIFIED	1	1	0
57	LEATHER/ SYNTHETIC FOOTWEAR & PRODUCTS	1	0	1
	TOTAL	228	140	88

SECTION-II

4.2 VARIABLES IMPACTING LISTING DAY RETURNS AND DEMAND FOR IPO

Explanatory variables have been used to identify the determinants of listing day returns by using multivariate regression (OLS). There are two models used to fulfill the objectives. The first model identifies the determinants of listing day returns; explanatory variables used for this model are retail subscription, minimum amount, issue expenses, activity period, number of lead manager, the age of the firm, listing delay, ex-ante uncertainty and earning per share.

4.2.1 Factors Affecting the Listing Day Returns (Model-I)

Many researchers work in the field of new issues and listing day returns and use their studies to examine the determinants for listing day returns (Allen & Faulhaber, 1989; D. P. Baron, 1982). Multivariate regression (OLS) has been used to test the impact of explanatory variables on the listing day returns, measured by market-adjusted abnormal return (MAAR). While recognizing explanatory variables, the emphasis has been given on those variables which have established predictive power for explaining listing day returns. Retail subscription, minimum amount, issue expenses (log), IPO activity period (dummy), number of lead manager, age of IPO firm, listing delay, ex-ante uncertainty (EAU) and earning per share (EPS) have been used to discover the variables which are having an impact on listing day returns. Retail subscription is times subscribed for the allocation of IPO by retail investors. OLS regression model (white heteroskedasticity-consistent standard errors) has been used for the analysis to solve heteroskedasticity by following (Pensiero &

Krishnamurti, 2014). Data characteristics has been checked by using CUSUM test and "Breusch-Godfrey Serial Correlation LM Test" (APPENDIX F).

Equation used for the determinants of listing day return (MAAR)

$$MAAR = \alpha + \beta_1 LNRETAIL\_SUBSCRIPTION + \beta_2 MINIMUM\_AMOUNT + \beta_3 LNISSUE\_EXPENSES + \beta_4 ACTIVITY\_PERIOD + \beta_5 LEAD\_MANAGER + \beta_6 AGE\_FIRM + \beta_7 LISTING\_DELAY + \beta_8 EAU + \beta_9 EPS$$ ---------- *(Equation 1)*

Where, the dependent variable is listing day return (extracted by using MAAR). The independent variable LNRETAIL_SUBSCRIPTION refers to the demand of the IPO from retail investors for allocation. A number of independent variables have been used such as MINIMUM_AMOUNT, LNISSUE_EXPENSES, ACTIVITY_PERIOD (dummy variable), LEAD_MANAGER, AGE_FIRM, LISTING_DELAY, EAU, and EPS. All given dependant and independent variables have already been discussed in the description of variables section of the research methodology chapter.

Table 4.5 Multiple Regression Results for Determinants of Underpricing

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.355942	0.061924	-5.748005	0.0000
LNRETAIL_SUBSCRIPTION	0.004683	0.001531	3.059164	0.0025
MINIMUM_AMOUNT	4.86E-06	3.05E-06	1.593246	0.1126
LNISSUE_EXPENSES	0.069061	0.022778	3.031971	0.0027
ACTIVITY_PERIOD	-0.045959	0.033267	-1.381536	0.1685
LEAD_MANAGER	-0.007505	0.007026	-1.068095	0.2867
AGE_FIRM	0.000828	0.000743	1.114699	0.2662
LISTING_DELAY	-0.005056	0.000855	-5.914875	0.0000
EAU	0.044513	0.003657	12.17304	0.0000
EPS	0.002299	0.000782	2.941390	0.0036
R-squared	0.590669			
Adjusted R-squared	0.573770			

Note- Level of significance-5%

The above table reports the model described in Eq. (2). The result from Table 4.5 shows that demand from retail investors for subscription to an IPO (LNRETAIL_SUBSCRIPTION) has been significant and it influences the listing day returns positively. It means retail investors subscription level has also been a reason for listing day returns in the primary market. The result is in line with the conclusion of Menyah et al. (1995), which also stated that retail subscription positively leads to listing day return in the primary market.

Issue expenses of the IPOs represented by ISSUE_EXPENSES has been significant and has been positively influencing the listing day return, result is in line with Chemmanur (1993). Listing delay represented by (LISTING_DELAY) has been negatively influencing IPO listing day return, in line with the result of Chowdhry and Sherman (1996), that listing time affects the degree of listing day return. Ex-ante uncertainty represented by EAU has a positive significant relationship with listing day return; this result is supported by the study carried out by Schertler (2001). Explanatory variables like MINIMUM_AMOUNT, ACTIVITY_PERIOD, LEAD_MANAGER and AGE_FIRM are not significant.

4.2.2 Factors Affecting Subscription Level of Retail Investors (Model-II)

Multivariate regression (OLS) has been applied to test the impact of explanatory variables on the subscription level of retail investors in line with Sohail and Nasr (2007). While identifying independent variables for analysis, the emphasis has been given to those variables which have proven predictive power for explaining subscription level of retail investors (Khurshed et al., 2010). The minimum amount has been used to analyze its influence on retail investors' subscription level.

Different independent variables have also been used for this study namely issue size (log), subscription level of qualified institutional buyer (log), age of the firm, IPO activity period (dummy), ex-ante uncertainty, listing delay, return on net worth, earning per share. The minimum amount has been derived by multiplying upper price band of offer price and a lot size of each IPO, listed in NSE from the financial year 2008-09. Natural logarithm of issue size and QIB subscription has been used as independent variables. Activity period used for the analysis is the dummy variable (0,1).

Equation used for the determinants of Retail subscription

$$LNRETAIL\_SUBSCRIPTION = \alpha + \beta_1 MINIMUM\_AMOUNT + \beta_2 LNISSUE\_SIZE + \beta_3 LNQIB\_SUBSCRIPTION + \beta_4 AGE\_FIRM + \beta_5 ACTIVITY\_PERIOD + \beta_6 EAU + \beta_7 LISTING\_DELAY + \beta_8 RONW + \beta_9 EPS \text{----------} (\text{Equation 3})$$

Where, the dependent variable LNRETAIL_SUBSCRIPTION, which represents the demand from the retail investors for the allocation of IPO. The variable MINIMUM_AMOUNT refers to the amount investors has to invest while applying for an IPO. Further independent variables such as LNISSUE_SIZE (log), LNQIB_SUBSCRIPTION (log), AGE_FIRM, ACTIVITY_PERIOD (dummy variable), EAU, LISTING_DELAY, RONW, and EPS. Dependent and independent variables have been discussed in the given section description of the variables of research methodology chapter. Heteroskedasticity for the data has been checked by using “Breusch-Pagan-Godfrey test”, mis specification is checked by using CUSUM test and auto correlation has been checked by “Breusch-Godfrey Serial Correlation LM Test” (APPENDIX F).

Table 4.6 Multiple Regression Results for Determinants of Retail Subscription

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.474251	0.451055	3.268452	0.0013
MINIMUM_AMOUNT	7.62E-05	2.01E-05	3.793160	0.0002
LNISSUE_SIZE	-0.366261	0.066159	-5.536054	0.0000
LNQIB_SUBSCRIPTION	0.033356	0.003832	8.704552	0.0000
AGE_FIRM	0.004837	0.004509	1.072756	0.2846
ACTIVITY_PERIOD	0.163393	0.176516	0.925655	0.3556
EAU	0.026362	0.014307	1.842563	0.0668
LISTING_DELAY	-0.006851	0.006053	-1.131978	0.2589
RONW	0.003288	0.001072	3.067160	0.0024
EPS	0.003933	0.005943	0.661833	0.5088
R-squared	0.421787			
Adjusted R-squared	0.397915			

Note- Level of significance-5%

Multivariate regression analysis has been used to test model given in Eq. (3). The result from (Table 4.6) shows that minimum amount required for the IPO investment (MINIMUM_AMOUNT) has been significant and positively influencing the demand of IPOs from retail investors who are less informed about the financial soundness of new issue. It seems from the result that the retail subscription level for the IPO where the subscriber has to invest more amount used to be high, the result is supporting Neupane and Poshakwale (2012) finding that retail investors bid aggressively for IPOs due to overconfidence. Issue Size of the company going public is represented by LNISSUE_SIZE has been highly significant and negatively influencing the retail investors' demand of IPOs; it means the level of retail investors subscription is high for low issue size IPOs. Subscription level of qualified institutional buyers has been highly significant and positively leading to retail subscription. Khurshed, Pande, and Singh (2009) analyze the influence of the degree of LNQIB subscription on retail investors subscription level and had stated the same result. Ex-ante uncertainty represents by EAU has been highly significant for the

retail demand and return on net worth (RONW) is also positively significant with the degree of retail subscription. Variables namely AGE_FIRM, ACTIVITY_PERIOD, LISTING_DELAY and EPS are not significant.

4.3 CONCLUSION

The result from analysis indicated that the market adjusted listing day returns for the whole sample period has been 12.13%.

Multivariate regression (OLS) has been performed to identify the variables which are influencing listing day returns and demand from retail investors of IPOs is represented by the degree of subscription.

- Results from the analysis for objective 1 revealed that demand from retail investors (RETAIL_SUBSCRIPTION) has been positively influencing the listing day returns. This indicates that retail investors' subscription level has a significant impact in determining initial day returns in the Indian primary market. Investors buy IPOs in the primary market with an expectation to get positive initial day returns, this is a reason for positive retail demand influence on initial day return. This finding agrees with Sahoo and Rajib (2010).
- Interestingly, the result indicates that the degree of retail subscription is high for the IPO where retail investors have to invest more. Result confirms that retail investors follow qualified institutional buyers while applying for an IPO. This result is in line with the conclusion given by Löffler, Panther, and Theissen (2005), because retail investors prefer to use shortcuts instead of doing their own ground work for investment. High level of uncertainty about

an IPO positively influences its demand in the primary market, which is in agreement with Khurshed et al. (2010); Ghosh (2005).

CHAPTER-V

BEHAVIOURAL BIASES, AWARENESS AND INVESTMENT SATISFACTION OF RETAIL INVESTORS

5 BEHAVIOURAL BIASES, AWARENESS AND INVESTMENT SATISFACTION OF RETAIL INVESTORS

The existence of a positive relationship between the behavioural biases of retail investors with investment intentions and investment satisfaction has been studied in this chapter. The influence of demographics of various groups on the awareness level of the retail investors has been analysed and reported. Further, the impact of demographics on the concerns of retail investors while investing in IPOs has been discussed. Apart from the pilot study, sample characteristics and instrument validation have been explained.

5.1 PILOT STUDY

The term pilot study is defined as "A small study conducted in order to evaluate the feasibility, time, cost, adverse events, and to improve the research design prior to conducting a full-scale research" (Shumway-Cook & Woollacott, 2007). A pilot study analyses the feasibility of the research before executing the main study. "The pilot study is important for the improvement of the quality and efficiency of the main study" (Cann et al., 2008). According to Johanson and Brooks (2010), sample representation used for the study has more influence in accuracy than the size of the sample selected for the study. It is mentioned in the sources of collecting primary data, that retail investors who are investing in the primary market for a minimum of two years have been used as respondents for this study. The respondents were selected from the four cities namely Mumbai, Delhi, Kolkata and Hyderabad. These cities were selected on the basis of highest number of operating

Demat account holders from their respective zones (West, North, East, and South). Purposive and snowball sampling has been used for the collection of data. The sample size for a pilot study of 12 per group was suggested by Johanson (2010). Cann (2008) recommended, "sample size for the pilot study should be 10% of the sample projected for the final study". A total of 124 respondents have been used for the pilot study. A structured questionnaire containing four constructs has been used for the collection of data. Four constructs namely awareness level of retail investors, behavioural biases, investment intention, and investment satisfaction have been used in the pilot study. Details about all the constructs have been discussed earlier in the description of variables used for the study in chapter 3. A total of 29 items have been used for the collection of data for the pilot study, from which 3 items have been deleted from the study for not meeting criteria for further analysis. Finally, 26 items have met the threshold criteria of more than .40 value for outer loadings and no cross-loadings and these items have been used for the reliability and validity analysis. Reliability and validity for the items and constructs have been tested by using PLS-SEM. Results of the analysis for construct reliability, convergent validity, and discriminant validity is presented below (Table 5.1).

Table 5.1 Construct Reliability and Validity Result

Construct Name	Item acronym	Factor Loadings	Cronbach's Alpha	rho_A	Composite reliability (CR)	Average variance extracted (AVE)
Awareness (AW)	AW1	.946	.927	.936	.924	.674
	AW2	.726				
	AW3	.821				
	AW4	.844				
	AW5	.615				
	AW6	.926				
Behavioural biases (BB)	BB1	.758	.957	.958	.957	.690
	BB2	.912				
	BB3	.846				
	BB4	.855				
	BB5	.831				
	BB6	.856				
	BB7	.790				
	BB8	.852				
	BB9	.835				
	BB10	.761				
Investment Intention (ID)	ID1	.904	.843	.868	.847	.533
	ID2	.588				
	ID3	.563				
	ID4	.771				
	ID5	.768				
Investment Satisfaction (IS)	IS1	.857	.927	.930	.927	.718
	IS2	.877				
	IS3	.919				
	IS4	.754				
	IS5	.821				

Factor loadings represent the correlation between the item and the factor, and the values .50 or greater are considered practically significant. Items used for this model are highly loaded (factor loadings > 0.70) on their specific factors/constructs. Cronbach's Alpha values for all the constructs are more than 0.70, meeting threshold criteria, so it can be said that they are fulfilling the "internal consistency of items within factors" (Tavakol & Dennick, 2011). Composite reliability is presented in the above table (Table 5.1), which has been checked by using average variance extracted (AVE) for four constructs. "Minimum acceptable value for composite reliability is 0.6" (Fornell & Larcker, 1981). It can be inferred from the table that composite reliability for each construct is greater than 0.70. Hence, all the constructs adhere to the required construct reliability criteria. "Average variance extracted (AVE)" has been calculated to test the "convergent validity" for all four constructs. It can be seen from table 5.1, that the AVE for all construct is more than 0.50. It proves that all the "constructs possess convergent validity" (Fornell & Larcker, 1981).

The final model consists 26 items which have been assembled under four constructs - 'awareness' (six items); 'behavioural biases' (ten items); 'investment intention' (five items); and 'investment satisfaction' (five items). Table 5.2 shows the result for the discriminant validity.

Table 5.2 Discriminant Validity

	AW	BB	ID	IS
AW	**0.821**			
BB	0.133	**0.831**		
ID	0.027	0.592	**0.730**	
IS	0.320	0.380	0.278	**0.847**

Note: Diagonal values represent AVE values; off-diagonal values represent squared inter-construct correlations.

"If the AVE values are greater than the squared inter-construct correlations, then it implies distinctiveness of the constructs" (Fornell & Larcker, 1981). The above table shows that the construct's respective AVE values are higher than the squared inter construct correlation. Therefore, all four constructs which have been used for the model show discriminant validity. During the collection of data for the pilot study, respondents discussed their concerns while investing in the primary market. Therefore, one more construct, i.e., 'concerns of retail investors', was added later on for final data collection.

5.2 THE MAIN STUDY

5.2.1 SAMPLE CHARACTERISTICS

927 respondents had been contacted for the survey data collection. The sample characteristics have been examined by using SPSS 20. After eliminating respondents with missing data from the sample, sample got reduced to 849 from 927. After checking for univariate outliers, it has been found that it has 6 univariate outliers (z score > +/- 3.29). After checking for multivariate outliers, 5 multivariate outliers have been detected; those having Mahalanobis distances above critical score of 65.25 (34 df and p<.001). There were 11 multivariate outliers; they have been removed from the sample, making 838 as the final sample size of the study. Overall scale is normally distributed. The table-5.17 presents skewness and kurtosis value for all five constructs used in the study. All the constructs are normally distributed, which are within the threshold value, i.e., "skewness statistic divided by the standard error between z score +/- 3.29 (p < .001, two-tailed test) " (Tabachnick & Fidell, 2007). Kurtosis values of all the constructs are also within threshold limit +/-3.29,

except for Dis-Satisfaction variables (-4.98). Singularity and multicollinearity have been not detected as all constructs have SMC (1-tolerance), which is closer to 0.00 (Tabachnick & Fidell, 2007) (Table 5.3).

Table 5.3 Normality of the Constructs Used for the Study

	Behavioural Biases	Investors Awareness	Investment Intention	Investment Satisfaction	Investor Concerns
Skewness	-0.268	-0.251	-0.275	0.106	-0.246
St. Error. of Skewness	0.084	0.084	0.084	0.084	0.084
Skewness/SE	-3.19048	-2.9881	-3.27381	1.261905	-2.92857
Kurtosis	-0.431	-0.527	-0.554	-0.536	-0.843
St. Error. of kurtosis	0.169	0.169	0.169	0.169	0.169
Kurtosis/SE	-2.5503	-3.11834	-3.27811	-3.1716	-4.98817

5.2.2 DEMOGRAPHICS OF THE RETAIL INVESTORS

The demographic descriptive statistics of the retail investors are presented in Table-5.4 and frequency chart (Figure-5.1).

Table 5.4 Sample distribution of Gender, Age, Qualification, Occupation, Region and Experience.

S. No.	Variable	Category	No. of Respondents	Percentage of Respondents
1	Gender	Male	679	81
		Female	159	19
2	Age	Below 30 Years	261	31.2
		31-40 Years	348	41.5
		41-50 Years	109	13.0
		51-60 Years	67	8.0
		More than 60 Years	53	6.3
3	Qualification	Under graduate	128	15.3
		Graduate	301	35.9
		Post graduate	233	27.8
		Doctorate	176	21.0
4	Occupation	Student	60	7.2
		Homemaker	63	7.5
		Businessman	237	28.3
		Private employee	368	43.9
		Government employee	110	13.1
5	Region	Mumbai	234	27.9
		Delhi	205	24.5
		Hyderabad	212	25.3
		Kolkata	187	22.3
6	Experience of investment	2-5 years	354	42.2
		6-10 Years	300	35.8
		11-15 Years	124	14.8
		More than 15 Years	60	7.2

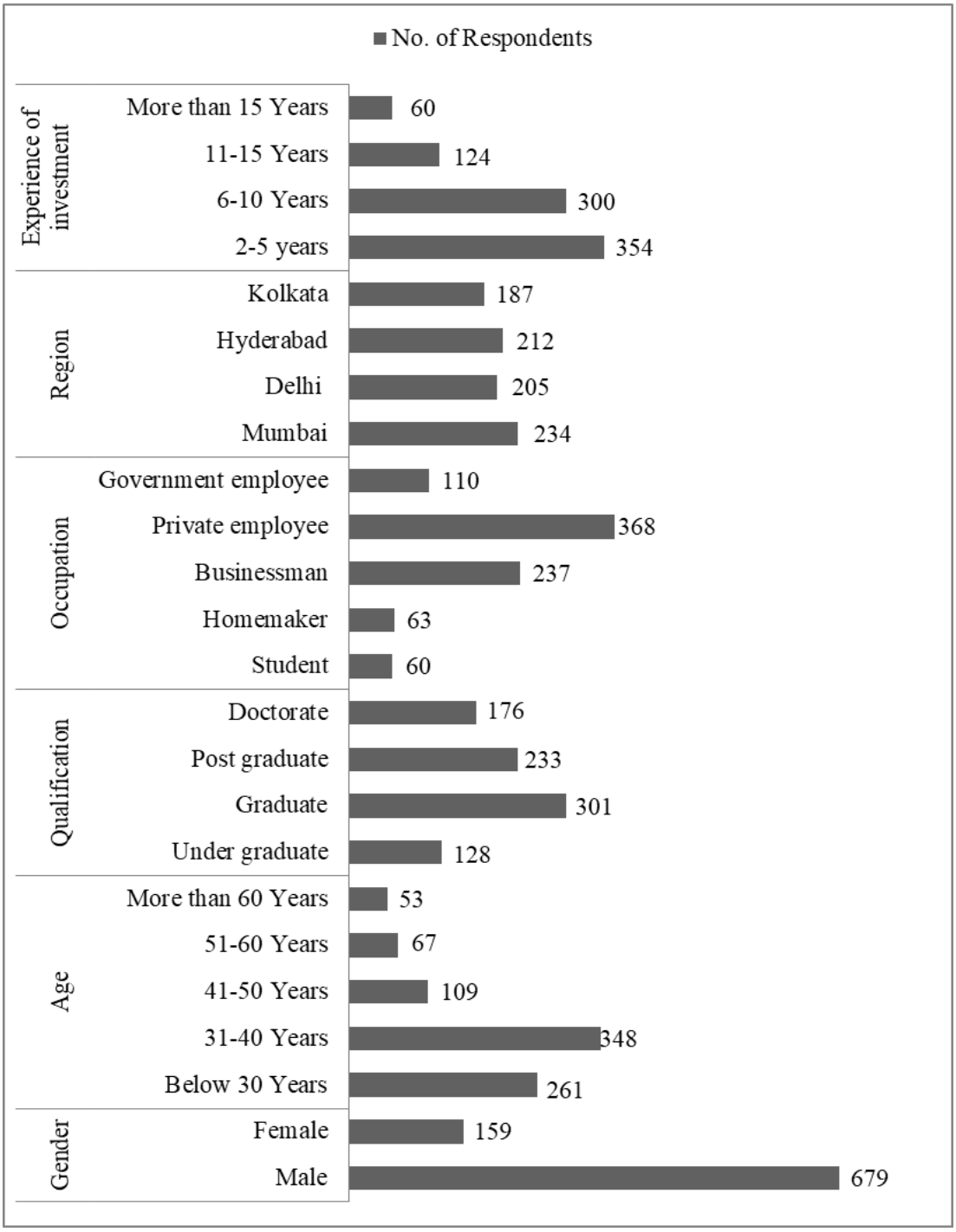


Figure 5-1 Sample Distribution of Gender, Age, Qualification, Occupation, Region and Experience

The sample consisted of 81% male and 19% female respondents. Most of the respondents belong to the age group of 31 to 40 years (42.1%), followed by less than 30 years category (31.1%) and least number of respondents have been from the age group of more than 60 years category (5.8%). Percentage of graduate respondents are high with a share of 35.9%, followed by postgraduate respondents (27.8%), and the least number of respondents belong to the qualification of undergraduate (15.2%). Most of the respondents belong to the category of private employees (43.9%), followed by businessmen (28.3%). The highest number of respondents belong to the city of Mumbai (27.9%), followed by Hyderabad (25.3%), Delhi (24.5%) and Kolkata (22.3%). Most of the respondents are having 2-5 years (43.4%) of experience in the equity market followed by 6-10 years as investors (36.5%).

