Chapter 3

Research Methodology

As soon as the idea gains momentum in the mind, the process of research methodology is initiated. The questions that pop in the mind as What to do? on whom to do, what process should be followed, in what form results are to be expressed and analyzed. To arrive at a valid conclusion it is important to follow a structured approach. Research in simpler terms is “the process followed to search for the ideas corresponding to the thought in the mind and to gain an insight of how the ideas related and unrelated. Research could be on the idea existing and exploring it further or research can address to a new venture all together.”

Research is a collaborative process; no research can be conducted in isolation. Since the idea is incepted in the mind of the researcher, he/she are on a continuous spree to discuss the idea with related as well as unrelated people, as such discussions will provide a depth and breadth to the idea. The idea is then discussed with the experienced and the individuals expert in the for further clarification. Such research will have general applicability and will cater to different sets, such researches proves to be very demanding in terms of time, money and hard work. “Multi disciplinary researches” or “Transdisciplinary Research” (Easterby Smith et al.’s 2002: “use of knowledge from other disciplines”) or the research with universal applicability are difficult for an individual researcher and such types of researches can be conducted and performed in teams”. Individual researcher is not in a position to conduct such in depth researches and with general applicability.

When an idea strikes to the mind of the researcher few important questions are need to be asked. Walliman (2001), argued that “the use of the term research in common parlance is not a true representation of the term”. He indicated the ways in which the term is misinterpreted.

A research is not

a. Just collecting facts or information with no clear purpose

b. Reassembling and recording facts or information or information without interpretation

c. As a term to get your product or idea noticed and respected.
The first two statements clearly identified that for a successful research data collection must not be vague but should be collected to fulfill a purpose. It is important to understand what is the reason behind collecting the data, and when inferred where the inferences can be applied.

After data is collected and is reassembled and arranged, and is left at this point of time will lose its importance. Until and unless the data is interpreted research is futile. Based in this brief discussion, research characteristics are identified

a. Data are collected systematically
b. Data are interpreted systematically
c. There is a clear purpose; to find things out

“Research should be based on logics and not just beliefs” (Ghauri and GRonhaug, 2002), but research is also conducted to test the beliefs

**RM3.1: Simple definition of Research**

“Research is something that people undertake in order to find out things in a systematic way, and thereby increasing their knowledge”.

**Definition Research**

Research is a multidisciplinary process, so is the way it is Research inculcates scientific and inductive thinking and it promotes the development of logical habits of thinking and organization. In short, the search for knowledge through objective and systematic method of finding solution to a problem is research or “research” refers to the systematic method consisting of enunciating the problem, formulating a hypothesis, collecting the facts or data, analyzing the facts and reaching certain conclusions either in the form of solutions(s) towards the concerned problem or in certain generalizations for some theoretical formulation (pg.2).

(A)

While analyzing the definitions of the term “Research”, two important features came in forefront i.e. Systematic and Analyzing. If the two terms are regularly taken care of throughout the process of research, the researcher can expect valid and meaningful results.
Systematic means the researcher is required to follow a particular procedure to achieve desired success and after the data is collected in a systematic manner, interpret the meaning that the data is generating and reporting it. Research Topic must be such that the researcher is capable of understanding and undertaking. Understanding and Undertaking the research topic is very important as it maintains the interest in research.

RM3.2: Formulating and clarifying the Research Topic

Ghauri and Gronhaug, 2002, Smith and Dainty, 1991 indicated that “Formulating and clarifying the research topic is the starting point of the research”. As the selection of the appropriate research strategy, data collection and analysis techniques all depends upon how well the research topic is explained and understood. As the research topic is a nut shell of what is desired of the research and it is the sole determinant of what are going to be the composite of the research. Raimond 1993 quoted that “without spending time on this stage the researcher is far less likely to achieve a successful project”.

Retail Investors Attitude towards Investment in Secondary Equity Market and the Impact of Behavioral Finance: A Study in New Delhi City

There has been constant debate over that - which investor drives the stock market movement? Few of the theories are in support of the FII’s and large fund houses, while other theories believed the retail investors to be the driving force. In the current research an effort was done to understand the pattern of investment exhibited by the investors falling in the category of FII’s, Mutual Fund and Retail Investors. The investment pattern and the decision making process followed by the large institutions is assumed to be a rational process, but for retail
investors apart from the rational forces many irrational forces were assumed to be taking part in the investment process. In order to probe further in the mind of the retail investor and to study the impact of the behavioral pattern the study was extended. A new branch of finance which gained its genesis from the field of psychology: Behavioral Finance provided the guiding light to the next part of the analysis. The study was conducted in order to develop a better understanding of the investor’s mind and their investment process and to identify what are the market conditions and how do they impact the behavior of the retail investor. The current research topic was also selected on the basis of personal suitability as it a very interesting combination in terms of the subject covered i.e. Finance and Psychology. As personally I am a Finance and HR graduate so the topic suits my profile and I am able to understand what data and process is required to be followed to meet the requirement of the topic.