5.2.3 DEMOGRAPHICS OF THE RESPONDENTS AND THEIR PREFERENCE ABOUT TIME HORIZON OF INVESTMENT

Relationship between demographics of retail investors and their preference of holding the investment in IPOs has been studied using crosstab analysis. Gender, age, the city of residence, qualification, occupation, monthly income and experience of the retail investors have been used to know the investors preference about investment time horizon in the primary market..

Table 5.5 and Figure 5.2, show the gender wise preference of time horizon for investment in IPOs.

Table 5.5 Respondent's Gender wise preference for Time Horizon of Investment

Gender of the respondents	Till the date of the listing	1-3 years	4-6 years	7-9 years	More than 9 years	Total
Male	338	149	123	38	31	679
Female	56	47	34	12	10	159
Total	394	196	157	50	41	838

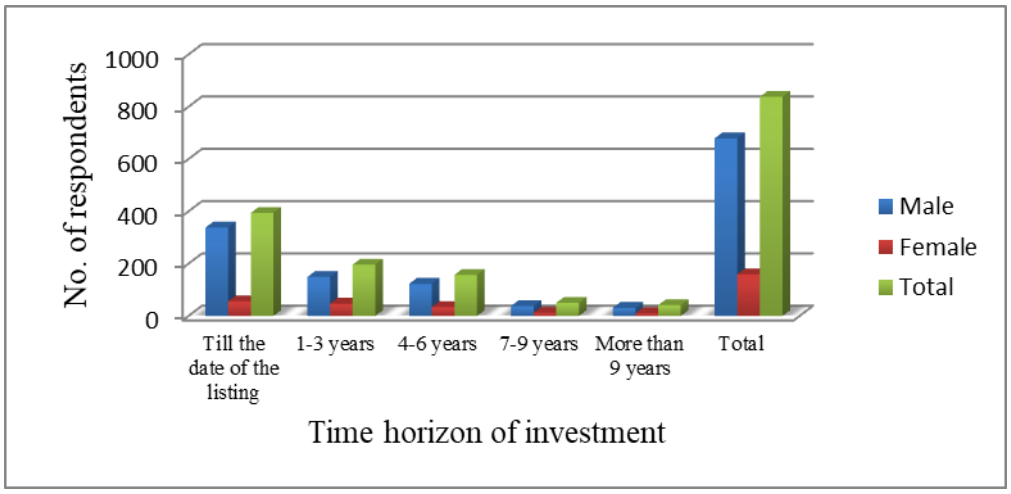


Figure 5-2 Respondent's Gender Wise Preference for Time Horizon of Investment

Most of the investors prefer to invest till listing date (394 respondents). From the total sample, 338 male investors prefer to invest in an IPO till the date of listing, while 56 female investors have a preference to make investment till the date of listings. The second preferred choice for investment time horizon is 1-3 years (149 male investors and 47 female investors). Numbers of long-term investors are very less; from the total sample, only 50 investors prefer to invest for a time horizon of 7-9 years and 41 investors preferred to make an investment for more than 9 years.

Table 5.6 and Figure 5.3, show the respondent's age wise preference for time horizon of investment.

Table 5.6 Respondent's Age Wise Preference for Time Horizon of Investment

Age of the respondents	Till the date of the listing	1-3 years	4-6 years	7-9 years	More than 9 years	Total
Below 30 years	143	59	42	9	8	261
31-40 years	170	80	73	15	10	348
41-50 years	38	29	20	12	10	109
51-60 years	26	14	12	8	7	67
More than 60 years	17	14	10	6	6	53
Total	394	196	157	50	41	838

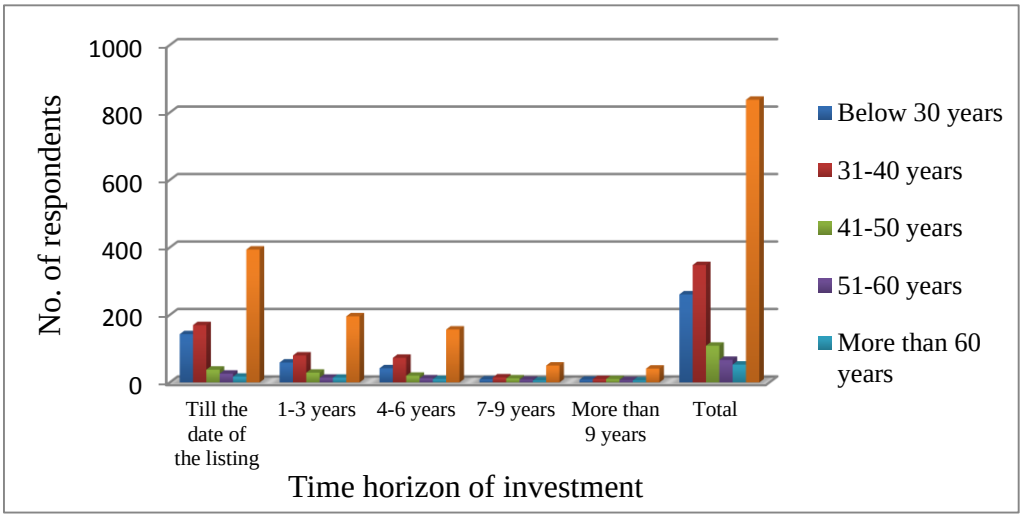


Figure 5-3 Respondent's Age Wise Preference for Time Horizon of Investment.

It can be seen from the Table 5.6, that most of the respondents belong to the age group of 31-40 years; from the same age group highest number of respondents (170) preferred to invest in IPOs till listing date only. Respondents from the below 30 years category are the second largest group of investors (261). From the category of below 30 years investors, majority (143) of them like to invest in IPOs till listing day only, followed by 1-3 years (59) of investment time horizon.

Table 5.7 and Figure 5.4, show the respondent's city wise preference for time horizon of investment.

Table 5.7 City of Residence Wise Preference for Time Horizon of Investment

City of residence of the respondents	Till the date of the listing	1-3 years	4-6 years	7-9 years	More than 9 years	Total
Mumbai	117	46	47	13	11	234
Delhi	103	45	38	11	8	205
Hyderabad	85	63	39	14	11	212
Kolkata	89	42	33	12	11	187
Total	394	196	157	50	41	838

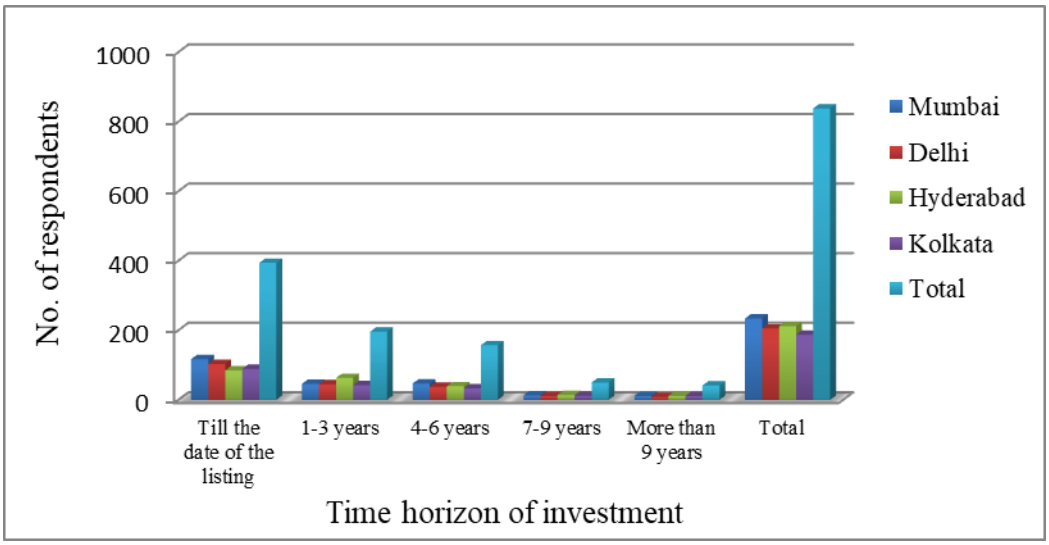


Figure 5-4 City of Residence Wise preference for Time Horizon of Investment

It can be seen from Table 5.7 that most of the respondents belong to the city of Mumbai (234). Across all the four cities, number of respondents who prefer to invest in IPOs till listing day only, is high (394); followed by the desire of investment time horizon of 1-3 years (196). The pattern of investment in terms of time horizon is the same across all the four cities, as number of investors are more for short-term investment options and time horizon preference is decreasing for long-term investment.

Table 5.8 and Figure 5.5, show the respondent's qualification wise preference for time horizon of investment.

Table 5.8 Respondent's Qualification Wise Preference for Time Horizon of Investment

Qualification of the respondents	Till the date of the listing	1-3 years	4-6 years	7-9 years	More than 9 years	Total
Under graduate	64	27	22	7	8	128
Graduate	137	75	54	21	14	301
Post graduate	113	53	43	13	11	233
Doctorate	80	41	38	9	8	176
Total	394	196	157	50	41	838

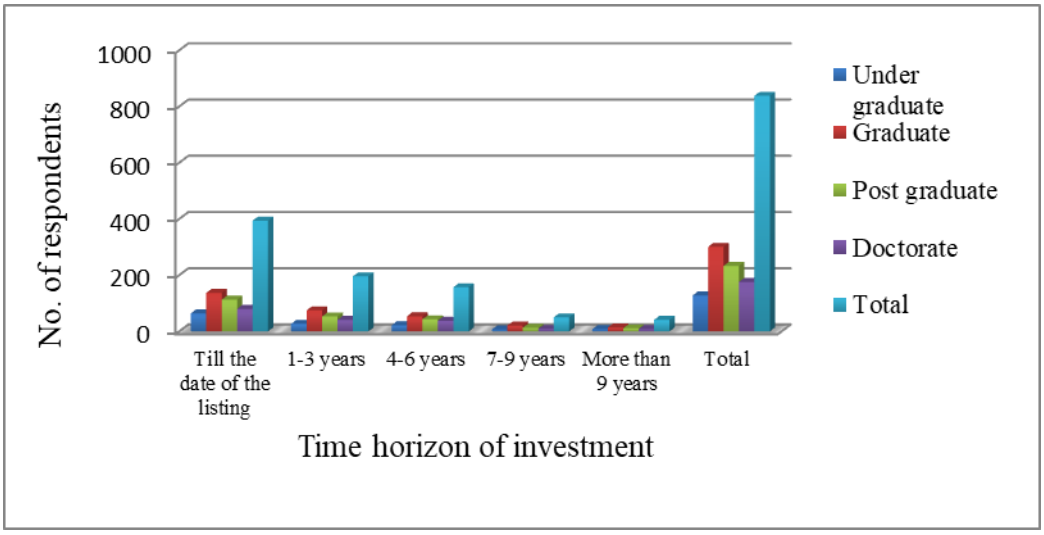


Figure 5-5 Respondent's Qualification Wise preference for Time Horizon of Investment.

It can be seen from Table 5.8 that respondents with qualification of graduation are highest (301), followed by post graduate respondents (233). Most of the graduate investors (137), preferred to invest in IPOs till listing day only, followed by 1-3 years (75), 4-6 years (54), 7-9 years (21) and only 14 retail investors want to invest in IPOs for a period of more than 9 years. It is revealed from the table

across all the respondents from the various categories of qualification that 394 respondents want to make IPO investment till listing day only, which is a clear signal of investors' desire for short-term investment.

Table 5.9 and Figure 5.6, show the respondent's occupation wise preference for time horizon of investment.

Table 5.9 Respondent's Occupation Wise Preference for the Time Horizon of Investment

Occupation of the respondents	Till the date of the listing	1-3 years	4-6 years	7-9 years	More than 9 years	Total
Student	26	14	7	6	7	60
Home maker	20	20	11	6	6	63
Businessman	125	50	46	7	9	237
Private Employee	182	82	71	21	12	368
Government Employee	41	30	22	10	7	110
Total	394	196	157	50	41	838

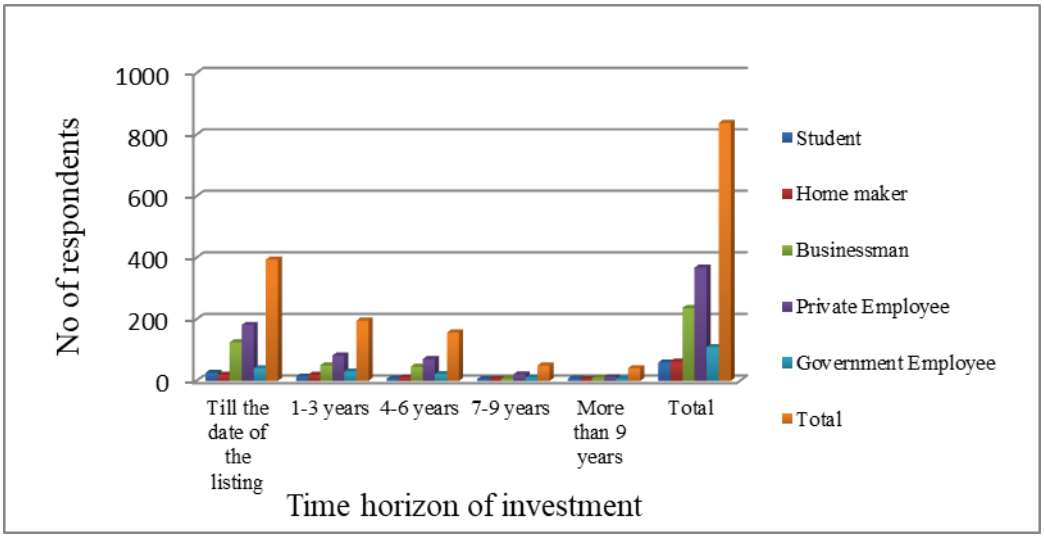


Figure 5-6 Respondent's Occupation Wise Preference for Time Horizon of Investment

It can be seen from Table 5.9, that highest number of respondents (368) are private employees, followed by businessmen (237). Mostly, investors from private employee category (182), preferred to invest in IPOs till listing day only; while a very small number of investors (12) from the same category like to invest in IPOs for more than 9 years. It can be seen from the table that the category of businessman has highest number of investors (125), preferring to invest in IPOs till listing day only.

Table 5.10 and Figure 5.7, show the respondent's experience wise preference for the time horizon of investment.

Table 5.10 Respondent's Experience Wise Preference for Time Horizon of Investment

Experience of the respondents	Till the date of the listing	1-3 years	4-6 years	7-9 years	More than 9 years	Total
2-5 years	196	80	54	12	12	354
6-10 years	123	76	68	20	13	300
11-15 years	52	29	24	10	9	124
More than 15 yeras	23	11	11	8	7	60
Total	394	196	157	50	41	838

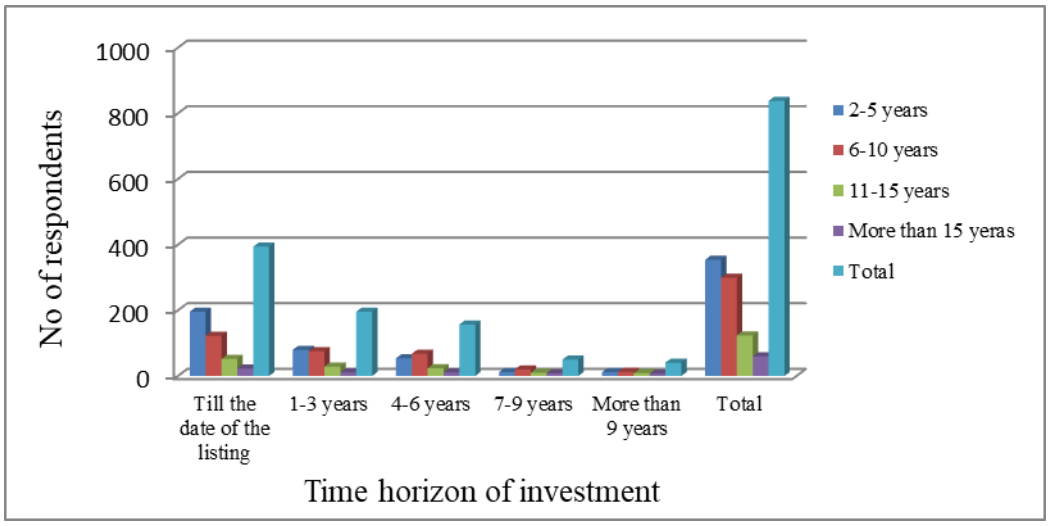


Figure 5-7 Respondent's Experience Wise preference for Time Horizon of Investment

The above table (Table 5.10) reveals that most of the investors fall in the group of 2-5 years of experience followed by investors with experience of 6-10 years. A number of investors with experience of more than 15 years are comparatively very less. From the total sample of 838, 394 retail investors of the entire group want to invest their money till listing date only, while only 41 investors want to invest in IPOs for more than 9 years. It is inferred from the above table that the majority of investors belong to all the experience groups, preferring to hold their investment till the date of listing only.

5.2.4 DEMOGRAPHICS OF THE RESPONDENTS AND THEIR EXPECTED RATE OF RETURN FROM IPO INVESTMENT

Crosstab analysis has been performed to examine the relationship between the demographics of the retail investors and their expected rate of return from IPO investment. Demographic variables - gender, age, the city of residence, qualification, occupation, monthly income and experience of the retail investors have been used for the analysis.

Table 5.11 and figure 5.8 show the result for the crosstab between gender of the respondents and their expectation of return from IPO.

Table 5.11 Respondent's Gender Wise Expectation of Returns

Gender of the respondents	10%-20% of return	21%-30% of return	31%-40% of return	41%-50% of return	More than 50% of return	Total
Male	123	197	157	150	52	679
Female	39	65	26	19	10	159
Total	162	262	183	169	62	838

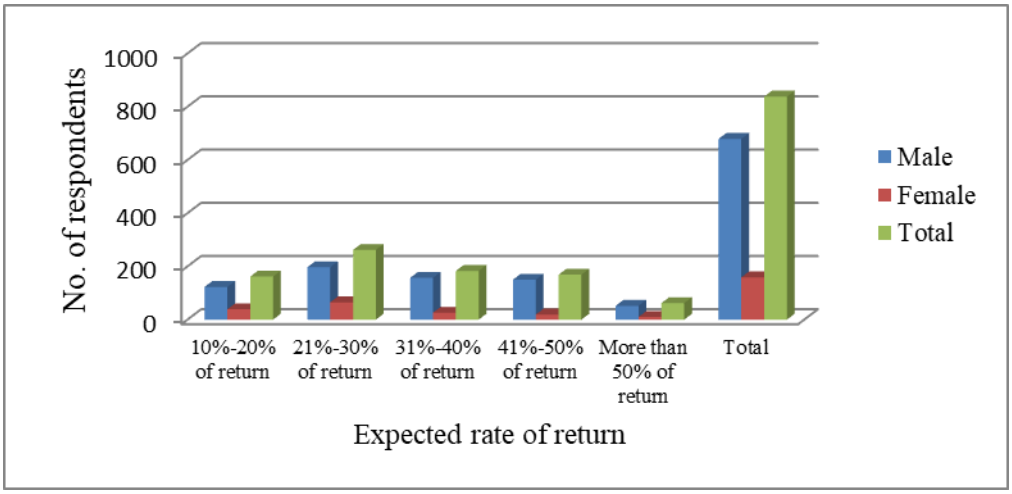


Figure 5-8 Respondent's Gender Wise Expectation of Return

The above table (Table 5.11) shows that most of the male investors had a desire to earn a return of 21-30% from the IPO investment, followed by 31-40% of expectation of return from the IPO investment. Most of the female investors had a desire to earn a return of 21-30% from the IPO investment, followed by 10-20% of expectation of return. It can be inferred from the given table that expectation of earning the highest return of more than 50%, is very low.

Table 5.12 and figure 5.9 show the result for the crosstab between age of respondents and their expectation of return from IPO.

Table 5.12 Respondent's Age Wise Expectation of Return

Age of the respondents	10%-20% of return	21%-30% of return	31%-40% of return	41%-50% of return	More than 50% of return	Total
Below 30 years	36	76	54	67	28	261
31-40 years	68	109	90	66	15	348
41-50 years	30	33	20	18	8	109
51-60 years	17	27	9	8	6	67
More than 60 years	11	17	10	10	5	53
Total	162	262	183	169	62	838

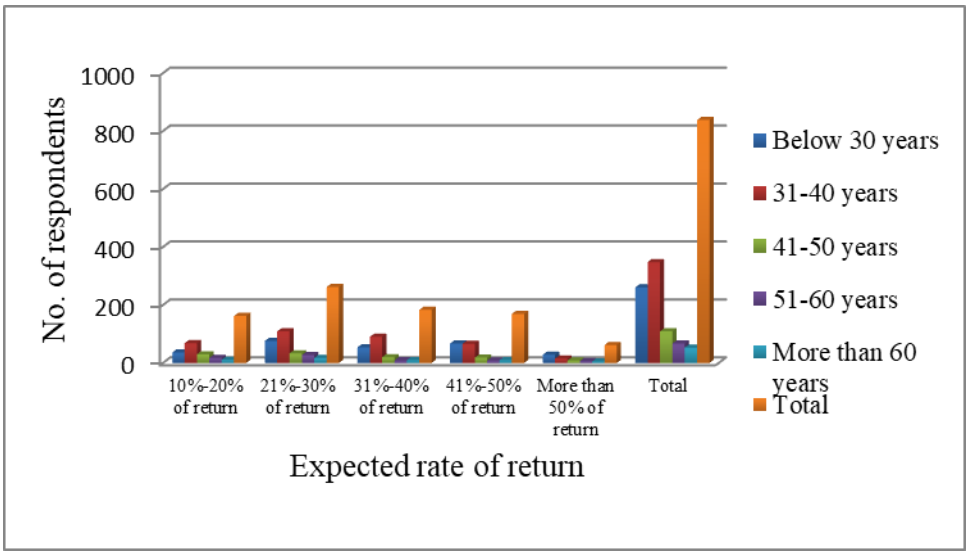


Figure 5-9 Respondent's Age Wise Expectation of Returns

It is evident from the (Table 5.12), that most of the investors belong to the age group of 31-40 years; from this age group highest number of respondents (109) expect return of 21-30% from the IPO investment. The second highest age group of investors are below 30 years of age, from which (76) investors expect 21-30% of the return. It can be observed from the table, that majority of the respondents belong to the below 30 to 40 years of age group, after combining the first two groups of respondents.

Table 5.13 and figure 5.10 show the results for the crosstab between city of residence of the respondents and their expectation of return from IPO.

Table 5.13 City of Residence Wise Expectation of Return

City of residence of the respondents	10%-20% of return	21%-30% of return	31%-40% of return	41%-50% of return	More than 50% of return	Total
Mumbai	48	75	48	45	18	234
Delhi	35	57	53	45	15	205
Hyderabad	53	72	39	32	16	212
Kolkata	26	58	43	47	13	187
Total	162	262	183	169	62	838

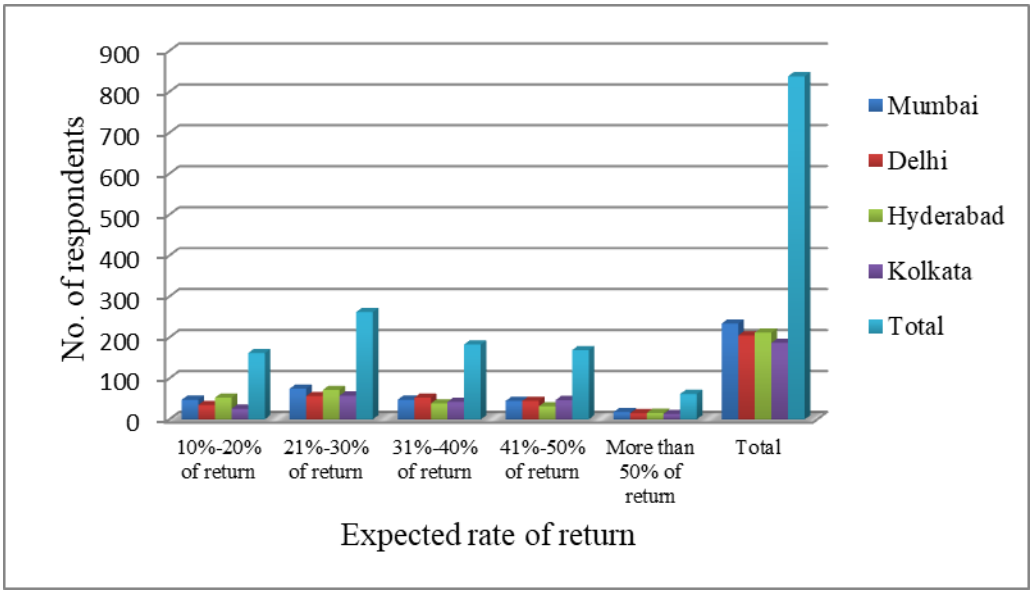


Figure 5-10 City of Residence Wise Expectation of Return

It is evident from the table (Table 5.13) that investors across four cities expect 21-30% of return from IPOs in a large number (262), followed by expectation of 31-40% of return (183) respondents. Across all the four cities, least number of investors expect returns of more than 50%.

Table 5.14 and figure 5.11 show the results for the crosstab between qualification of the respondents and their expectation of return from IPO.

Table 5.14 Respondent's Qualification Wise Expectation of Return

Qualification of the respondents	10%-20% of return	21%-30% of return	31%-40% of return	41%-50% of return	More than 50% of return	Total
Under graduate	18	40	29	28	13	128
Graduate	56	87	76	65	17	301
Post graduate	47	79	42	48	17	233
Doctorate	41	56	36	28	15	176
Total	162	262	183	169	62	838

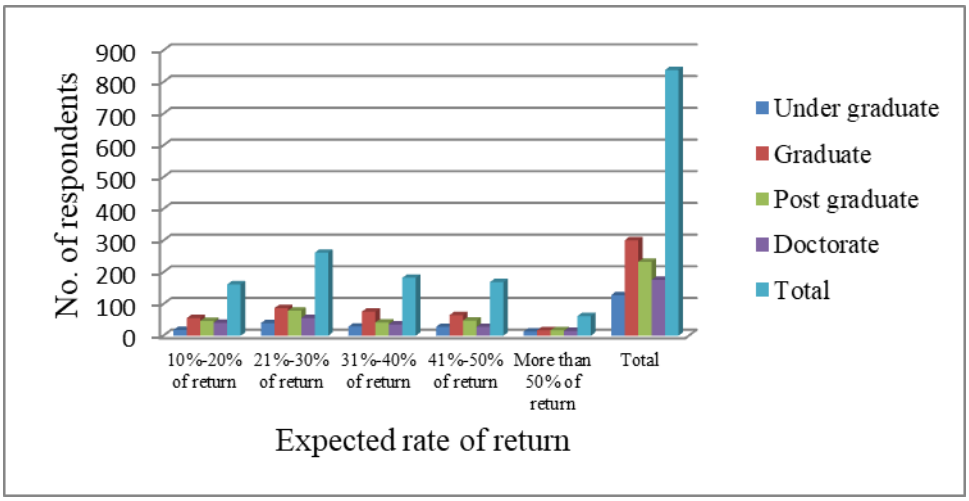


Figure 5-11 Respondent's Qualification Wise Expectation of Return

It can be seen from the Table 5.14 that a number of respondents who expect 21-30% of returns from the IPO are more (262), across all qualification groups. Respondents with the qualification of graduation anticipate returns of 21-30% and very few respondents from the same category expect more than 50% of returns. It can be seen that only 128 of the total 838 respondents belong to the under-graduate

category. It shows lack of participation of the less qualified group of investors in IPOs.

Table 5.15 and figure 5.12 show the results for the crosstab between occupation of the respondents and their expectation of return from IPO.

Table 5.15 Respondent's Occupation Wise Expectation of Return

Occupation of the respondents	10%-20% of return	21%-30% of return	31%-40% of return	41%-50% of return	More than 50% of return	Total
Student	10	19	8	14	9	60
Home maker	13	27	7	9	7	63
Businessman	32	58	65	66	16	237
Private Employee	80	119	87	59	23	368
Government Employee	27	39	16	21	7	110
Total	162	262	183	169	62	838

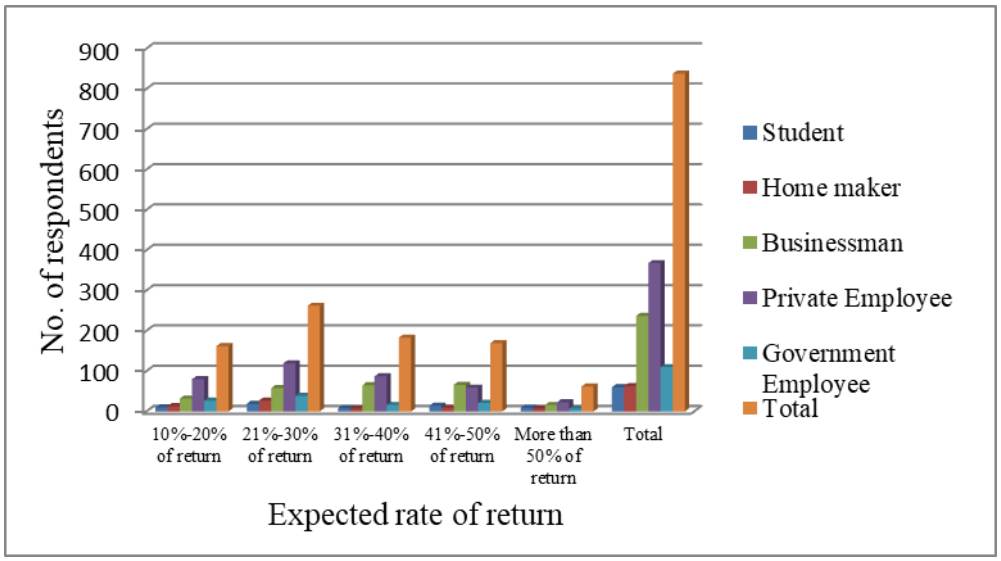


Figure 5-12 Respondent's Occupation Wise Expectation of Return

It is evident from Table 5.15 that most of the respondents (262), among all occupation groups of investors, had an expectation of 21-30% of returns, followed by 31-40% expectation of returns by (183) respondents. Investors who anticipate

more than 50% of return are very less (62) respondents. A number of investors having occupation of private employee are very high (368), in comparison with other investor groups.

Table 5.16 and figure 5.13 show the results for crosstab between experience of the respondents and their expectation of returns from IPO.

Table 5.16 Respondent's Experience Wise Expectation of Return

Experience of the respondents	10%-20% of return	21%-30% of return	31%-40% of return	41%-50% of return	More than 50% of return	Total
2-5 years	46	106	84	87	31	354
6-10 years	69	98	67	50	16	300
11-15 years	33	39	22	23	7	124
More than 15 yeras	14	19	10	9	8	60
Total	162	262	183	169	62	838

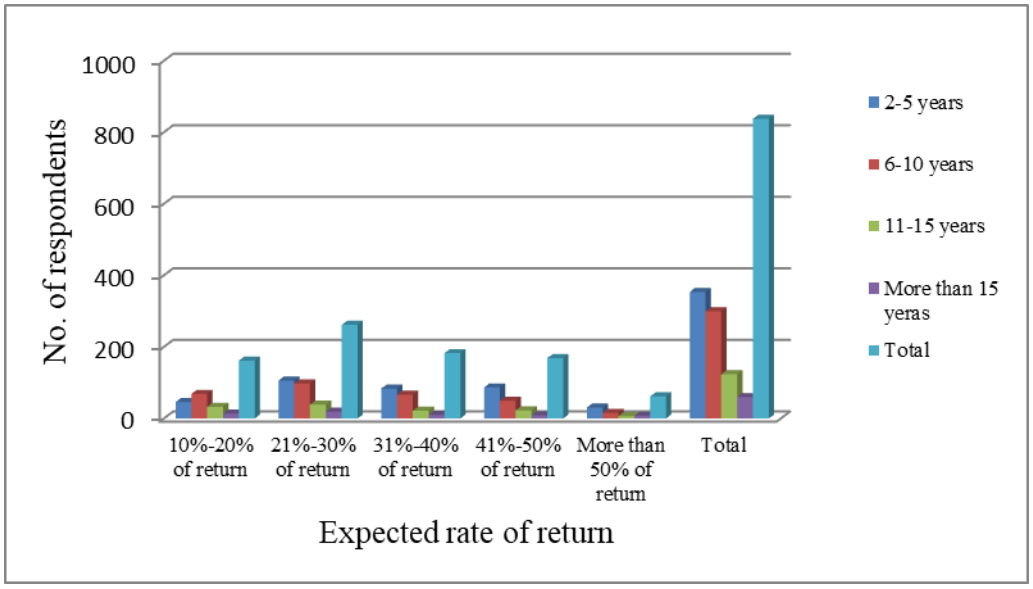


Figure 5-13 Respondent's Experience Wise Expectation of Return

Table 5.16 shows that respondents belonging to the category of 2-5 years of investment experience is high in number followed by an experienced group of 6-10

years and 11-15 years. It can be seen that most of the investors want a return of (21-30%) followed by (31-40%) and (41-50%). Very few respondents expect the return of (more than 50%).

Table-5.17 lists different kinds of concerns that retail investors have from IPO investments.

Table 5.17 Descriptive of the Concerns of Retail Investors from IPO Investment

Descriptive Statistics

Concerns of the retail investors	N	Minimum	Maximum	Mean	Std. Deviation
Too much price manipulation	838	1.00	5.00	3.5752	1.09018
High demat charges	838	1.00	5.00	3.4236	1.02456
Reservation of only 35 percent in IPO for retail investors	838	1.00	5.00	3.6516	1.21729
Need for prepayment of the full amount while applying for an IPO	838	1.00	5.00	3.5644	1.11470
Corporate mismanagement/fraud	838	1.00	5.00	3.4248	.99986
Price volatility in IPO	838	1.00	5.00	3.6909	1.17773
Too much insider trading	838	1.00	5.00	3.1897	1.12155
Information asymmetry	838	1.00	5.00	3.6480	1.10021
Valid N (listwise)	838				

It can be seen from the results that the concern with highest mean is ‘price volatility in IPOs’ (3.69), followed by ‘only 35% reservation for retail investors in the subscription of IPOs’ (3.65) and ‘information asymmetry’ (3.64). Moreover, ‘too much price manipulation’ has a mean value of (3.57), ‘need for prepayment of full amount while applying for the subscription of IPOs’ (3.56), ‘corporate mismanagement’ (3.42), ‘high demat charges’ and ‘too much insider trading’ in IPOs are the issues that retail investors are having in concern to the primary market.

"Price volatility, price manipulation and corporate mismanagement have been indicated as three top fears of retail investors" (Gupta et al., 2005).

5.2.5 BEHAVIOURAL BIASES, INVESTMENT INTENTION AND SATISFACTION LEVEL

In this section, mediation effect of 'investment intention' between 'behavioural biases' and 'satisfaction level' has been tested. This is followed by studying the impact of demographic profiles of retail investors on their awareness level. The influence of demographics on the challenges investors face while investing in IPOs is explained.

5.2.5.1 Model Used in the Study

Stanyer (2014) stated that "advances in behavioural finance also provide a framework that enables us to better explore and understand investor preferences, and to delve into the biases that affect how we take decisions and how these may cause us to deviate from the textbook assumptions of how rational investor sought to behave." Ample amount of literature has discussed the presence of 'behavioural biases' among investors. Biases which have been used for this study are overconfidence, herding, and optimistic behaviour. Barber and Odean (2001), concluded that overconfident investors perform excessive trading of securities and commit mistakes while investing in securities, which lead to less productive investment decisions and ultimately results in lower or negative returns on investment. It is evident from literature that individual investors are more prone to herd behaviour while taking investment decisions compared to institutional investors (Jaya Mamta Prosad et al., 2015). Optimism reflects the confidence that the result of some specific effort will be positive, satisfactory, and desirable. "The optimist

investors overvalue their skills and thus have unrealistic optimistic assessments about the future performance of their investment decision" (Kahneman & Riepe, 1998; Suto & Toshino, 2005; Toshino and Suto (2004)). Many researchers have explored the existence and influence of over-optimism on investors (Barone-Adesi et al., 2013; Shefrin & Statman, 2011a). "The results showed that overconfidence bias, reliance on the expert bias, and self-control bias have a positive and significant association with financial satisfaction levels" (Sahi, 2017). However, there is very less literature which examines the association of behavioural biases with financial satisfaction. This study has adopted the model illustrated in the Figure 5.14 - to know the relationship between behavioural biases and investment satisfaction (H_1); to examine the influence of behavioural biases on investment intention (H_2), and to check whether investment intention plays any mediating role between behavioural biases and investment satisfaction (H_3).

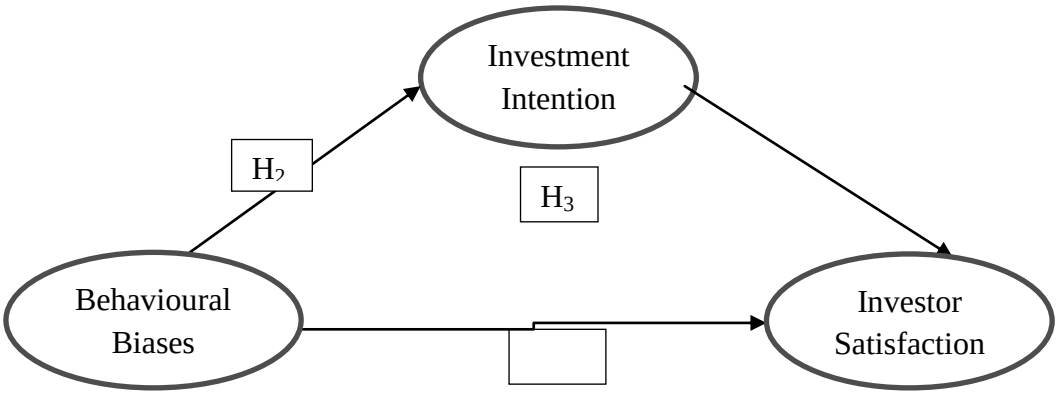


Figure 5-14 Behavioural Biases Model

To explore the mediating role of investment intention between behavioural biases and satisfaction level, following hypotheses were developed and tested:

Hypothesis (H_1): Behavioural biases have a significant positive relationship with investment satisfaction.

Hypothesis (H_2): Behavioural biases have a significant positive relationship with investment intention.

Hypothesis (H_3): Investment intention acts as the mediating variable between behavioural biases and investment satisfaction.

5.2.5.2 Instrument Validation

Measures which have been used to examine the model are "construct validity; face validity (a.k.a. content validity); convergent validity (a.k.a. uni-dimensionality); and discriminant validity". Hair, Black, Babin, Anderson, and Tatham (2006) stated that "face validity is recognized by studying whether the association proposed in the study has been broadly recognized or verified in the past literature". All the constructs used for this model have been adopted from existing literature in this area of research. So, it can be said that it fulfills the "face validity" criteria. EFA and CFA have been executed to assess "Convergent validity" of constructs.

5.2.5.3 Reliability Test for Measurement Scale

The internal consistency has been determined by conducting reliability test. The value of Cronbach's alpha is more than .70 for all the three factors (Table 5.18), which is a satisfactory result for "internal consistency", "alpha value of .70 is acceptable for using the scale for further analysis" (Hair et al., 2006).

Table 5.18 Convergent Validity of Behavioural Biases Model (EFA Result)

Construct Name	Item acronym	Factor Loadings	Communalities	Cronbach's Alpha	Factor wise variance explained	Variance explained	KMO & Barlett's Test
Behavioural Biases (BB)	BB1	.799	.765	.965	35.851	74.49	Kaiser-Meyer-Olkin = 0.89 Bartlett's Test = 9482.7 df = 190 Significance value = 0.000
	BB2	.812	.781				
	BB3	.799	.776				
	BB4	.812	.772				
	BB5	.799	.785				
	BB6	.818	.785				
	BB7	.798	.755				
	BB8	.785	.747				
	BB9	.783	.733				
	BB10	.787	.744				
Investment Intention(ID)	ID1	.756	.736	.904	19.452		
	ID2	.752	.719				
	ID3	.760	.719				
	ID4	.757	.717				
	ID5	.767	.723				
Investment Satisfaction(IS)	IS1	.775	.726	.905	19.182		
	IS2	.796	.734				
	IS3	.798	.737				
	IS4	.750	.724				
	IS5	.762	.721				

The results from EFA test in (Table-5.18) showed that items used for this model are highly loaded (factor loadings > 0.70) on their specific factors/constructs and the variances explained from the test were more than 70% revealing high "convergent validity"

"Principal component analysis" using VARIMAX rotation has discovered three factors. Total "cumulative variance explained" by these factors was 74.49 %. Hence, after the "exploratory factor analysis (EFA)", the final model enclosed 20 items under three constructs, namely, 'behavioural biases' (ten items), 'investment intention' (five items) and 'investment satisfaction' (five items).

Factor loadings reveal “the correlation between the item and the factor, and the values .50 or greater are considered practically significant; percent of variance explained represents how much variance is explained by factors”, here factor ‘behavioural biases’ explained 35.85 percent of total variance, ‘investment intention’ explained 19.45 and ‘investment satisfaction’ explained 19.18 percent of total variance. The values related to “factor loading, percent of variance and communality values” are significant for “factor analysis” (Table 5.18). The three different factors are labeled as: ‘behavioural biases’ (PB), ‘investment intention’ (ID) and ‘investment satisfaction’ (IS).