**Key terms of the topic:** Attitude, Indian Retail investor, Secondary Equity Market, Behavioral Finance, NCR Region

Identification of the keywords developed a better understanding of the entire research topic. The basic purpose of the research was to study the perception (What View an investor holds about investing) and since the study was done about secondary equity market so the purpose was to study that What view a retail i.e. an individual investor holds about investing in secondary equity market.

Psychologist Kendra Cherry in her article defined “Perception as the sensory experience of the world around us and involves both the recognition of environmental stimuli and actions in response to these stimuli. Perception includes the five senses; touch, sight, taste smell and taste. Perception is acknowledging the world around us through the five senses”. In general terms Perception is how you look at things while Attitude is “the way that you act towards something”. The research aimed at studying the attitude of the investor, i.e. as soon as the investor hears the term secondary equity market what feeling is created in the mind i.e. Positive, Negative or neutral. The research followed the top down approach and also studied the attitude by actually studying the investment portfolio of the respondent. Does the perception about the secondary equity market is followed or is exhibited in the attitude of the respondent.

A positive perception about the secondary equity market is converted by making more investment in equity market related investment avenues.
Key Words

The volatility and the unexplained behavior of the secondary equity market prompt researchers to identify the hidden factors that bring volatility to the market. The research is an effort made to explain the unexplained factors affecting the stock market. The stock market experiences participation of different categories of investors. There are two major categories i.e. Institutional Investors and Retail Investors. Institutional investors include both domestic as well as international ranging from FII’s HNI’s, Mutual Funds, Insurance companies and Govt. Institutions while on the other hand we have is Retail investor.

Two peculiar specifications about the retail investors is their Vulnerability and Sensitivity. Vulnerability is increased as the retail investor do not possess a team of expert analysts who can forecast the market to the most accurate level and complimenting their decision with super specialized software, while the Retail investor face the volatile market single handily while sometimes taking cues from external agencies like Family members, Financial Advisors, News channels and their market experts.

The retail investor is observed to be highly sensitive, as the individual can’t separate the emotion from the rational mind. The other important aspect is the extent of losses and the impact on the investor. Since the institutional investors have large proportion of investment, their profit and losses do not impact much, but is a retail investor lose a slight portion of the
hard earned money, the investor stands shattered. The retail investor is very much prone and open to the Behavioral or emotional undercurrents.

It is observed that an individual to the extent the events turn out to be in the zone of “as expected/ predicted” tries to follow a rational approach and a logical approach but as soon as the events turn out to be random and move out of the zone of “as expected”, rationality reduces because of increased level of anxiety and emotions gets more weight age. Randomness and unexpected behavior are two basic characteristics of secondary equity market, and the retail investor / individual is the one greatly affected by the two characteristics, so the research of studying the two factors together offers great scope.

The irrational or unexplained behavior of the stock market forced scholars from field of Finance and Psychology to identify the underlying factors. The studies gave rise to the term of “Behavioral Finance”, so while studying the retail investor perception about the secondary equity market, it becomes important to consider the theories of Behavioral Finance and check their validity and the extent to which they are able to explain the perception formation about the secondary equity marker investment.

The study was conducted in the NCR region, as the concentration of people with high intellectual value is high in the region. The region follows a cosmopolitan culture thus representing Indian community. Also the research assumes that the concentration of English speaking people who can understand and interpret the questionnaire is high. Also a part of convenience is involved as a place of residence enhances the agility of data collection.

Retail investor holds a very prominent position in the secondary equity market. Regulatory and developmental agencies Like SEBI takes serious effort to make the market attractive to the retail investors. Till the evolution of the theories of behavioral finance, the traditional theories assumed the investor to be perfectly rational,

“The topic of research must be such that it excites the imagination of the researcher.” Un clarity of the research topic was existing I was initially not clear about the topic, Unclear topic should not be misunderstood by that the researcher is not interest or is not motivated to conduct the research, it only mean that the researcher is not clear. Clarity of the topic was identified as soon as the research topic was broken into key words mentioned above.

The volatility of the secondary equity market is the driving force, numerous researchers and theorist are trying to tame the horse, trying to identify the forces driving the secondary equity
market. Since the market experience an active involvement of the humans, so psychology and their practitioners also devised a role for themselves.