Figure 5.15 illustrates the results for the confirmatory factor analysis. Table 5.19 represents the model fit indices for the measurement model.

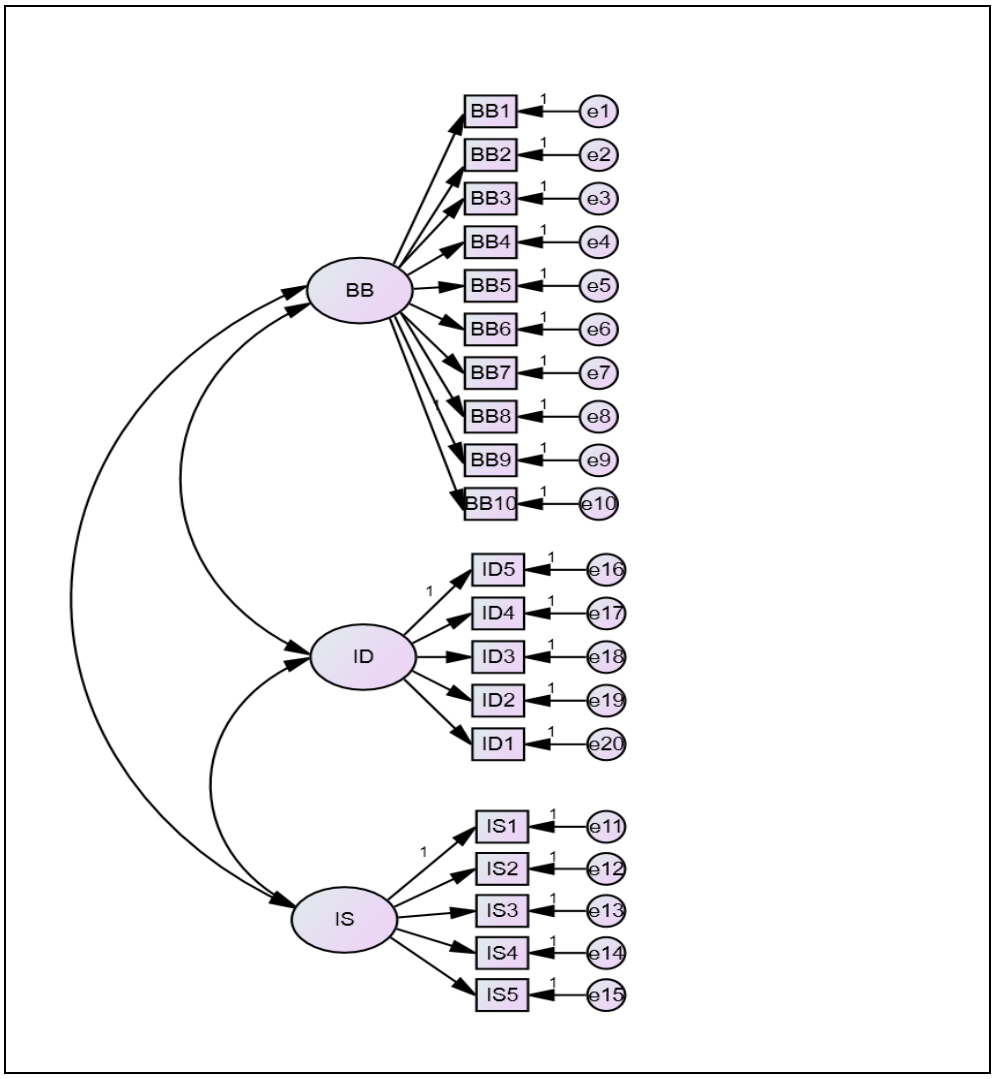


Figure 5-15 CFA Graph of Behavioual Model.

Table 5.19 Model Fit Indices for Measurement Model

Model fit index	Value
CFI	.939
IFI	.939
TLI	.931
NFI	.929
RFI	.920
GFI	.922
RMR	.021
RMSEA	.081
$\chi 2$	769
df	167

Note-"CFI, comparative fit index; IFI, incremental fit index; TLI, tucker-lewis index; NFI, normed fit index; RFI, relative fit index; GFI, goodness of fit index; RMR, RMSEA, root mean square error of approximation; χ2, Chi-square; df, degrees of freedom".

It can be seen from table 5.19 that the Chi-square value is 769 with df = 167, which is an acceptable level (Wheaton, Muthen, Alwin, & Summers, 1977). Model fit indices values are CFI = .939, TLI = .931, RMSEA = 0.081 satisfy threshold criteria (Byrne, 2001, pp. 79-86). It can be said that the value of fit indices is "satisfactory and specify a reasonable fit of the measurement model with the data".

Table 5.20 shows the results of convergent validity for confirmatory factor analysis.

Table 5.20 Convergent Validity CFA Result

Construct Name	Item acronym	Factor Loadings	Average variance extracted (AVE)	Composite reliability (CR)
Behavioural Biases (BB)	BB1	.859	.738	.966
	BB2	.868		
	BB3	.868		
	BB4	.860		
	BB5	.874		
	BB6	.870		
	BB7	.853		
	BB8	.850		
	BB9	.839		

	BB10	.847		
Investment Intention(ID)	ID1	.826	.654	.904
	ID2	.809		
	ID3	.803		
	ID4	.802		
	ID5	.802		
Investment Satisfaction(IS)	IS1	.810	.658	.906
	IS2	.805		
	IS3	.807		
	IS4	.821		
	IS5	.814		

"Average Variance Extracted" (AVE) has been used to describe the convergent validity for all the three constructs used for the model. It can be seen from the above table that the AVE values for all three constructs are more than .50 (> 0.50). It shows that all the three "constructs possess convergent validity" (Fornell & Larcker, 1981). AVE has been used to extract composite reliability, and the results are satisfactory which is reported in the above table. "Minimum acceptable value for composite reliability is 0.6" (Fornell & Larcker, 1981). It can be seen from the table that CR values for all constructs are (>0.70). Therefore, results from the analysis support the presence of "convergent validity and composite reliability". "AVE and the squared inter-construct correlations" has been compared to established "Discriminant validity" which is represented in table-5.21.

Table 5.21 Discriminant Validity

	BB	ID	IS
BB	**0.738**		
ID	0.201	**0.654**	
IS	0.202	0.204	**0.658**

Diagonal values represent AVE values; off-diagonal values represent squared inter-construct correlations.

"If the AVE values are greater than the squared inter-construct correlations, then it implies distinctiveness of the constructs" (Fornell & Larcker, 1981). The above table presents that "construct's respective AVE values" are higher than the "squared inter

construct correlation" from the other constructs. Therefore, it can be said that the constructs which have been used for the model have discriminant validity.

The interrelationship between the constructs of the given model have been checked by using structured equation modeling (SEM) technique with the help of AMOS 20. The model used for both H1 and H2 are presented in figure 5.16 and 5.17 respectively. Figure 5.18 illustrates the mediation model used in the study.

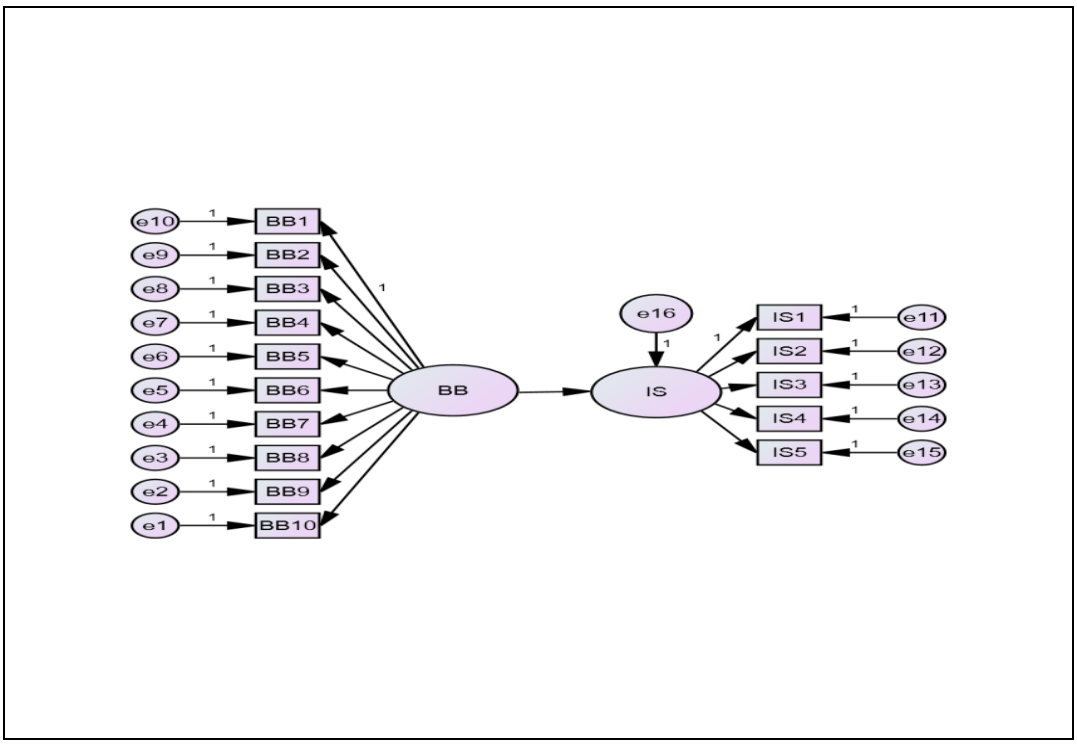


Figure 5-16 Model for Hypothesis 1 by Using SEM

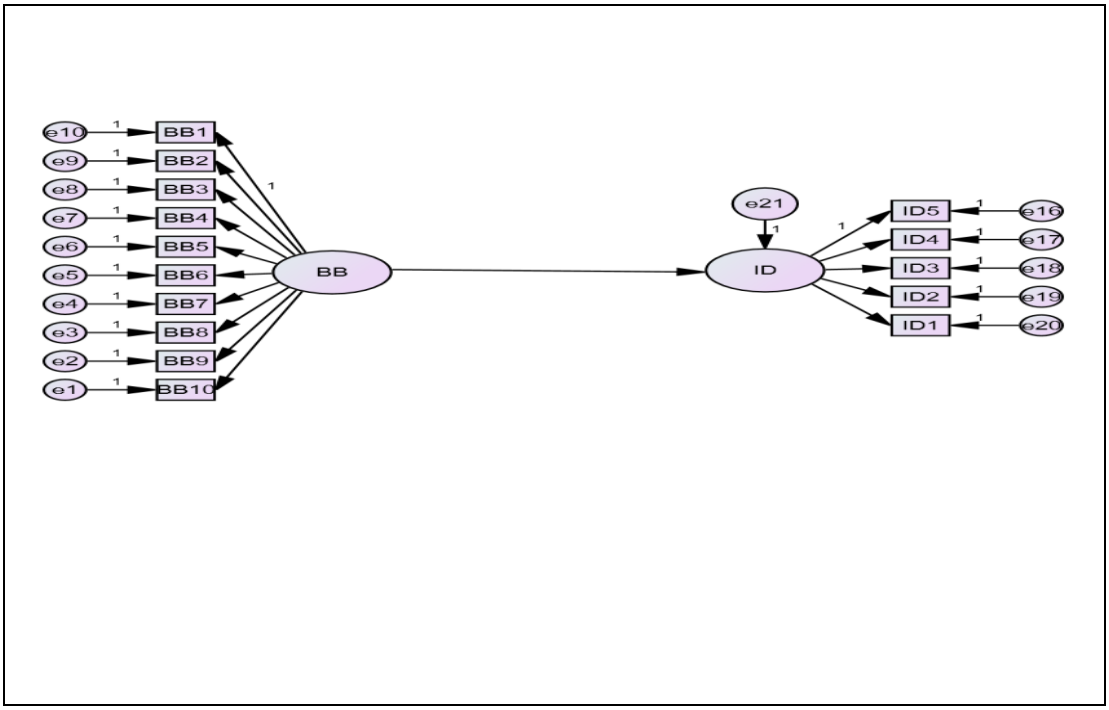


Figure 5-17 Model for Hypothesis 2 by Using SEM

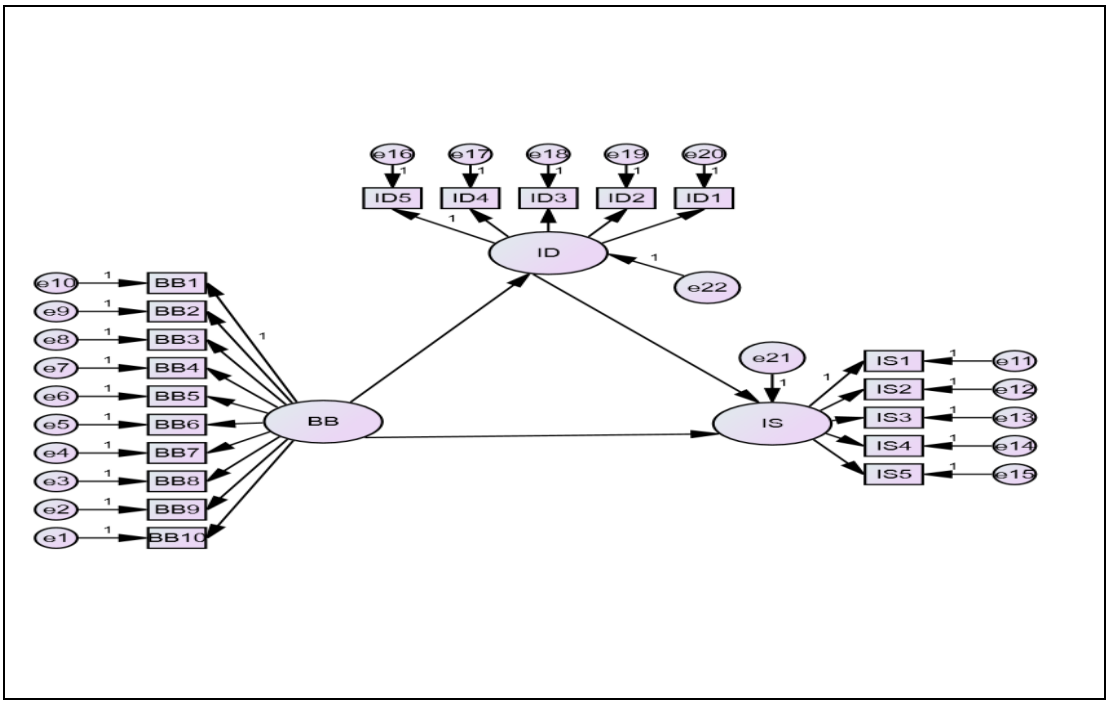


Figure 5-18 Mediation Model for Hypothesis 3

Hypothesis testing results are presented in table 5.22. The p-values in the table below are associated with "standardized path coefficients". It can be reported that all hypotheses (H_1, H_2, and H_3) have been significant and the path coefficients are significant at p-value 0.001. According to (R. M. Baron and Kenny (1986)) "a variable is said to mediate a relationship between an independent variable and a dependent variable if it satisfies the following three criteria":

1. Association among (Behavioural Biases), independent variable and (Investment Satisfaction) which is the dependent variable has to be significant (Figure 5.16 and Table 5.22);

2. The association between the (Behavioural Biases) used as an independent variable and (Investment Intention) which is a mediating variable has to be significant (Figure 5.17 and Table 5.22); and

3. Association between the mediating variable (Investment Intention) and the dependent variable (Investment Satisfaction) has to be significant and the direct relationship between Behavioural Biases in retail investors and Investment Satisfaction should become either insignificant or the effect of awareness on investment satisfaction should reduce. (figure 5.18 and table 5.22).

Table 5.22 Hypothesis Testing and Mediating Effect Result

	Hypothesized Path	Estimate	SE	CR	p-values	Hypothesis Supported?
H_1	Behavioural Biases (BB) →Investment Satisfaction	.691	.038	18.360	***	Supported at 0.001 LOS.
H_2	Behavioural Biases(BB) →Investment Intention	.689	.035	19.826	***	Supported at 0.001 LOS.
H_3	Behavioural Biases(BB) →Investment Intention	.689	.035	19.818	***	Supported at 0.001 LOS.
	Investment Intention(ID) →Investment Satisfaction (IS)	.469	.049	9.565	***	Supported at 0.001 LOS.
	Behavioural Biases(BB) → Investment Satisfaction	.367	.045	8.149	***	Supported at 0.001 LOS.

*Note: ***Significant at 0.1 percent level*

Sobel's test has been used to examine the indirect path between the independent and dependent variable and the result revealed a z-statistic of 8.607, which is statistically significant at 1%. It denotes that indirect path (mediation path) is "significantly different from zero". Zhao, Lynch Jr, and Chen (2010) reported that "mediation effect holds if the indirect path is significant. Since in this case, both direct and indirect paths are significant (Table 5.22) and in the same direction (positive)", (Table 5.22). So, it can be inferred that there is a significant and complementary partial mediation.

5.2.6 RELATIONSHIP BETWEEN DEMOGRAPHICS AND AWARENESS AND CONCERNS OF RETAIL INVESTORS

5.2.6.1 Relationship of Demographics with Awareness of the Retail Investors

According to (Noctor et al., 1992) investor awareness is defined as "the ability to make informed judgments and to take effective decisions regarding the use and management of money".

The diversification of the financial market indicates that there are broader range of products available for the retail investors, and they have to select their investment product from the available financial market instruments (Warren et al., 1990). According to Seth (2010) in "country like India, with economic and social diversity, investor awareness is appropriate for them who work at the margin and are unprotected to the persistent downward financial pressure of their investment". By keeping in mind about retail investors' awareness about primary market "one-way analysis of variance (ANOVA)" test has been performed to examine the significant difference between awareness level of retail investors belonging to a different group of demographics.

ANOVA has been performed to test the hypothesis 4 that is "there is significant difference in the awareness level of retail investors belonging to different gender groups".

Table 5.23 Relationship between Gender of the Respondents and Awareness

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.576	1	1.576	1.548	.214
Within Groups	851.520	836	1.019		
Total	853.097	837			

The ANOVA result shows that the significance value is .214 which is more than .05. It is concluded from the above table that there is no significant difference among the respondent's gender belonging to different groups and awareness level of retail investors about the primary market. The null hypothesis is, therefore, accepted.

As the result is insignificant and only two groups are there in the gender category, 'Post Hoc test' cannot be conducted.

ANOVA has been performed to test the hypothesis 5 that is "there is a significant difference in the awareness level of retail investors belonging to different age groups".

Table 5.24 Relationship between Age of the Respondents and Awareness

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.479	4	1.870	1.842	.119
Within Groups	845.617	833	1.015		
Total	853.097	837			

The ANOVA result in the above table shows that the significance value is .119 which is more than .05. It can be concluded that there is no significant difference in the awareness level of retail investors belonging to different age groups. The null hypothesis is, therefore, is accepted.

As the result is insignificant, 'Post Hoc test' cannot be conducted.

ANOVA has been executed to test the hypothesis 6 that is "there is a significant difference in the awareness level of retail investors belonging to different cities".

Table 5.25 Relationship between Different Cities of the Respondents and Awareness

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.401	3	.134	.131	.942
Within Groups	852.695	834	1.022		
Total	853.097	837			

The ANOVA result in the above table shows that the significance value is .942 which is more than .05. The result reveals that there is no significant difference in awareness levels of retail investors belonging to different cities of residence. The null hypothesis is, therefore, accepted. As the result is insignificant, 'Post Hoc test' cannot be conducted.

ANOVA has been executed to test the hypothesis 7 that is "there is a significant difference in the awareness level of retail investors belonging to different qualification groups".

Table 5.26 Relationship between Qualification of the Respondents and Awareness

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	71.963	3	23.988	25.611	.000
Within Groups	781.134	834	.937		
Total	853.097	837			

The ANOVA result in the above table shows that the significance value is .000 which is less than .05. It shows that there is a significant difference between the respondents belonging to different groups of qualification and their awareness level about the primary market. The null hypothesis is, therefore, not accepted, the alternative hypothesis is accepted.

As the result is significant and more than two groups are there, 'Post Hoc test' has been conducted to test which group differs significantly from the sample using Tukey HSD test.

Table 5.27 Post Hoc Tests

Multiple Comparisons

Dependent Variable: Awareness of Primary Market

Tukey HSD

(I) Qualification of the respondents	(J) Qualification of the respondents	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Under Graduate	Graduate	-.16648	.10240	.365	-.4301	.0971
	Post Graduate	-.61051*	.10675	.000	-.8853	-.3357
	Doctorate	-.77538*	.11255	.000	-1.0651	-.4857
Graduate	Under Graduate	.16648	.10240	.365	-.0971	.4301
	Post Graduate	-.44402*	.08445	.000	-.6614	-.2266
	Doctorate	-.60890*	.09167	.000	-.8449	-.3729
Post Graduate	Under Graduate	.61051*	.10675	.000	.3357	.8853
	Graduate	.44402*	.08445	.000	.2266	.6614
	Doctorate	-.16488	.09650	.320	-.4133	.0835
Doctorate	Under Graduate	.77538*	.11255	.000	.4857	1.0651
	Graduate	.60890*	.09167	.000	.3729	.8449
	Post Graduate	.16488	.09650	.320	-.0835	.4133

". The mean difference is significant at the 0.05 level".*

"Turkey HSD test" has been conducted to examine pairwise differences among group means. Tests disclose significant pairwise differences among the mean scores of respondents with qualifications of undergraduate, post graduate as well as respondents with doctorate qualification ($p<.05$), there are also pairwise differences among the mean scores of respondents with qualifications of graduate, post graduate as well as doctorate qualified respondents ($p<.05$). Respondents having the qualification of undergraduate do not significantly differ from graduate respondents

and post graduate respondents do not significantly differ from doctorate respondents (p>.05).