The concept of Behavioral finance is included in the topic as an individual or a human being cannot be separated from emotions while he is taking even the investment decision. The science provides an insight into the human mind and the heuristics associated with the human psychology assist in better explanation of the perception towards the secondary equity market. Behavioral Finance still rests heavily on International theories corresponding international respondent and they form the base for all the researches. Dearth of the research work done on the Indian counterparts motivated me to study their perception about the secondary equity market. After understanding the topic of research, it is important to pursue a process of research to provide it a systematic direction as

It is rightly said that “A thing well planned and begin is half done”. Mark Saunders et. al. (2003), suggested a “Research Onion”, indicating all the steps required to be followed to perform the research systematically and hassle free.

The Research Process “Onion”

![Research Onion Diagram]

Mark Saunders, Philip Lewis, and Adrian Thornhill, 2003
RM3.3: Research Philosophy

Initiating a research requires adopting a particular Research Philosophy. Philosophy is the basic idea about the research in the mind of the researchers. On the basis of the way the researcher wants to execute the research.

Saunders et. al. (2003) indicated that “Research philosophies differ on the goals and the way to achieve these goals. According to Saunders et. al. (2003) “Researchers when use quantitative tools, techniques that emphasize measuring and counting, are called positivist, and those who prefer the qualitative tools of observation, questioning, and description are called naturalists. Naturalists and Positivists differs in the assumption about what is important to study what can be known, what research tools and techniques are appropriate to study, and what standards should be used to judge the quality of the research. These assumptions when taken together are termed as research paradigms and research philosophies.”

The current study observed to follow the Positivists approach for conducting research. Most of the assumptions framed under Positivists approach match the criteria of current study. Positivists search for generalizable rule. As a positivist I assumed a neutral role and tried to develop a standardized instrument recognizing the fact that no data collection instrument is perfect. Since the focus of the study is to generalized the heuristics of behavioral finance and to develop a general acceptability model of Intuitive thinking, same as the Positivists aim to work out theories that apply to people or societies broadly then the in-depth focus as assumed by the naturalists cannot be followed.

Saunders et. al. (2003) mentioned that “Qualitative work is judged more on its freshness—its ability to discover new themes and new explanations, then on its generalizability. It is also evaluated for its richness vividness, and accuracy in describing complicated situations or culture.” Such quality of work desires enough dedication, quality of work and closeness with the respondents, which is the limiting factor in the current study.

Saunders et. al. (2003) “Positivists design their work to test their informed guesses which they call hypotheses and about what the findings will be.” The hypotheses were framed with the help of previous studies and personal observations. Relationship was studied between two or three factors – termed as variables – identified and holding the rest of the environment constant experimentally or statistically. What is important for the study is finding the relationship among the variables to statistically acceptable limit. Saunders et. al. (2003)
“The positivists also consider the fact that the variables are not the only variables existing in the environment, but for the current study the identified variables are important to study.” On the basis of identified variables various hypotheses are formed during the research.

These differences in philosophy influence every stages of research, from the literature review to final write up. The positivists focus on the statistical conclusions; the author’s analysis of the data is presented authoritatively rather than concluding. For the report the number do the talking, statistical techniques, analysis and interpretation occupies a major role.

**RM 3.4: Research Approach:**

Once the research philosophy is decided on the basis of suitability to the research idea and inferences to be drawn, the next stage is to identify the research approach selected on the basis of best suitability to the philosophy. Two forms of research approach exist that can be followed: Deductive and Inductive

**Deductive:** “The research approach in which the researcher develops theory and hypothesis or (hypotheses) and designs a research strategy to test the hypothesis.” The current study followed a deductive approach as the target was to test the hypothesis framed. The process of hypothesis testing is followed as suggested by Robson (1993).

The deductive approach is also termed as **Testing Theory.** The approach involves development of a theory and the theory is subjected to rigorous test. Robson (1993) listed five sequential stage through which deductive research would progress

1. Deciding a Hypothesis
2. Expressing the hypothesis in operational terms (i.e. indicating exactly how the variables are to be measured), which propose a relationship between two specific variables.
3. Testing the operational hypothesis, testing can be performed by conducting an experiment or any other form of empirical study i.e. in the current study the technique for empirical study used is questionnaire survey.
4. Examining the specific outcome of the inquiry (it will either confirm the theory or indicate the need for its modification)
5. Modifying the theory in the light of the findings.