ANOVA has been performed to test the hypothesis 8 that is "there is a significant difference in the awareness level of retail investors belonging to different occupation groups".

Table 5.28 Relationship between Occupation of the Respondents and Awareness

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.147	4	.787	.771	.544
Within Groups	849.950	833	1.020		
Total	853.097	837			

The ANOVA result in the above table shows that the significance value is .544 which is more than .05. Result shows that there is no significant difference in retail investors' awareness level belonging to different occupation groups. The null hypothesis is, therefore, accepted.

As the result is insignificant and there is no significant difference between the different groups of occupation and awareness levels of retail investors about the primary market, 'Post Hoc test' cannot be conducted.

ANOVA has been performed to test the hypothesis 9 that is "there is a significant difference in the awareness level of retail investors belonging to different experience groups".

Table 5.29 Relationship between Experience of the Respondents and Awareness

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	49.448	3	16.483	17.105	.000
Within Groups	803.649	834	.964		
Total	853.097	837			

The ANOVA result from the above table reveals that there is a significant difference in the awareness levels of retail investors about primary market belonging to different experience groups. As the significance value is .000 which is less than .05. The null hypothesis is, therefore, not accepted, the alternative hypothesis is accepted.

As the result is significant and more than two groups are there, Post Hoc test has been conducted to test which group differs significantly from the sample using the Tukey HSD test.

Table 5.30 Post Hoc Test

Multiple Comparisons

Dependent Variable: Awareness of Primary Market

Tukey HSD

(I) How many years of experience do you have in investing in IPOs?	(J) How many years of experience do you have in investing in IPOs?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
2-5 Years	6-10 Years	-.44702*	.07613	.000	-.6430	-.2510
	11-15 Years	-.56214*	.10207	.000	-.8249	-.2994
	More than 15 Years	-.52010*	.15668	.005	-.9234	-.1168
6-10 Years	2-5 Years	.44702*	.07613	.000	.2510	.6430
	11-15 Years	-.11512	.10450	.689	-.3841	.1539
	More than 15 Years	-.07308	.15827	.967	-.4805	.3343
11-15 Years	2-5 Years	.56214*	.10207	.000	.2994	.8249
	6-10 Years	.11512	.10450	.689	-.1539	.3841
	More than 15 Years	.04203	.17225	.995	-.4014	.4855
More than 15 Years	2-5 Years	.52010*	.15668	.005	.1168	.9234
	6-10 Years	.07308	.15827	.967	-.3343	.4805
	11-15 Years	-.04203	.17225	.995	-.4855	.4014

"*The mean difference is significant at the 0.05 level".

Results from "Turkey HSD test" reveal significant pair-wise differences among the mean scores of respondents with experience of 2-5 years and mean scores of investors having experience of 6-10 years, 11-15 years and more than 15 years of investment experience in the primary market ($p < .05$). Respondents with investment experience in the primary market of 6-10 years do not significantly differ from respondents with experience of 11-15 years and more than 15 years ($p > .05$). Respondents with investment experience in the primary market of 11-15 years do not

significantly differ from respondents with experience of more than 15 years in the primary market (p > .05).

5.2.6.2 Relationship of Demographics with Concerns of the Retail Investors

Retail investors have to encounter challenges while proceeding for investment in the primary or secondary market. Concerns of the retail investors while making investments in IPOs have not been discussed extensively in literature. Only some studies have explored this angle. Gupta et al. (2005), concluded from their study that **"**Price volatility, corporate mismanagement/fraud, and price manipulation have been the top three fears of retail investors in the Indian security market**".** As stated by Iyer and Bhaskar (2002), **"**Indian financial markets are directed and controlled by a few large players who have private information which is inaccessible to others**"**. An attempt is made by the research question to know the difference between concerns of the retail investors while investing in IPOs belonging to different demographics.

ANOVA has been performed to test the hypothesis 10 that is "there is a significant difference in the level of concerns from IPO investment between different gender groups of investors".

Table 5.31 Relationship between Gender and Concerns of the Retail Investors

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.306	1	1.306	1.389	.239
Within Groups	786.058	836	.940		
Total	787.364	837			

The ANOVA result from the above table reveals that the significance value is .239 which is more than .05. Therefore, it can be inferred from the result that there is no significant difference between the different gender groups of respondents and their concerns during IPO investment. The null hypothesis is, therefore, accepted.

As the result is insignificant and only two groups are there in the gender category, 'Post Hoc test' cannot be conducted.

ANOVA has been performed to test the hypothesis 11 that is "there is a significant difference in the level of concerns from IPO investment between the different age groups of investors".

Table 5.32 Relationship between Age and Concerns of the Retail Investors

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.019	4	.755	.802	.524
Within Groups	784.344	833	.942		
Total	787.364	837			

The ANOVA result shows that the significance value is .524, which is more than .05. It can be concluded that there is no significant difference among the different age group of respondents and their concerns during IPO investment. The null hypothesis is, therefore, accepted.

As the result is insignificant and there is no significant difference among the age and concerns of retail investors from the primary market, 'Post Hoc test' cannot be conducted.

ANOVA has been performed to test the hypothesis 12 that is "there is a significant difference in the level of concerns from IPO investment belonging to different cities of investors".

Table 5.33 Relationship between City of Residence of Retail Investors and their Concerns

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.459	3	1.153	1.227	.299
Within Groups	783.905	834	.940		
Total	787.364	837			

The ANOVA result shows that the significance value is .299, which is more than .05. It can be inferred, therefore, that there is no significant difference among the city of residence of respondents and their concerns during IPO investment. The null hypothesis is, therefore, accepted.

As the result is insignificant and there is no significant difference between the city of residence of respondents and their concerns with primary market, 'Post Hoc test' cannot be conducted.

ANOVA has been performed to test the hypothesis 13 that is "there is a significant difference in the level of concerns from IPO investment between different qualification groups of investors".

Table 5.34 Relationship between Qualification and Concerns of the Retail Investors

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	32.923	3	10.974	12.132	.000
Within Groups	754.441	834	.905		
Total	787.364	837			

The ANOVA result shows that the significance value is .000 which is less than .05. It can be concluded from the result that there is a significant difference among different groups of qualification of respondents and their concerns during IPO investment. The null hypothesis is, therefore, not accepted and alternative hypothesis is accepted.

As the result is significant and more than two groups are there, Post Hoc test has been conducted to test which group differs significantly from the sample using the Tukey HSD test.

Table 5.35 Post Hoc Tests

Multiple Comparisons

Dependent Variable: Concerns of Retail Investors While Investing in Indian IPO Market

Tukey HSD

(I) Qualification of the respondents	(J) Qualification of the respondents	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Under Graduate	Graduate	.13667	.10064	.526	-.1224	.3957
	Post Graduate	.48851*	.10491	.000	.2185	.7586
	Doctorate	.47418*	.11061	.000	.1895	.7589
Graduate	Under Graduate	-.13667	.10064	.526	-.3957	.1224
	Post Graduate	.35184*	.08299	.000	.1382	.5655
	Doctorate	.33751*	.09009	.001	.1056	.5694
Post Graduate	Under Graduate	-.48851*	.10491	.000	-.7586	-.2185
	Graduate	-.35184*	.08299	.000	-.5655	-.1382
	Doctorate	-.01432	.09483	.999	-.2584	.2298
Doctorate	Under Graduate	-.47418*	.11061	.000	-.7589	-.1895
	Graduate	-.33751*	.09009	.001	-.5694	-.1056
	Post Graduate	.01432	.09483	.999	-.2298	.2584

". The mean difference is significant at the 0.05 level".*

"Turkey HSD test" has been conducted to examine pairwise differences among group means. Tests disclose significant pairwise differences among the mean scores of respondents with qualification of undergraduate, post graduate as well as respondents with doctorate qualification ($p < .05$); there are also pairwise differences between the mean scores of respondents with qualification of graduate, post graduate as well as doctorate qualified respondent ($p < .05$). Respondents having the qualification of undergraduate do not significantly differ from graduate respondents and post graduate respondents do not significantly differ from doctorate respondents ($p > .05$).

ANOVA has been performed to test the hypothesis 14 that is "there is a significant difference in the level of concerns from IPO investment between different occupation groups of investors".

Table 5.36 Relationship between Occupation and Concerns of the Retail Investors

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14.391	4	3.598	3.877	.004
Within Groups	772.973	833	.928		
Total	787.364	837			

The ANOVA result shows that the significance value is .004 which is less than .05. The result shows that there is a significant difference among the different groups of occupations of respondents and their concerns during IPO investment. . The null hypothesis is, therefore, not accepted; the alternative hypothesis is accepted. As the result is significant and more than two groups are present, Post Hoc test is conducted to test which group differs significantly from the sample using the Tukey HSD test.

Table 5.37 Post Hoc Tests

Multiple Comparisons

Dependent Variable: Concerns of Retail Investors While Investing in Indian IPO Market

Tukey HSD

(I) occupation of the respondents	(J) occupation of the respondents	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Student	Home Maker	.14484	.17377	.920	-.3302	.6199
	Business Man	-.08544	.13922	.973	-.4660	.2951
	Private Employee	.19429	.13412	.596	-.1723	.5609
	Government Employee	.24318	.15460	.515	-.1795	.6658
Home Maker	Student	-.14484	.17377	.920	-.6199	.3302
	Business Man	-.23028	.13655	.443	-.6036	.1430
	Private Employee	.04945	.13134	.996	-.3096	.4085
	Government Employee	.09834	.15220	.967	-.3177	.5144
Business Man	Student	.08544	.13922	.973	-.2951	.4660
	Home Maker	.23028	.13655	.443	-.1430	.6036
	Private Employee	.27974*	.08023	.005	.0604	.4991
	Government Employee	.32862*	.11114	.026	.0248	.6324
Private Employee	Student	-.19429	.13412	.596	-.5609	.1723
	Home Maker	-.04945	.13134	.996	-.4085	.3096
	Business Man	-.27974*	.08023	.005	-.4991	-.0604
	Government Employee	.04889	.10468	.990	-.2373	.3351
Government Employee	Student	-.24318	.15460	.515	-.6658	.1795
	Home Maker	-.09834	.15220	.967	-.5144	.3177
	Business Man	-.32862*	.11114	.026	-.6324	-.0248
	Private Employee	-.04889	.10468	.990	-.3351	.2373

". The mean difference is significant at the 0.05 level".*

"Turkey HSD test" has been conducted to examine pairwise differences among group means. Tests disclose significant pairwise differences among the mean scores of respondents having the occupation of businessmen with private employees and government employees ($p<.05$) and vice versa. Pairwise differences between the

mean scores of Private employees with businessmen and government employees with businessmen ($p<.05$) is recorded from post hoc test.

ANOVA has been performed to test the hypothesis 15 that is "there is a significant difference in the level of concerns from IPO investment between different experience groups of investors".

Table 5.38 Relationship between Experience and Concerns of the Retail Investors

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	28.357	3	9.452	10.386	.000
Within Groups	759.006	834	.910		
Total	787.364	837			

The ANOVA result shows that the significance value is .000 which is less than .05. Result reveals that there is a significant difference among the different groups of experience of respondents and their concerns during IPO investment. The null hypothesis is, therefore, not accepted, the alternative hypothesis is accepted.

As the result is significant and more than two groups are there, Post Hoc test has been conducted to test which group differs significantly from the sample using the Tukey HSD test.

Table 5.39 Post Hoc Tests

Multiple Comparisons

Dependent Variable: Concerns of Retail Investors While Investing in Indian IPO Market

Tukey HSD

(I) How many years of experience do you have in investing in IPOs?	(J) How many years of experience do you have in investing in IPOs?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
2-5 Years	6-10 Years	.29017*	.07399	.001	.0997	.4806
	11-15 Years	.46305*	.09919	.000	.2077	.7184
	More than 15 Years	.44921*	.15226	.017	.0573	.8412
6-10 Years	2-5 Years	-.29017*	.07399	.001	-.4806	-.0997
	11-15 Years	.17287	.10156	.323	-.0886	.4343
	More than 15 Years	.15904	.15381	.730	-.2369	.5550
11-15 Years	2-5 Years	-.46305*	.09919	.000	-.7184	-.2077
	6-10 Years	-.17287	.10156	.323	-.4343	.0886
	More than 15 Years	-.01384	.16740	1.000	-.4448	.4171
More than 15 Years	2-5 Years	-.44921*	.15226	.017	-.8412	-.0573
	6-10 Years	-.15904	.15381	.730	-.5550	.2369
	11-15 Years	.01384	.16740	1.000	-.4171	.4448

". The mean difference is significant at the 0.05 level".*

Results from "Turkey HSD test" reveal significant pairwise differences among the mean scores of respondents with experience of 2-5 years and mean scores of investors having experience of 6-10 years, 11-15 years and more than 15 years of investment experience in the primary market ($p < .05$). Respondents with investment experience in the primary market of 6-10 years significantly differ from respondents with experience of 2-5 years ($p < .05$). Respondents with investment experience in the primary market of 11-15 years significantly differ from respondents with experience of 2-5 years ($p < .05$). Respondents with investment experience in the

primary market of more than 15 years significantly differ from respondents with experience of 2-5 years ($p < .05$).

5.3 CONCLUSION

This chapter deals with the analysis of objective 3 to 5 which relate to investment intention, behavioural biases, investment satisfaction, investors' awareness level and also their possible relationship with demographics of investors. The descriptive study shows that majority of the investors (72%) are of the middle age group (30 to 40 years). Number of young investors is more in the primary market; reason may be that young investors like to take risk. This group of investors is attracted towards the IPO investment due to the sensation seeking behaviour (Barber & Odean, 2013). It has been found that overall 50% of the investors prefer to keep their investment in IPOs till the date of listings, because investors who purchase IPOs on offer price believe that they will get positive returns on the listing day. This finding agrees with Sahoo and Rajib (2010).

Results indicate the presence of overconfidence, optimism and herding biases among retail investors, which is obvious as investors follow the crowds and go for shortcuts while making an investment decision, which agrees with Jaya Mamta Prosad et al. (2015). It is revealed from the analysis that behavioural biases have been positively influencing the investment intention and investment satisfaction; investment intention plays a mediating role between behavioural biases and investment satisfaction of retail investors. The positive mediating effect of investment intention between behavioural biases and investment satisfaction indicates that biases are natural tendencies (Montier, 2009).

One-way anova has been used to analyse the influence of retail investors' demographics on their awareness level. Results confirm that retail investors belonging to different qualification groups and experience groups significantly differ in terms of their awareness level about the primary market. The result is in accordance with H. Chen and Volpe (2002). Therefore, more attention should be given to investors having less qualification to train them adequately in the nuances of the primary market.

Results also reveal that price volatility in IPOs, Reservation of only 35 percent in IPOs for retail investors and Information asymmetry are the top three concerns of retail investors.

CHAPTER-VI

FINDINGS, CONCLUSION AND SUGGESTIONS

6 FINDINGS, CONCLUSION AND SUGGESTIONS

This chapter presents the findings, conclusion and recommendations of the study. The summary and findings have been listed in the same order as the objectives of the present study.

6.1 FINDINGS

The present study examined various independent variables to study their influence on listing day returns to answer the first objective which was "to identify the determinants which are influencing listing day returns of Indian IPOs". Retail subscription (log), minimum amount, issue expenses (log), IPO activity period (dummy), number of lead managers, age of IPO firm, listing delay, ex ante uncertainty (EAU) and earning per share (EPS) have been used to determine the variables which impact the listing day returns. Multivariate regression (OLS) has been used to analyze the influence of explanatory variables on the listing day return, measured by market-adjusted abnormal return (MAAR). Results show that retail investors' subscription of an IPO (LNRETAIL_SUBSCRIPTION) has been significant and positively influences 'listing day return', a result supported by DERRIEN (2005). The r square for the model was .59 and adjusted r square was .57.

'Issue expenses' has a significant and positive influence on the 'listing day returns'; the same outcome was found by Chemmanur (1993). 'Listing delay' negatively influences IPO 'listing day return'; this is in line with the results of Chowdhry and Sherman (1996). Ex-ante uncertainty (EAU) has a positive and significant relationship with 'listing day return'; this is supported by Schertler (2002). Return on net worth (RONW) and (EPS) have positive significant impact on

'listing day return'. Explanatory variables like 'minimum amount', 'activity period', 'lead managers' and 'age of the firm' are not significant.

The result from the analysis confirms that retail investors' subscription level is an important reason for high listing day returns in the primary market. The result of this study is in line with the conclusion of Menyah et al. (1995), which stated that retail subscription positively leads to listing day returns in the primary market.

The second research objective is "to determine the variables which are influencing the subscription level of retail investors." Multivariate regression (OLS) has been applied to test the impact of explanatory variables on the subscription level of retail investors (Sohail & Nasr, 2007). Determinants of retail investors' subscription level are the minimum amount, issue size (log), subscription level of qualified institutional buyers (log), age of the firm, IPO activity period (dummy), ex-ante uncertainty, listing delay, return on net worth and earning per share. 'Minimum amount' has been used as an independent variable to determine retail subscription.

Results indicate that minimum amount required for IPO investment (MINIMUM_AMOUNT) has a significant positive impact on the demand of IPOs from retail investors, which indicates demand is more for the IPO having high minimum amount criteria; this is in line with the conclusion given by DERRIEN (2005), i.e., "if traders are optimistic, they are ready to pay high price". Issue Size of the company has a significant negative impact on the retail subscription; it means the degree of retail investors' subscription is high for low issue size IPOs and vice versa. This result is contradictory to the result of Khurshed et al. (2009). Subscription level of qualified institutional buyers has a significant positive impact on the retail subscription; the same was found by Neupane and Poshakwale (2012). Ex ante

uncertainty (EAU) and return on net worth have significant positive relations with the degree of retail subscription. Variables namely ‘age of the firm’, ‘activity period’, ‘listing delay’ and ‘EPS’ are not significant. It can be concluded from the results that retail subscription level is high for the IPO where a subscriber has to invest more.

The descriptive statistics of the sample show that 81% of male and 19% female respondents participated in the survey. Most of the respondents belong to the age group of 31 to 40 years of category (42.1%). Percentage of graduate respondents are high (35.9%), followed by post graduate respondents (27.8%). Most of the participants have 2 -10 years working experience (78.04%).

The third objective was “to evaluate the mediating effect of investment intention between behavioural biases and investment satisfaction.” After removing missing values and outliers, a sample size of 838 was used for analysis. Normality of the data was checked by using SPSS 20 software.

Three constructs, namely behavioural biases (10 items), investment intention (5 items) and investment satisfaction (5 items) have been used for the study. Behavioural biases contain three biases: overconfidence (3 items), herding (3 items) and optimistic behaviour (4 items). The model used for the analysis has behavioural biases (independent variable), investment intention (mediating variable) and investment satisfaction (dependent variable).

Table 6.1 Results of Hypotheses for objective 3

Sl. No.	Hypotheses	Results
H_1	Behavioural biases have a significant positive relationship with investment satisfaction.	Supported
H_2	Behavioural biases have a significant positive relationship with investment intention.	Supported
H_3	Investment intention performed as the mediating variable between behavioural biases and investment satisfaction.	Supported

The mediating effect of investment intention on behavioural biases and investment satisfaction was tested by path analysis. The study investigated the mediating effect on a direct path between behavioural biases and investment satisfaction by using (Barron & Kenny, 1986). Mediation analysis has been performed in three predefined steps. The mediating effect of investment intention between behavioural biases and investment satisfaction has been confirmed by the Sobel (Sobel, 1982) test. It is inferred from the results that there is significant and complementary partial mediation**.**

The fourth objective was "to assess the effect of demographics of retail investors on awareness level of respondents". Investor awareness is defined as "the ability to make informed judgments and to take effective decisions regarding the use and management of money". (Noctor et al., 1992).

Marisetty and Subrahmanyam (2010), stated that "investors in India are mainly retail with the relatively very low rate of financial literacy". As

recommended by (Seth, 2010) in a country like India, financial awareness for the retail investors is necessary. By keeping in mind the retail investors' awareness level about the primary market, "One-way Analysis of Variance (ANOVA)" test has been used to find whether there is any significant difference between awareness levels of retail investors belonging to various groups of demographics.

Six items have been used to study awareness levels of retail investors and six demographics, namely gender, age, the city of residence, qualification, occupation, and experience have been used. Hypotheses from 4 to 9 have been used for analysis.

Table 6.2 Results of Hypotheses for objectives 4

Sl. No.	Hypotheses	Sig.	Results
H_4	There is a significant difference in the awareness level of retail investors belonging to different gender groups.	.214	Not Supported
H_5	There is a significant difference in the awareness level of retail investors belonging to different age groups.	.119	Not Supported
H_6	There is a significant difference in the awareness level of retail investors belonging to different cities.	.942	Not Supported
H_7	There is a significant difference in the awareness level of retail investors belonging to different qualification groups.	.000	Supported (Post Hoc Test)
H_8	There is a significant difference in the awareness level of retail investors belonging to different occupation groups.	.544	Not Supported
H_9	There is a significant difference in the awareness level of retail investors belonging to different experience groups.	.000	Supported (Post Hoc Test)

The results derived from analysis indicate that different categories within gender, age, the city of residence and occupation do not significantly differ in their awareness level of the primary market. Bucher-Koenen and Lusardi (2011), also reveal that gender, age and occupation are not significant with respect to awareness level of equity investment.

The results also confirm that retail investors belonging to different groups of qualification differ in their awareness level about the primary market; this result is supported by H. Chen and Volpe (2002).

Post hoc test about investors' qualification has indicated awareness level of 'undergraduate investors' is differing from graduate, post graduate and doctorate investors. Therefore, more attention should be given to investors having less qualification to train them adequately in the nuances of the primary market. Post hoc test about investors' experience has indicated awareness level of investors having 2-5 years of experience; their awareness level is different from the group of investors having other durations of experience**.** Investors with less experience in the primary market should take their decisions on investment carefully.

The fifth objective was "To identify the effect of demographics on retail investors' concerns during IPO investments." As stated by Gupta, L. C. (1996), "Most of the new investors make their first entry into equity investment via the new issue market and these investors are vulnerable to easy exploitation by unscrupulous company promoters and other elements".

Eight items have been used to study the concerns retail investors have during IPO investments. Six demographics namely, gender, age, city of residence, qualification, occupation, and experience have been used to study the relationship

between different groups of demographics of retail investors and concerns that retail investors have from IPO investments.

Table 6.3 Results of Hypotheses for objective 5

Sl. No.	Hypotheses	Sig.	Results
H_{10}	There is a significant difference in the level of concerns from IPO investment between different gender groups of investors.	.239	Not Supported
H_{11}	There is a significant difference in the level of concerns from IPO investment between different age groups of investors.	.524	Not Supported
H_{12}	There is a significant difference in the level of concerns from IPO belonging to different cities of investors.	.299	Not Supported
H_{13}	There is a significant difference in the level of concerns from IPO investment between different qualification groups of investors.	.000	Supported (Post Hoc Test)
H_{14}	There is a significant difference in the level of concerns from IPO investment between different occupation groups of investors.	.004	Supported (Post Hoc Test)
H_{15}	There is a significant difference in the level of concerns from IPO investment between different experience groups of investors.	.000	Supported (Post Hoc Test)

"One-way analysis of variance (ANOVA)" test has been applied for the study. The outcome of the analysis indicates that different categories within gender, age, and city of residence of the respondents do not significantly differ while facing challenges during IPO investment.

Retail investors belonging to different groups of qualification, occupation, and experience group differ significantly and have concerns from the primary market.

"Turkey HSD" results show respondents in the undergraduate and graduate category differ significantly from post graduate and doctorate qualification holders while facing challenges in the primary market**.**

Respondents in the category of businessmen, government employees, and private employees differ significantly from one another in the matter of facing challenges during IPO investment**.** "Turkey HSD" results also show that respondents with experience of 2-5 years differ from investors with experience of "6-10 years, 11-15 years and more than 15 years" regarding facing challenges in primary market $p < .05$**.**

6.2 CONCLUSION

This study endeavored to find the determinants of listing day returns and retail investors' subscription levels in the Indian primary market. It makes an effort to find how behavioural biases and investment intention lead to investment satisfaction. An attempt to assess the impact of the demography of retail investors on their awareness levels is made. Further, the study tries to examine the concern of retail investors while investing in IPOs.

It has been found through the study that oversubscription has a significant and positive influence on listing day returns. This result is in line with the conclusion of Menyah (1995).

Variables like issue expenses (log), ex-ante uncertainty, listing delay and earning per share explain the initial day returns; results are in line with (Chemmanur, 1993; Chowdhry & Sherman, 1996; Schertler, 2002). The results of analysis show that retail subscription (log) positively influences initial day return, which indicates that retail investors' subscription level has a significant contribution in determining initial day returns in the Indian primary market. Investors buy IPOs at the primary market with an expectation to get positive initial day returns; this is a reason for positive retail demand influence on initial day returns (Sahoo & Rajib, 2010). Some of the findings attest that positive initial day returns are an outcome of the over optimistic sentiment of traders who have over expectations and bid for IPOs beyond its accurate value (DERRIEN, 2005; Ljungqvist, Nanda, & Singh, 2006; Loughran & Ritter, 2004). This result is in accordance with the behavioural imperfection theory (DERRIEN, 2005). Firms try to float IPOs during positive market reactions and attract large number of investors for subscription which leads to the initial day returns (Sahoo & Rajib, 2010).

It can also be concluded that issue size (log), QIB degree of subscription (log), ex-ante uncertainty and return on net worth explain the degree of retail investors subscription; these findings are consistent with literature (Khurshed et al., 2009). The minimum amount (log) required for IPO investment has a positive significant relation with the demand for IPOs by retail investors (log). Interestingly, the results indicate that the degree of retail subscription is high for an IPO where retail investors have to invest more. This result confirms that retail investors follow qualified institutional buyers while applying for an IPO (Löffler et al., 2005), because retail investors prefer to use shortcuts instead of doing their own ground

work for investment. High level of uncertainty about an IPO positively influences its demand in the primary market (Ghosh, 2005; Khurshed et al., 2010).

The outcome of the second objective, where retail subscription has been used as a dependent variable, the coefficient is negative in case of retail subscription issue size (log), and has a significant influence on the independent variable. It can be concluded from the results that the degree of retail subscription has been high for smaller IPOs. Ambiguity about different features and pricing of the listing make a difference of opinion between optimistic and pessimistic investors, resulting in high demand for IPOs (Sahoo & Rajib, 2010). This result is in accordance with the divergence of opinion hypothesis (Miller 1977,2007).

The variables used for analysis of the third objective were behavioural biases, investment intention, and investment satisfaction. Many researchers have examined the presence and influence of these biases on investors (Barone-Adesi et al., 2013; Shefrin & Statman, 2011a). Results indicate presence of overconfidence, optimism and herding biases among retail investors, which is obvious as investors follow the crowds and go for shortcuts during IPO investments (Jaya Mamta Prosad et al., 2015). According to Sahi (2017), "influence of overconfidence bias, reliance on the expert bias, and self-control on financial satisfaction and concluded that these three biases have a positive significant relationship with financial satisfaction". Sometimes biases can help equity investors to select the correct option and choose less costly mistakes, helping them to achieve satisficing behavior.

The study confirms the influence of behavioural biases on investment intention and investment satisfaction in retail investors. The analysis studied the mediating effect on a direct path between behavioural biases and investment

satisfaction by using methodology given by R. M. Baron and Kenny (1986). The outcome of the analysis confirms the mediating effect of investment intention between behavioural biases and investment satisfaction, as also confirmed by the Sobel (Sobel, 1982) test.

It can be concluded that there is significant and complementary partial mediation. The outcome from this analysis suggests that behavioural biases have positive significant relation with investment satisfaction and investment intention. The hypothesis results show that due to lack of information and cost optimization, the retail investors' resort to biases while making investment decisions which serve as a saving face against their inherent weakness. The positive mediating effect of investment intention between behavioural biases and investment satisfaction indicates that biases are natural tendencies (Montier, 2009). Results are consistent with (Sahi, 2017; Shefrin & Statman, 2011b).

The study has also examined the relationship of different groups of demographics with awareness levels of retail investors. The outcome of the analysis reveals that different categories within gender, age, city of residence and occupation do not significantly differ in their awareness levels of the primary market. The result is consistent with Bucher-Koenen and Lusardi (2011); results also confirm that retail investors belonging to different qualification groups and experience groups significantly differ in terms of their awareness level about the primary market. The result is in accordance with H. Chen and Volpe (2002).

The fifth objective has lead to examination of the relationship between different groups of demographics of investors and their concerns while investing in IPOs. The outcome indicates that concerns regarding investment in IPOs of different

categories within gender, age, and city of residence of investors do not significantly differ. Retail investors belonging to different groups of qualification, occupation, and experience show significant difference in their concerns.

6.3 SUGGESTIONS & RECOMMENDATIONS

Recommendations from the study are important for IPO investors as well as for the regulator of the primary market. In India, 90 IPOs listed in the first six months of 2018, are making 16% of all listings worldwide, and the number of listings is 27% more than a year ago. The total funds raised during the first half of 2018 is Rs. 27,000 crore, which is 5% of the total funds raised by IPOs worldwide (EY report). If one analyzes region wise investment percentage in the primary market, it is very low when compared to the secondary market in India (NCAER Report). This means that the number of untapped investors for the primary market is very high. So, the regulatory body should take steps to attract more investors towards the primary market.

Analysis of secondary data concluded the presence of high rate of listing day returns in the Indian primary market, average listing day return in the sample period being 12.13%. The study suggests that retail investors should follow those variables continuously which explain listing day returns to take right decisions of investment in the primary market. When asked about time horizon of investments in the primary market, nearly 50% of the respondents prefer to invest till listing day; this has led to the rise of a question: Whether the high rate of listing day returns is the reason for short-term investment in IPOs or not (Sahoo & Rajib, 2010). Policy makers should take care of the issue of listing day returns in the primary market. The study suggests

that retail investors should not bid to every IPO without proper knowledge about financial conditions of the company; they must be selective and should take informed decisions.

The results indicates that retail investors follow qualified institutional buyers while applying for an IPO (Löffler et al., 2005). Retail investors should be careful while following qualified institutional buyers because institutional buyers submit their bids early to induce the non-institutional investors to follow them and on the final day of the book building process they back off (Khurshed et al., 2010). Results show that issue size has been negatively influencing retail subscription. It can be concluded from results that the degree of retail subscription has been high for smaller IPOs. Investors should be very careful while applying for subscription of IPOs and investment decisions should be taken on the basis of their time horizon and companies' fundamentals.

The outcome from the analysis confirms the presence of behavioural biases like overconfidence, herding, and optimism in retail investors which are leading to investment intention (Barber & Odean, 2001). The present study analyses the presence and impact of these biases on retail investors, investment intentions and the influence of these biases on investors' satisfaction. (Barone-Adesi et al., 2013; Shefrin & Statman, 2011a). The result confirms that overconfidence, herding and optimism have a positive and significant association with investment satisfaction which is in line with the result of (Sahi, 2017). Retail investors should be made aware about the presence of different kinds of biases when they invest in the primary market because some of the research outcomes describe these biases as negative in terms of returns for the investors (Barber & Odean, 2001). They should

not try to predict the unpredictable. Retail investors are suggested to control biases while taking investment decisions in IPOs because it would be helpful to build a healthy strategy of investment and fruitful for them in future endeavours.

Awareness programs about investment in the primary and secondary market should be organised at college and university level for students since retail investors falling in different groups of education display significant differences about the degree of awareness of IPOs. The awareness level of retail investors belonging to different classes of experience groups also differs in their degree of awareness about the primary market. It is recommended that the design of the training program for retail investors should not be confined to basic knowledge of the primary market but should also cover how to analyse financial and accounting information of a firm; this would prove helpful for investors to invest knowledgeably in IPOs. Training programs for retail investors should be designed according to their investment capacity and experience level to provide them with more benefit.

Analysis has been done to identify the factors which have impact on the investors' confidence because the number of investors in the primary market will increase when investors will feel the market is fair and safe for their investment. The outcome of the analysis shows that 'price volatility' in the primary market, 'only 35% reserved share' for retail investors and 'information asymmetry' are the top three concerns for retail investors. It is suggested to market regulators to deal with the concerns of the retail investors to build confidence of the investors in the primary market. Efforts should be made by regulators and policy makers to train retail investors adequately so that they would be satisfied by their decision to invest

in the primary market and they can take decisions to repeatedly participate in the primary market.

6.4 LIMITATIONS OF THE STUDY

Despite the contributions of the present study to the primary market literature, it has some limitations too.

- There are investment opportunities other than IPOs in the market, but the focus of this study was limited to IPOs which are listed on the NSE through book building process.
- Data of only 10 years of IPOs listed on the NSE has been used for this study.
- There are many variables used in previous researches, which explained underpricing and subscription level but in the present study, only thirteen explanatory variables have been used for two models due to constraints in availability of data and normality of data.
- The present study confines to retail investors and their perception about the primary market only.
- The data collected for the primary analysis was limited to four cities represented by four regions of India.

6.5 DIRECTIONS FOR FUTURE RESEARCH

The study revealed several other prospective topics for research in the area of underpricing, over reaction hypothesis and behavioural finance. These include the following:

- Impact of retail demand on long-term performance of IPOs.

- How minimum amount of investment is explaining long-term performance of IPOs.
- Presence of other biases in retail investors' and their association with investment intention and financial satisfaction.
- Actual performance as a mediating variable between awareness level and investment satisfaction.
- Demographics of the investors as moderating variable between behavioural biases and investment satisfaction.
- A longitudinal study to check whether the investor biases and level of financial satisfaction remain constant or change over the period.
- The study can be conducted for theoretical modeling of behavioural biases, financial satisfaction, and re-investment decision in IPOs.

References

Acquah-Sam, E., & Salami, K. (2013). Knowledge and participation in capital market activities: The Ghanaian Experience. *International Journal of Scientific Research in Education, 6*(2), 189-203.

Agarwalla, S. K., Barua, S., Jacob, J., & Varma, J. R. (2012). A survey of financial literacy among students, young employees and the retired in India. *Retrieved February, 26*, 2013.

Al-Tamimi, H. A. H. (2006). Factors influencing individual investor behavior: an empirical study of the UAE financial markets. *The Business Review, 5*(2), 225-233.

Alavi, A., Pham, P. K., & Pham, T. M. (2008). Pre-IPO ownership structure and its impact on the IPO process. *Journal of Banking & Finance, 32*(11), 2361-2375.

Allen, F., & Faulhaber, G. R. (1989). Signalling by underpricing in the IPO market. *Journal of financial Economics, 23*(2), 303-323.

Baker, M., & Wurgler, J. (2007). Investor sentiment in the stock market. *The Journal of Economic Perspectives, 21*(2), 129-151.

Bansal, R., & Khanna, A. (2012). Determinants of IPOs initial return: extreme analysis of Indian market. *Journal of Financial Risk Management, 1*(04), 68.

Bansal, R., & Khanna, A. (2013). Vector auto-regressive analysis of determinants of IPO underpricing: Empirical evidence from Bombay stock exchange. *Global Business Review, 14*(4), 651-689.

Banumathy, K., & Azhagaiah, R. (2016). Investors' Awareness About Investment in Stock Market. *PACIFIC BUSINESS REVIEW INTERNATIONAL, 8*(11), 14-22.

Barber, B. M., Lee, Y.-T., Liu, Y.-J., & Odean, T. (2009). Just how much do individual investors lose by trading? *Review of Financial Studies, 22*(2), 609-632.

Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *The quarterly journal of economics, 116*(1), 261-292.

Barber, B. M., & Odean, T. (2008). All that glitters: The effect of attention and news on the buying behavior of individual and institutional investors. *Review of Financial Studies, 21*(2), 785-818.

Barber, B. M., & Odean, T. (2011). The behavior of individual investors.

Barber, B. M., & Odean, T. (2013). The behavior of individual investors *Handbook of the Economics of Finance* (Vol. 2, pp. 1533-1570): Elsevier.

Baron, D. P. (1982). A model of the demand for investment banking advising and distribution services for new issues. *The journal of finance, 37*(4), 955-976.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology, 51*(6), 1173.

Barone-Adesi, G., Mancini, L., & Shefrin, H. (2013). A tale of two investors: Estimating optimism and overconfidence.

Barua, S. K., Raghunathan, V., & Varma, J. R. (1994). Research on the Indian capital market: A review. *Vikalpa, 19*(1), 15-32.

Beatty, R. P., & Ritter, J. R. (1986). Investment banking, reputation, and the underpricing of initial public offerings. *Journal of financial Economics, 15*(1-2), 213-232.

Bhabra, H. S., & Pettway, R. H. (2003). IPO prospectus information and subsequent performance. *Financial Review, 38*(3), 369-397.

Bloomfield, R., Libby, R., & Nelson, M. W. (1999). Confidence and the welfare of less-informed investors. *Accounting, Organizations and Society, 24*(8), 623-647.

Bodie, Z., Kane, A., & Marcus, A. (2001). Finance investments.

Boulton, T. J., Smart, S. B., & Zutter, C. J. (2011). Earnings quality and international IPO underpricing. *The Accounting Review, 86*(2), 483-505.

Brau, J. C., & Fawcett, S. E. (2006). Initial public offerings: An analysis of theory and practice. *The journal of finance, 61*(1), 399-436.

Bryman, A., & Bell, E. (2011). *Business Research Methods 3e*: Oxford University Press.

Bubna, A., & Prabhala, N. (2013). Anchor investors in ipos. *Unpublished Working Paper*.

Bucher-Koenen, T., & Lusardi, A. (2011). Financial literacy and retirement planning in Germany. *Journal of Pension Economics & Finance, 10*(4), 565-584.

Cann, A., Connolly, M., Ruuska, R., MacNeil, M., Birmingham, T., Vandervoort, A., & Callaghan, J. (2008). Inter-rater reliability of output measures for a posture

matching assessment approach: a pilot study with food service workers. *Ergonomics, 51*(4), 556-572.

Caparrelli, F., D'Arcangelis, A. M., & Cassuto, A. (2004). Herding in the Italian stock market: a case of behavioral finance. *The Journal of Behavioral Finance, 5*(4), 222-230.

Célérier, C., & Vallée, B. (2014). The motives for financial complexity: An empirical investigation. *HEC Paris Research Paper No. FIN-2013-1013, available at: http://ssrn. com/abstract, 2289890*.

Chahine, S., & Filatotchev, I. (2008). The effects of information disclosure and board independence on IPO discount. *Journal of small business management, 46*(2), 219-241.

Chakrabarti, B. B. *ARNAB BHATTACHARYA.* Indian Institute of Management Calcutta.

Chalk, A. J., & Peavy III, J. W. (1987). Initial public offerings: daily returns, offering types and the price effect. *Financial Analysts Journal, 43*(5), 65-69.

Chang, E. C., Cheng, J. W., & Khorana, A. (2000). An examination of herd behavior in equity markets: An international perspective. *Journal of Banking & Finance, 24*(10), 1651-1679.

Chemmanur, T. J. (1993). The pricing of initial public offerings: A dynamic model with information production. *The journal of finance, 48*(1), 285-304.

Chen, G., Firth, M., & Kim, J.-B. (2004). IPO underpricing in China's new stock markets. *Journal of Multinational Financial Management, 14*(3), 283-302.

Chen, H., & Volpe, R. P. (2002). Gender differences in personal financial literacy among college students. *Financial services review, 11*(3), 289.

Chowdhry, B., & Sherman, A. (1996). International differences in oversubscription and underpricing of IPOs. *Journal of Corporate Finance, 2*(4), 359-381.

Chuang, W.-I., & Lee, B.-S. (2006). An empirical evaluation of the overconfidence hypothesis. *Journal of Banking & Finance, 30*(9), 2489-2515.

Dakshayani, G. (2016). A Study on Investment Awareness and Preferences of the Salaried Persons in Bijapur District. *Splint International Journal of Professionals, 3*(7), 92.

Dalziel, T., White, R. E., & Arthurs, J. D. (2011). Principal costs in initial public offerings. *Journal of Management Studies, 48*(6), 1346-1364.

Das, S. K. (2011). An empirical analysis on preferred investment avenues among rural and semi-urban households. *Journal of Frontline Research in Arts and Science, 1*(2), 26-36.

De Bondt, W. F. (1998). A portrait of the individual investor. *European economic review, 42*(3), 831-844.

Deb, S. S., & Marisetty, V. B. (2010). Information content of IPO grading. *Journal of Banking & Finance, 34*(9), 2294-2305.

DERRIEN, F. (2005). IPO pricing in "hot" market conditions: Who leaves money on the table? *The journal of finance, 60*(1), 487-521.

Dharmaja, G. (2012). V, Ganesh. J, Dr. Santhi. V. A Study on the Individual Investor Behavior with Special Referance to Geojit BNP Paribas Financial Service Ltd, Coimbatore. *IRACST-International Journal of Research in Management & Technology (IJRMT), 2*(2), 243-252.

Fan, J., Wong, T., & Zhang, T. (2005). The emergence of corporate pyramids in China.

Feldstein, M. S., & Yitzhaki, S. (1982). Are high income individuals better stock market investors? : National Bureau of Economic Research Cambridge, Mass., USA.

Firth, M. (1998). IPO profit forecasts and their role in signalling firm value and explaining post-listing returns. *Applied Financial Economics, 8*(1), 29-39.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 39-50.

Ghosh, S. (2002). Underpricing of IPOs: The Indian experience over the last decade.

Ghosh, S. (2005). The post-offering performance of IPOs in the Indian banking industry. *Applied Economics Letters, 12*(2), 89-94.

Glaser, M., & Weber, M. (2007). Overconfidence and trading volume. Geneva Risk and Insurance Review, 32 (1), 1–36. *Thema Finanzmarkt-Gurus*.

Graham, J. R., Harvey, C. R., & Huang, H. (2009). Investor competence, trading frequency, and home bias. *Management Science, 55*(7), 1094-1106.

Grullon, G., Kanatas, G., & Weston, J. P. (2004). Advertising, breadth of ownership, and liquidity. *Review of Financial Studies, 17*(2), 439-461.

Gu, A. Y. (2003). State ownership, firm size, and IPO performance: Evidence from Chinese" A" share issues. *American Business Review, 21*(2), 101.

Guiso, L., & Jappelli, T. (2005). Awareness and stock market participation. *Review of Finance, 9*(4), 537-567.

Gupta, L. (1996). Challenges before securities and Exchange Board of India. *Economic and political Weekly*, 751-757.

Gupta, L., Jain, N., Choudhury, U., Gupta, S., Sharma, R., Kaushik, P., . . . Jain, S. (2005). Indian household investors survey-2004. *Society for Capital Market Research & Development, New Delhi*.

Hair, J. F. (2010). Black, WC, Babin, BJ, & Anderson, RE (2010). *Multivariate data analysis, 7*.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Multivariate data analysis (Vol. 6): Upper Saddle River, NJ: Pearson Prentice Hall.

Hebb, G. M., & MacKinnon, G. H. (2004). Valuation Uncertainty and IPOs: Investment bank versus Commercial bank underwriters. *Journal of Economics and Finance, 28*(1), 68-87.

Helwege, J., & Liang, N. (2004). Initial public offerings in hot and cold markets. *Journal of financial and quantitative analysis, 39*(3), 541-569.

Hill, P., & Wilson, N. (2006). Value gains on flotation and IPO underpricing. *Journal of Business Finance & Accounting, 33*(9-10), 1435-1459.

Hochberg, Y. V., Ljungqvist, A., & Lu, Y. (2007). Whom you know matters: Venture capital networks and investment performance. *The journal of finance, 62*(1), 251-301.

Hong, H., Kubik, J. D., & Stein, J. C. (2004). Social interaction and stock-market participation. *The journal of finance, 59*(1), 137-163.

Ibbotson, M. R., & Mark, R. F. (1994). Wide-field nondirectional visual units in the pretectum: do they suppress ocular following of saccade-induced visual stimulation. *Journal of neurophysiology, 72*(3), 1448-1450.

Ibbotson, R. G., Sindelar, J. L., & Ritter, J. R. (1988). Initial public offerings. *Journal of applied corporate finance, 1*(2), 37-45.

Iyer, S. B., & Bhaskar, R. K. (2002). Investor's psychology: A study of investor behaviour in the Indian capital market. *Finance India, 16*(4), 1357.

Jain, B. A., & Kini, O. (1999). The life cycle of initial public offering firms. *Journal of Business Finance & Accounting, 26*(9-10), 1281-1307.

Johanson, G. A., & Brooks, G. P. (2010). Initial scale development: sample size for pilot studies. *Educational and Psychological Measurement, 70*(3), 394-400.

Jong, A. d., Huijgen, C. A., Marra, T. A., & Roosenboom, P. (2012). Why do firms go public? The role of the product market. *Journal of Business Finance & Accounting, 39*(1-2), 165-192.

Kafayat, A. (2014). Interrelationship of biases: effect investment decisions ultimately. *Theoretical & Applied Economics, 21*(6).

Kahneman, D., & Riepe, M. W. (1998). Aspects of investor psychology. *Journal of portfolio management, 24*(4), 52-+.

Katz, S. P. (2009). Earnings quality and ownership structure: The role of private equity sponsors. *The Accounting Review, 84*(3), 623-658.

Kaustia, M., & Knüpfer, S. (2008). Do investors overweight personal experience? Evidence from IPO subscriptions. *The journal of finance, 63*(6), 2679-2702.

Kavitha, C. (2015). Investors Attitudes towards Stock Market Investment. *International Journal of Scientific Research and Management, 3*(7), 3356-3362.

Kengatharan, L., & Kengatharan, N. (2014a). The influence of behavioral factors in making investment decisions and performance: Study on investors of Colombo Stock Exchange, Sri Lanka. *Asian Journal of Finance & Accounting, 6*(1), 1-23.

Kengatharan, L., & Kengatharan, N. (2014b). The influence of behavioral factors in making investment decisions and performance: Study on investors of Colombo Stock Exchange, Sri Lanka. *Asian Journal of Finance & Accounting, 6*(1), 1.

Khurshed, A., Pande, A., & Singh, A. K. (2009). Subscription patterns, offer prices and the underpricing of IPOs.

Khurshed, A., Pande, A., & Singh, A. K. (2010). A dissection of bookbuilt IPOs: subscriptions, underpricing and initial returns.

Koh, F., & Walter, T. (1989). A direct test of Rock's model of the pricing of unseasoned issues. *Journal of financial Economics, 23*(2), 251-272.

Kooli, M., & Suret, J.-M. (2002). *How cost-effective are Canadian IPO markets?* (Vol. 83): Cirano Montreal.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*: New Age International.

Krishnamurti, C., & Kumar, P. (2002). The initial listing performance of Indian IPOs. *Managerial Finance, 28*(2), 39-51.

Kukreja, G. (2012). Investors' Perception for Stock Market: Evidences from National Capital Region of India. *Interdisciplinary journal of contemporary research in business, 4*(8), 712-726.

Kumar, K., & Vikkraman, P. (2008). Investor's preference on IPOs in India. *Academic journal article from Global Business and Management Research: An International Journal*.

Kumar, K. J. S. (2010). Indian Primary Market-A Review. *An International Journal Published by, 1*(1), 6.

Lee, W. Y., Jiang, C. X., & Indro, D. C. (2002). Stock market volatility, excess returns, and the role of investor sentiment. *Journal of Banking & Finance, 26*(12), 2277-2299.

Lerner, J. (1994). Venture capitalists and the decision to go public. *Journal of financial Economics, 35*(3), 293-316.

Levis, M. (2011). The performance of private equity-backed IPOs. *Financial Management, 40*(1), 253-277.

Ljungqvist, A., Nanda, V., & Singh, R. (2006). Hot markets, investor sentiment, and IPO pricing. *The Journal of Business, 79*(4), 1667-1702.

Löffler, G., Panther, P. F., & Theissen, E. (2005). Who knows what when? The information content of pre-IPO market prices. *Journal of Financial Intermediation, 14*(4), 466-484.

Loughran, T., & Ritter, J. (2004). Why has IPO underpricing changed over time? *Financial Management*, 5-37.

Loughran, T., & Ritter, J. R. (1995). The new issues puzzle. *The journal of finance, 50*(1), 23-51.

Loughran, T., & Ritter, J. R. (2002). Why has IPO underpricing changed over time?

Lowry, M., Officer, M. S., & Schwert, G. W. (2010). The variability of IPO initial returns. *The journal of finance, 65*(2), 425-465.

Luong, T. T., Ha, T. P., Dai Tran, L., Do, M. H., Mai, T. T., Pham, N. H., . . . Nguyen, Q. T. (2011). Design of carboxylated Fe3O4/poly (styrene-co-acrylic acid)

ferrofluids with highly efficient magnetic heating effect. *Colloids and Surfaces A: Physicochemical and Engineering Aspects, 384*(1-3), 23-30.

Lusardi, A., & Mitchell, O. S. (2011). Financial literacy and planning: Implications for retirement wellbeing: National Bureau of Economic Research.

Manjunatha, T., & Gopi, K. (2013). FACTORS INFLUENCING RETAIL INVESTORS IN INDIAN PRIMARY MARKET. *CLEAR International Journal of Research in Commerce & Management, 4*(2).

Marisetty, V. B., & Subrahmanyam, M. G. (2010). Group affiliation and the performance of IPOs in the Indian stock market. *Journal of Financial Markets, 13*(1), 196-223.

Meera Mohiadeen, P. (1999). A study on new issue management services of lead merchant bankers in India.

Menyah, K., Paudyal, K., & Inyangete, C. G. (1995). Subscriber return, underpricing, and long-term performance of UK privatization initial public offers. *Journal of Economics and Business, 47*(5), 473-495.

Miller, R. E., & Reilly, F. K. (1987). An examination of mispricing, returns, and uncertainty for initial public offerings. *Financial Management*, 33-38.

Montier, J. (2009). *Behavioural investing: a practitioner's guide to applying behavioural finance*: John Wiley & Sons.

Murali, K. (1999). Disintermediation'and private corporate financing: an analysis of the new issue (primary) market in India.

Murthy, K. B., & Singh, A. K. (2014). Short-Run Performance of IPO Market in India. *International journal of Financial management, 4*(2).

Nandha, M., & Sawyer, K. (2002). Ex-ante uncertainty in initial public offerings: The Indian market. *Finance India, 16*(3), 961.

Neupane, S., & Poshakwale, S. S. (2012). Transparency in IPO mechanism: Retail investors' participation, IPO pricing and returns. *Journal of Banking & Finance, 36*(7), 2064-2076.

Noctor, M., Stoney, S., & Stradling, R. (1992). Financial literacy: a discussion of concepts and competences of financial literacy and opportunities for its introduction into young people's learning. *National Foundation for Educational Research*.

Odean, T. (1998a). Are investors reluctant to realize their losses? *The journal of finance, 53*(5), 1775-1798.

Odean, T. (1998b). Volume, volatility, price, and profit when all traders are above average. *The journal of finance, 53*(6), 1887-1934.

Park, J., Konana, P., Gu, B., Kumar, A., & Raghunathan, R. (2010). Confirmation bias, overconfidence, and investment performance: Evidence from stock message boards.

Pensiero, D., & Krishnamurti, C. (2014). Investor sentiment, profitability and offer price band: evidence from the Indian IPO market. *Global Economy and Finance Journal, 7*(2), 59-70.

Pethe, A., & Karnik, A. (2000). Do Indian stock markets matter? Stock market indices and macro-economic variables. *Economic and political Weekly*, 349-356.

Pichler, P., & Stomper, A. (2009). Primary Market Design: Mechanisms And When-Issued Markets. *University of k'ienna working paper*.

Pollack, S. W. The Role of Retail Investors in Book Built IPOs: Evidence from India.

Prosad, J. M., Kapoor, S., & Sengupta, J. (2015). Behavioral biases of Indian investors: a survey of Delhi-NCR region. *Qualitative Research in Financial Markets, 7*(3), 230-263.

Prosad, J. M., Kapoor, S., & Sengupta, J. (2015). Theory of behavioral finance *Handbook of research on behavioral finance and investment strategies: decision making in the financial industry* (pp. 1-24): IGI Global.

Rao, K. C., & Ranganathan, K. (2006a). *The Indian Stock Market in 2005-06: An Examination of Two Major Events*: Institute for Studies in Industrial Development.

Rao, K. C., & Ranganathan, K. (2006b). THE INDIAN STOCK MARKET IN 2005–06.

Ritter, J. R. (1984). The" hot issue" market of 1980. *Journal of Business*, 215-240.

Ritter, J. R. (1987). The costs of going public. *Journal of financial Economics, 19*(2), 269-281.

Ritter, J. R. (1991). The long-run performance of initial public offerings. *The journal of finance, 46*(1), 3-27.

Ritter, J. R., & Welch, I. (2002). A review of IPO activity, pricing, and allocations. *The journal of finance, 57*(4), 1795-1828.

Rock, K. (1986). Why new issues are underpriced. *Journal of financial Economics, 15*(1-2), 187-212.

Ruud, J. S. (1993). Underwriter Price Support and the Ipo Underpricing Puzzle. *Journal of financial Economics, 34*(2), 135-151. doi: Doi 10.1016/0304-405x(93)90015-4

Sahi, S. K. (2017). Psychological biases of individual investors and financial satisfaction. *Journal of Consumer Behaviour, 16*(6), 511-535.

Sahoo, S., & Rajib, P. (2010). After market pricing performance of initial public offerings (IPOs): Indian IPO market 2002–2006. *Vikalpa, 35*(4), 27-44.

Schertler, A. (2001). *The Certification Role of Private Equity Investors: Evidence from Initial Public Offerings on the Noveau Marché and the Neuer Markt*: UN University, Institute for New Technologies.

Schertler, A. (2002). Venture capitalists investment incentives under public equity schemes.

Seth, P. (2010). Financial Literacy & Investment Decisions of Indian Investors-A Case of Delhi & NCR" article published in International Conference. *WEBSITE/ONLINE RESOURCES*.

Shefrin, H., & Statman, M. (2011a). Behavioral Finance in the Financial Crisis: Market Efficiency. *Minsky, and Keynes, November, Santa Clara University, November*.

Shefrin, H., & Statman, M. (2011b). Behavioral finance in the financial crisis: market efficiency, Minsky, and Keynes. *Santa Clara University, November*.

Sherman, A. E. (2000). IPOs and long-term relationships: an advantage of book building. *The Review of Financial Studies, 13*(3), 697-714.

Shiller, R. J. (1987). Investor behavior in the October 1987 stock market crash: Survey evidence: National Bureau of Economic Research Cambridge, Mass., USA.

Shumway-Cook, A., & Woollacott, M. H. (2007). *Motor control: translating research into clinical practice*: Lippincott Williams & Wilkins.

Slama Zouari, S. B., Boudriga, A., & Boulila, N. T. (2011). Determinants of IPO underpricing: Evidence from Tunisia.

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology, 13*, 290-312.

Sohail, M. K., & Nasr, M. (2007). Performance of initial public offerings in Pakistan. *International Review of Business Research Papers, 3*(2), 420-441.

Stanyer, P. (2014). *The Economist Guide to Investment Strategy: How to Understand Markets, Risk, Rewards, and Behaviour*: The Economist.

Strahilevitz, M. A., Odean, T., & Barber, B. M. (2011). Once burned, twice shy: How naïve learning, counterfactuals, and regret affect the repurchase of stocks previously sold. *Journal of Marketing Research, 48*(SPL), S102-S120.

Surendar, G., & Rao, S. (2011). Retail Investor‘s Perception towards Initial Public Offers (IPOs)-Study on Selected Cities. *International Journal of Research in IT and Management, 1*(3), 96-114.

Suto, M., & Toshino, M. (2005). Behavioural biases of Japanese institutional investors: Fund management and corporate governance. *Corporate Governance: An International Review, 13*(4), 466-477.

Swarup, K. S. (2003). Measures for Improving Common Investor Confidence in Indian Primary Market: A Survey. *Online], National Stock Exchange India Limited, Available from http://www. nseindia. com/content/research/Paper64. pdf*.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*: Allyn & Bacon/Pearson Education.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education, 2*, 53.

Toshino, M., & Suto, M. (2004). Cognitive biases of Japanese institutional investors: Consistency with behavioral finance. *Waseda University Institute of Finance Working Paper Series WIF-04-005*.

Tripathi, V. (2008). Investment strategies in Indian stock market: a survey.

Wang, X. L., Shi, K., & Fan, H. X. (2006). Psychological mechanisms of investors in Chinese Stock Markets. *Journal of Economic Psychology, 27*(6), 762-780.

Warren, W. E., Stevens, R. E., & McConkey, C. W. (1990). Using demographic and lifestyle analysis to segment individual investors. *Financial Analysts Journal, 46*(2), 74-77.

Welbourne, T. M., & Cyr, L. A. (1999). The human resource executive effect in initial public offering firms. *Academy of Management Journal, 42*(6), 616-629.

Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. F. (1977). Assessing reliability and stability in panel models. *Sociological methodology, 8*, 84-136.

Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of consumer research, 37*(2), 197-206.

Appendix-A

Questionnaire

Dear Respondent,

I Asif Hasan, pursuing Ph.D., in Management Studies on the topic entitled "INITIAL PUBLIC OFFERINGS (IPOS): AWARENESS, BEHAVIOURAL BIASES LEADING TO INVESTMENT INTENTION AND INVESTORS SATISFACTION" from UOH. As a part of my research, the survey is being conducted. I request your kind co-operation in giving responses to the questions in the questionnaire. Your responses will be kept strictly confidential and will be used for research purpose only.

Regards

Asif Hasan

SECTION-1

1.1. Please give a rating based on your opinion on the following questions. **(5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree)**

1	I have sufficient knowledge of Indian Primary market	
2	I am confident of my ability to pick better stocks than others	
3	My past investment successes are attributed to my own skills and understanding	
4	I would increase my trading activity if the past trading volume of stock market was higher than usual	
5	I prefer to buy stocks if many "buy" orders were placed from the beginning of the trading session	
6	My disappointment after losing money on an investment diminishes a little if others have also experienced the same loss	
7	I am positive about Primary market in terms of return	
8	I plan to increase my investment in stock market in next quarter	
9	If NSE drops by 5 percent, then it would recover within few days	
10	My past investment successes make me invest more in stocks	

1.2. Please give a rating based on your opinion on the following questions. **(5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree)**

1	I am aware of what is happening in primary market	
2	I have good grasp of primary market condition	
3	I am aware about price to earning ratio	
4	I know about bullish sentiment in primary market	
5	The current primary market environment is something I understand	
6	I am aware about earning per share	

1.3. Please give a rating based on your opinion on the following questions. **(5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree)**

1	I work out for all the pros and cons before applying for subscription of an IPO	
2	I remain calm when have to take decision of investment quickly	
3	I make decision for IPO investment after considering all implications	
4	I prefer to take safe option when apply for subscription of an IPO	
5	I always check background of the firm before applying for subscription of an IPO	

1.4. Please give a rating based on your opinion on the following questions. **(5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree)**

1	I feel satisfied with my investment decision in IPO	
2	Investment in IPO is much better than other investment options	
3	IPO investment give back me positive return	
4	IPO investment fulfilling my investment needs	
5	I try most of the time to make investment in IPO	

1.5. Please give a rating based on your opinion on the following questions. **(5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = Strongly Disagree)**

1	Too much price manipulation is the major concern in primary market	
2	High demat charges is the major concern in primary market	
3	Reservation of only 35 percent in IPO for retail investors is the major concern in primary market	
4	Need for prepayment of full amount while applying for an IPO is the major concern in primary market	
5	Corporate mismanagement/fraud is the major concern in primary market	
6	Price volatility in IPO is the major concern in primary market	
7	Too much insider trading is the major concern in primary market	
8	Information asymmetry is the major concern in primary market	

SECTION-2

2.1. Name of the respondent: **……..**

2.2. Gender – (M/F) **…….**

2.3. Age -

a) Below 30 years

b) 31-40 years

c) 41-50 years

d) 51-60 years

e) More than 60 years

2.4. City of residence: **……**

2.5. Qualification -

a) Under Graduate

b) Graduate

c) Post Graduate

d) Doctorate

2.6. Occupation -

a) Student

b) Homemaker

c) Businessman

d) Private-Employee

e) Government-Employee

2.7. How many years of experience do you have in investing in IPOs?

a) 2-5 years

b) 6-10 years

c) 11-15 years

d) More than 15 years

2.8. I prefer to hold my investments in IPO for a period of;

a) Till the date of the listing

b) 1-3 years

c) 4-6 years

d) 7-9 years

e) More than 9 years

2.9. What is your Expected rate of return from IPO investment?

a) 10-20%

b) 21-30%

c) 31-40%

d) 41-50%

e) More than 50%

Thank you.

APPENDIX-B

List of IPOs used for the Study

S. No.	Company	S. No.	Company
1	GAMMON INFRASTRUCTURE PROJECTS LTD.	115	ONELIFE CAPITAL ADVISORS LTD.
2	SITA SHREE FOOD PRODUCTS LTD.	116	FLEXITUFF INTERNATIONAL LTD.
3	TITAGARH WAGONS LTD.	117	TAKSHEEL SOLUTIONS LTD.
4	KIRI DYES & CHEMICALS LTD.	118	M & B SWITCHGEARS LTD.
5	GOKUL REFOILS & SOLVENT LTD.	119	VASWANI INDUSTRIES LTD.
6	SEJAL ARCHITECTURAL GLASS LTD.	120	INDO THAI SECURITIES LTD.
7	ARCHIDPLY INDUSTRIES LTD.	121	MULTI COMMODITY EXCHANGE OF INDIA LTD.
8	FIRST WINNER INDUSTRIES LTD.	122	NATIONAL BUILDINGS CONSTRUCTION CORP.LTD.
9	LOTUS EYE CARE HOSPITAL LTD.	123	MT EDUCARE LTD.
10	KSK ENERGY VENTURES LTD.	124	TRIBHOVANDAS BHIMJI ZAVERI LTD.
11	BIRLA COTSYN (INDIA) LTD.	125	SPECIALITY RESTAURANTS LTD.
12	NU TEK INDIA LTD.	126	VKS PROJECTS LTD.
13	RESURGERE MINES & MINERALS INDIA LTD.	127	TARA JEWELS LTD.
14	AUSTRAL COKE & PROJECTS LTD.	128	CREDIT ANALYSIS & RESEARCH LTD.
15	20 MICRONS LTD.	129	PC JEWELLER LTD.
16	ALKALI METALS LTD.	130	BHARTI INFRATEL LTD.
17	EDSERV SOFTSYSTEMS LTD.	131	V-MART RETAIL LTD.
18	MAHINDRA HOLIDAYS & RESORTS INDIA LTD.	132	REPCO HOME FINANCE LTD.
19	EXCEL INFOWAYS LTD.	133	JUST DIAL LTD.
20	RAJ OIL MILLS LTD.	134	WONDERLA HOLIDAYS LTD.
21	NHPC LTD.	135	SNOWMAN LOGISTICS LTD.
22	JINDAL COTEX LTD.	136	SHARDA CROPCHEM LTD.
23	GLOBUS SPIRITS LTD.	137	SHEMAROO ENTERTAINMENT LTD.
24	OIL INDIA LTD.	138	MONTE CARLO FASHIONS LTD.
25	PIPAVAV SHIPYARD LTD.	139	ORTEL COMMUNICATIONS

			LTD.
26	EURO MULTIVISION LTD.	140	ADLABS ENTERTAINMENT LTD.
27	THINKSOFT GLOBAL SERVICES LTD.	141	INOX WIND LTD.
28	INDIABULLS POWER LTD.	142	VRL LOGISTICS LTD.
29	DEN NETWORKS LTD.	143	MEP INFRASTRUCTURE DEVELOPERS LTD.
30	ASTEC LIFESCIENCES LTD.	144	UFO MOVIEZ INDIA LTD.
31	COX & KINGS (INDIA) LTD.	145	PNC INFRATECH LTD.
32	JSW ENERGY LTD.	146	MANPASAND BEVERAGES LTD.
33	GODREJ PROPERTIES LTD.	147	SYNGENE INTERNATIONAL LTD.
34	D.B.CORP LTD.	148	POWER MECH PROJECTS LTD.
35	MBL INFRASTRUCTURES LTD.	149	NAVKAR CORP.LTD.
36	INFINITE COMPUTER SOLUTIONS (INDIA) LTD.	150	PENNAR ENGINEERED BUILDING SYSTEMS LTD.
37	JUBILANT FOODWORKS LTD.	151	SHREE PUSHKAR CHEMICALS & FERTILISERS LTD.
38	SYNCOM HEALTHCARE LTD.	152	SADBHAV INFRASTRUCTURE PROJECT LTD.
39	VASCON ENGINEERS LTD.	153	PRABHAT DAIRY LTD.
40	THANGAMAYIL JEWELLERY LTD.	154	COFFEE DAY ENTERPRISES LTD.
41	AQUA LOGISTICS LTD.	155	INTERGLOBE AVIATION LTD.
42	D B REALTY LTD.	156	S.H.KELKAR & CO.LTD.
43	EMMBI POLYARNS LTD.	157	ALKEM LABORATORIES LTD.
44	HATHWAY CABLE & DATACOM LTD.	158	DR.LAL PATHLABS LTD.
45	ARSS INFRASTRUCTURE PROJECTS LTD.	159	NARAYANA HRUDAYALAYA LTD.
46	TEXMO PIPES & PRODUCTS LTD.	160	PRECISION CAMSHAFTS LTD.
47	MAN INFRACONSTRUCTION LTD.	161	TEAMLEASE SERVICES LTD.
48	UNITED BANK OF INDIA	162	QUICK HEAL TECHNOLOGIES LTD.
49	IL&FS TRANSPORTATION NETWORKS LTD.	163	HEALTHCARE GLOBAL ENTERPRISES LTD.
50	PRADIP OVERSEAS LTD.	164	BHARAT WIRE ROPES LTD.

51	PERSISTENT SYSTEMS LTD.	165	INFIBEAM INCORPORATION LTD.
52	SHREE GANESH JEWELLERY HOUSE LTD.	166	EQUITAS HOLDINGS LTD.
53	GOENKA DIAMOND & JEWELS LTD.	167	THYROCARE TECHNOLOGIES LTD.
54	TALWALKARS BETTER VALUE FITNESS LTD.	168	UJJIVAN FINANCIAL SERVICES LTD.
55	NITESH ESTATES LTD.	169	PARAG MILK FOODS LTD.
56	TARAPUR TRANSFORMERS LTD.	170	MAHANAGAR GAS LTD.
57	MANDHANA INDUSTRIES LTD.	171	QUESS CORP LTD.
58	SJVN LTD.	172	LARSEN & TOUBRO INFOTECH LTD.
59	JAYPEE INFRATECH LTD.	173	ADVANCED ENZYME TECHNOLOGIES LTD.
60	PARABOLIC DRUGS LTD.	174	DILIP BUILDCON LTD.
61	TECHNOFAB ENGINEERING LTD.	175	S.P.APPARELS LTD.
62	HINDUSTAN MEDIA VENTURES LTD.	176	RBL BANK LTD.
63	ASTER SILICATES LTD.	177	L&T TECHNOLOGY SERVICES LTD.
64	SKS MICROFINANCE LTD.	178	GNA AXLES LTD.
65	BAJAJ CORP LTD.	179	ICICI PRUDENTIAL LIFE INSURANCE CO.LTD.
66	PRAKASH STEELAGE LTD.	180	HPL ELECTRIC & POWER LTD.
67	INDOSOLAR LTD.	181	ENDURANCE TECHNOLOGIES LTD.
68	MICROSEC FINANCIAL SERVICES LTD.	182	PNB HOUSING FINANCE LTD.
69	CAREER POINT INFOSYSTEMS LTD.	183	VARUN BEVERAGES LTD.
70	EROS INTERNATIONAL MEDIA LTD.	184	SHEELA FOAM LTD.
71	ORIENT GREEN POWER CO.LTD.	185	LAURUS LABS LTD.
72	RAMKY INFRASTRUCTURE LTD.	186	BSE LTD.
73	CANTABIL RETAIL INDIA LTD.	187	MUSIC BROADCAST LTD.
74	TECPRO SYSTEMS LTD.	188	AVENUE SUPERMARTS LTD.
75	VA TECH WABAG LTD.	189	CL EDUCATE LTD.
76	ASHOKA BUILDCON LTD.	190	SHANKARA BUILDING PRODUCTS LTD.
77	BEDMUTHA INDUSTRIES LTD.	191	S.CHAND & CO.LTD.

78	COMMERCIAL ENGINEERS & BODY BUILDERS CO.LTD.	192	HOUSING & URBAN DEVELOPMENT CORP.LTD.
79	OBEROI REALTY LTD.	193	PSP PROJECTS LTD.
80	BS TRANSCOMM LTD.	194	TEJAS NETWORKS LTD.
81	PRESTIGE ESTATES PROJECTS LTD.	195	ERIS LIFESCIENCES LTD.
82	GYSCOAL ALLOYS LTD.	196	CENTRAL DEPOSITORY SERVICES (INDIA) LTD.
83	COAL INDIA LTD.	197	GTPL HATHWAY LTD.
84	GRAVITA INDIA LTD.	198	AU SMALL FINANCE BANK LTD.
85	RPP INFRA PROJECTS LTD.	199	SECURITY & INTELLIGENCE SERVICES (INDIA) LTD.
86	MOIL LTD.	200	COCHIN SHIPYARD LTD.
87	A2Z MAINTENANCE & ENGINEERING SERVICES LTD.	201	APEX FROZEN FOODS LTD.
88	RAVIKUMAR DISTILLERIES LTD.	202	BHARAT ROAD NETWORK LTD.
89	PUNJAB & SIND BANK	203	DIXON TECHNOLOGIES (INDIA) LTD.
90	C.MAHENDRA EXPORTS LTD.	204	MATRIMONY.COM LTD.
91	OMKAR SPECIALITY CHEMICALS LTD.	205	CAPACIT'E INFRAPROJECTS LTD.
92	ACROPETAL TECHNOLOGIES LTD.	206	ICICI LOMBARD GENERAL INSURANCE CO.LTD.
93	SUDAR GARMENTS LTD.	207	SBI LIFE INSURANCE CO.LTD.
94	LOVABLE LINGERIE LTD.	208	PRATAAP SNACKS LTD.
95	PTC INDIA FINANCIAL SERVICES LTD.	209	GODREJ AGROVET LTD.
96	SHILPI CABLE TECHNOLOGIES LTD.	210	MAS FINANCIAL SERVICES LTD.
97	MUTHOOT FINANCE LTD.	211	INDIAN ENERGY EXCHANGE LTD.
98	PARAMOUNT PRINTPACKAGING LTD.	212	GENERAL INSURANCE CORP.OF INDIA
99	FUTURE VENTURES INDIA LTD.	213	RELIANCE NIPPON LIFE ASSET MANAGEMENT LTD.
100	SERVALAKSHMI PAPER LTD.	214	MAHINDRA LOGISTICS LTD.
101	INNOVENTIVE INDUSTRIES LTD.	215	KHADIM INDIA LTD.
102	SANGHVI FORGING & ENGINEERING LTD.	216	HDFC STANDARD LIFE INSURANCE CO.LTD.
103	AANJANEYA LIFECARE LTD.	217	SHALBY LTD.
104	TIMBOR HOME LTD.	218	FUTURE SUPPLY CHAIN SOLUTIONS LTD.

105	RUSHIL DECOR LTD.	219	ASTRON PAPER & BOARD MILL LTD.
106	BHARATIYA GLOBAL INFOMEDIA LTD.	220	APOLLO MICRO SYSTEMS LTD.
107	INVENTURE GROWTH & SECURITIES LTD.	221	NEWGEN SOFTWARE TECHNOLOGIES LTD.
108	L&T FINANCE HOLDINGS LTD.	222	AMBER ENTERPRISES INDIA LTD.
109	TREE HOUSE EDUCATION & ACCESSORIES LTD.	223	GALAXY SURFACTANTS LTD.
110	BROOKS LABORATORIES LTD.	224	ASTER DM HEALTHCARE LTD.
111	TD POWER SYSTEMS LTD.	225	H.G.INFRA ENGINEERING LTD.
112	SRS LTD.	226	BHARAT DYNAMICS LTD.
113	PG ELECTROPLAST LTD.	227	BANDHAN BANK LTD.
114	PRAKASH CONSTROWELL LTD.	228	HINDUSTAN AERONAUTICS LTD.

APPENDIX-C

Total Funds Raised through IPOs in NSE during the Sample Period

IPO Year	Total Issue per year	Total Issue Size (Rs. in crore)
2008-09	17	2254.961
2009-10	32	20959.35
2010-11	46	32424.36
2011-12	26	5472.983
2012-13	10	6243.023
2013-14	2	1189.373
2014-15	6	1374.588
2015-16	24	15375.19
2016-17	26	28400
2017-18	39	66732.78
Total	**228**	**180426.6**

APPENDIX-D

Quarterly Distribution of IPO Listings in NSE during Financial Year 2008-09 to 2017-18

S. No.	Quarter during Sample Period	No of IPO Listing (quarterly)
1	April-June 20008	5
2	July-September 2008	9
3	October-December 2008	2
4	January-March 2009	1
5	April-June 20009	0
6	July-September 2009	7
7	October-December 2009	7
8	January-March 2010	18
9	April-June 20010	10
10	July-September 2010	8
11	October-December 2010	22
12	January-March 2011	6
13	April-June 20011	9
14	July-September 2011	9
15	October-December 2011	7
16	January-March 2012	1
17	April-June 20012	4
18	July-September 2012	1
19	October-December 2012	4

20	January-March 2013	1
21	April-June 20013	2
22	July-September 2013	0
23	October-December 2013	0
24	January-March 2014	0
25	April-June 20014	1
26	July-September 2014	2
27	October-December 2014	2
28	January-March 2015	1
29	April-June 20015	6
30	July-September 2015	8
31	October-December 2015	5
32	January-March 2016	5
33	April-June 20016	6
34	July-September 2016	10
35	October-December 2016	6
36	January-March 2017	4
37	April-June 20017	7
38	July-September 2017	10
39	October-December 2017	13
40	January-March 2018	9

APPENDIX-E

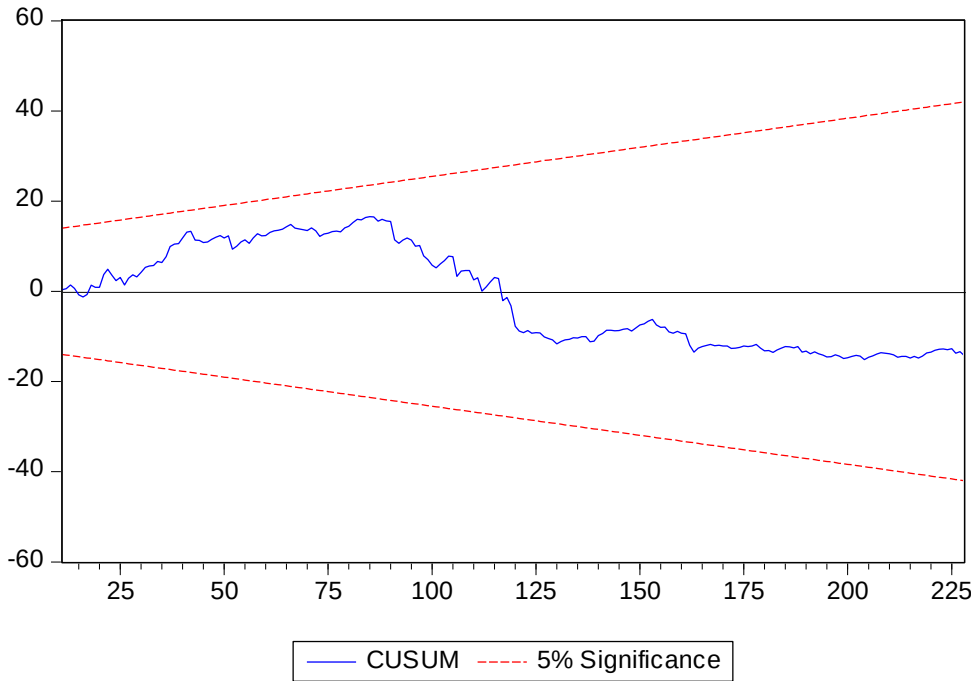
Yearwise Distribution of IPOs According to High Listing Period (Hot Period) and Low Listing Period (Cold Period)

Year	Total Issue per year	No. of Issue in Hot Period	No. of Issue in Cold Period	Issue Size in Hot Period (Rs. in crore)	Issue Size in Cold Period (Rs. in crore)	Total Issue Size (Rs. in crore)
2008-09	17	9	8	1548.48	706.481	2254.96
2009-10	32	32	0	20959.4	0	20959.4
2010-11	46	46	0	32424.4	0	32424.4
2011-12	26	25	1	4809.68	663.305	5472.98
2012-13	10	0	10	0	6243.02	6243.02
2013-14	2	0	2	0	1189.37	1189.37
2014-15	6	0	6	0	1374.59	1374.59
2015-16	24	14	10	6172.37	9202.83	15375.2
2016-17	26	22	4	24559.1	3840.91	28400
2017-18	39	39	0	66732.8	0	66732.8
Total	**228**	**187**	**41**	**157206**	**23220.5**	**180427**

APPENDIX-F

Characteristics of Data for Regression Analysis (Initial Day Return)

Mis Specification Test for Initial Day Return Regression



Heteroskedasticity Test: White

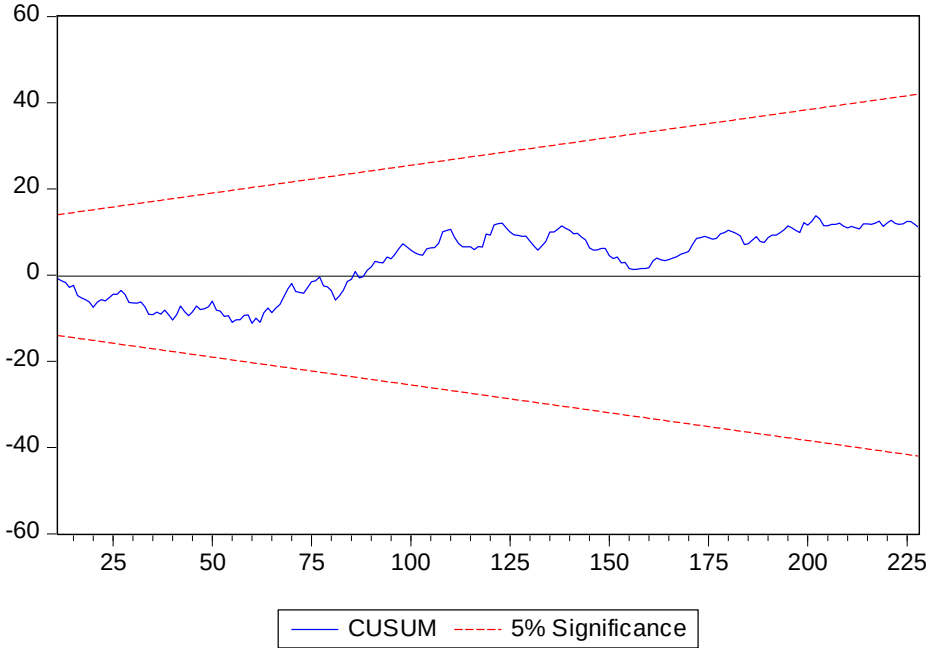
F-statistic	1.396527	Prob. F(53,174)	0.0566
Obs*R-squared	68.04252	Prob. Chi-Square(53)	0.0800
Scaled explained SS	278.8876	Prob. Chi-Square(53)	0.0000

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.552326	Prob. F(2,216)	0.5764
Obs*R-squared	1.160088	Prob. Chi-Square(2)	0.5599

Characteristics of Data for Regression Analysis (Retail Subscription)

Mis Specification Test for Retail Subscription Regression



Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.747706	Prob. F(9,218)	0.0798
Obs*R-squared	15.34378	Prob. Chi-Square(9)	0.0819
Scaled explained SS	13.37888	Prob. Chi-Square(9)	0.1462

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.273562	Prob. F(4,214)	0.0624
Obs*R-squared	9.294228	Prob. Chi-Square(4)	0.0542

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Inno Space (SJIF) Impact Factor : 5.509(Morocco) ISI Impact Factor : 1.259 (Dubai, UAE)

SECTOR WISE INVESTMENT PREFERENCE OF RETAIL INVESTORS - A STUDY OF CITY KOLKATA

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ABSTRACT

Government or Public/private sector companies or institutions can obtain funding through the sale of a new stock or bond issue in Primary Market. Promoters of the Company may have plans for the Company, which may require infusion of money Ritter (1991). The main purpose of the public issue, amongst others, is to raise money through public and get its shares listed at one of the recognized stock exchanges. Retail investors play an important role in the capital market. Government or Public sector companies or institutions can obtain funding through the sell of a new stock or bond issue. This study is an attempt to study the Retail Investors preference for sector wise investment demographically and problem faced by them while making investment in Primary Market.. This study is limited to the city Kolkata and the sample comprises investor who has participated in Primary market.

KEY WORDS: *Capital Market, Stock Exchange, Primary Market, Initial Public Offering, Retail Investors and Market Returns.*

INTRODUCTION

Primary Market:-

Primary market is that part of the capital market that deals with the new securities issuance. The double significance/importance of new issue market lies in the fact that household savings are channeled into productive investment firstly it leads to capital formation and the companies are able to raise it directly from investors, with lesser intermediation , lesser the burden on financial institution of supplying capital.

Initial Public Offering:-

An Initial public offering (IPO) is one through which an unlisted company makes either a fresh issue of securities or an offer for sale of its existing securities or both for the first time to the public. The first sale of the stock by a private company to the public. IPOs are often issued by smaller and younger companies seeking the capital to expand, but can also be done by large private companies looking to become publicly traded.

Retail Investor:-

An investor who invest small amounts of money for himself rather than on behalf of anyone else. Retail investors are the polar opposite of institutional investor. Which are large firm who invest on behalf of clients. Retail investors play an important role in the capital market. All investments made by retail investors, though small amounts together become a huge amount. A survey result says that only 12 percent of the savings is channeled to capital market.

Need of Primary Market:-

Philip Fisher said, "The stock market is filled with individuals who know the price of everything, but the value of nothing". Corporate need funds for their businesses. Funds requirement can be for short term or for long term.

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CERTIFICATE OF PUBLICATION

This is to certify that ***Asif Hasan***

has published a paper entitled ***Sector Wise Investment Preference of Retail Investors - A Study of City Kolkata***

in Volume ***4****, Issue* ***4*** *,* ***APRIL*** ***2016*** *of the* ***EPRA International Journal of Economic and Business Review - Online and Print***

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Dr. A. SINGARAJ
Chairman & Chief Editor

Performance of Indian IPOs during the Financial Year 2011–13: A Study

Asif Hasan
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Abstract

Capital market is very important for any nation's economy. Capital market is classified as primary and secondary market. First issues of securities took place in primary market and trading among investors took place in secondary market. An Initial public offering (IPO) is one through which an unlisted company makes either a fresh issue of securities or an offer for sale of its existing securities or both for the first time to the public. The process of selling new issues to investors is called underwriting. In the case of a new stock issue, this sell is an initial public offering (IPO). Dealers earn a commission that is built into the price of the security offering, though it can be found in the prospectus.

Equity investors first enter capital market through investment in primary market. Government or Public sector companies or institutions can obtain funding through the sell of a new stock or bond issue. Retail investors play an important role in the capital market. All investment made by retail investor combining become a huge amount. A survey result says that only 12 percent of the savings amount is coming to capital market. This study is an attempt to study the performance of Initial Public Offers for the last two years (April 2011 to March 2013) and their impact on Retail Investors. The performance of IPOs will be evaluated on the basis of return on the day of listing, three months, six months and 12 months.

It was found from the research that returns from the IPO which are listed during the period of April 2011 to March 2013 are very miserable. During this period 43 IPOs are listed and between them only eight IPO are trading above the Issue Price and most of the IPO are below the Issue Price.

Keywords: Investor, Capital Market, Primary Market, Initial Public Offer, Stock

INTRODUCTION

Capital market is the backbone of any nation's economy. Capital market is classified as primary and secondary market. First issues of securities took place in primary market and trading among investors took place in secondary market. IPOs are often issued by smaller, younger companies seeking the capital to expand, but can also be done by large privately owned companies looking to become publicly traded. Retail investors play an important role in the capital market.

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Initial Public Offerings (IPOs): Awareness, Behavioural Biases Leading to Investment Intention and Investor Satisfaction

by Asif Hasan

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