Explaining Characteristics of Deductive Approach and the suitability and applicability to the current research

1. Search to explain causal relationships between variables
   Variables that are tend to be identified under current research are
   a. Demographic Variables: Age, Gender, Marital Status, Qualification, Occupation, & Income
   b. Portfolio of the investor in terms of various investment avenues. The percentage distribution of the various investment avenues indicating the inclination of the investor toward the instruments representing investment in secondary equity market.
   c. Experience in investing
d. General observation and opinion about the secondary equity market. The opinion is sought on various characteristics of secondary equity market.

e. Level of confidence exhibited by the investor while taking routine decisions and investment decisions.

f. Level of Intuitive Decision making while taking routine and investment decisions. The level is measured on 5 point likert scale on the basis of the statements ranked.

g. Level of Logical Decision making while taking routine and investment decision. In order to support and examine the WISDOM equation of Holistic Decision Making, it was important to consider the Logical aspect of decision making by the respondent.

h. Opinion of the respondents regarding the cultural factors forming the attitude of the investor toward secondary equity market.

i. Measuring the problems and difficulties faced by the respondent while investing in secondary equity market. Attitude of the respondent toward secondary equity market is greatly affected by the problems encountered. Attitude toward an object or idea is greatly affected by the problems encountered. People tend to form a negative attitude toward an object or idea if the process is difficult or when encounter too much problems while following the process.

2. With the help of variables identified, hypotheses are formed. Hypothesis are formed on the basis of expected relationship between the variables

Main Variables: Overconfidence, Intuition, Culture, Astrology and Numerology, problems Investing

Ancillary Variables: Experience in Investing, Demographic variables, Investment Profile

RM 3.5: Literature Review:

“Knowledge does not exist in vacuum, and your work only has value in relation to other people’s work. Your work and your findings will be significant only to the extent that they’re the same as, or different from, other people’s work and findings.”

Jankowicz’s (2000:159)

David N. Boote, Beile Penny (2005), defined literature review as “A thorough, sophisticated literature review is the foundation and inspiration for substantial, useful research. The researcher’s mentioned the criteria to evaluate the quality of dissertation literature reviews.”
Randy L. Joyner et. al. (2012) indicated “literature review as the In depth synthesis of the knowledge base of the research problem.” Chris Hart (1998) explained “literature review demonstrates the skills in library searching, to show command of the subject area and understanding of the problem; to justify the research topic, design and methodology.” Alan Bryman (2012) mentioned that “literature review enables a researcher to identify the work already done in the area of operation and to ensure that the researcher is not “reinventing the wheel”. The literature review identifies that are there any unanswered questions in the field of research and help the researcher understand can these questions be answered by further research.

Identification of the key words within the research topic acted as base for literature review also. The current research was initiated with the literature review of the concept of Behavioral Finance, the review helped understanding the concept of Behavioral finance. On reviewing the literature a basic understanding of the concept was developed. Behavioral finance is nothing but understanding the psychology of the investor in the investment environment or studying the behavior of the investor when investing in the market. Behavioral Finance rests heavily on the concepts of psychology, and various researchers and behavioral psychologists have done conceptual and experimental work in the field. Experimentation tried to explain the irrational behavior of the market and to develop theories and concepts to explain the irrationality of the market. Randy L. Joyner et.al (2012) suggested that “through literature review the researcher must identify the major concepts and ideas related to the phenomenon and then identify the sub concepts related to the major one.”

The study that initiated with the understanding of the concept of behavioral finance, on reading the literature major themes, ideas and theories were identified, and finally zeroed down in the basis of most worked and appreciated and the least discovered and talked off.

The Most appreciated were selected with the aim of proving its validity on the Indian Investors and least talked of as they were having great scope for further development.

On conducting the literature review, various behavioral heuristics were identified and acknowledged. The literature review also identified that the onus of such theories and experiments was on the foreign investors. The Indian counterparts are very less researched and understood.

Literature review helps in answering following questions
a. What are the key sources?
b. What are the origins and definition of the topic
c. What are the key theories, concepts and ideas
d. What are the major issues and key discussions of the topic
e. What are the main questions and problems that have been addressed
f. How is the knowledge on the topic is structured and organized

The literature review helps in justifying the worthiness of the research. The survey of the existing literature will identify that no previous work is done in the respective field and the research will generate good insight and fresh view to the society. The current research identified the peculiar characteristics of Indian Retail investors and applied the international theory of most talked of market anomaly of behavioral finance i.e. Overconfidence on the Indian Investors and tested the validity. Apart from the concept of overconfidence other anomalies studied were effect of culture, astrology and numerology and the least talked and discovered topic of Intuitive decision making.

Definition:

“The selection of available documents (both published and Unpublished) on the topic which contain information, idea, data and evidence written from a particular stand point to fulfill certain aims and express views on the nature of the topic and how it is to be investigated and the effective evaluation of these documents in relation to the research being proposed.”

Chris Hart (1998) mentioned “Literature review as an integral part of successful research.”

The review of literature helps in developing and building the mere topic to a fully fledged research by opening up the idea and identifying the areas of its applicability and

Randy L. Joyner et.al (2012) emphasized on “the organization of the literature review as it hold very important position as randomness of the literature review will be dubious and confusing. In the current research the literature review is arranged conceptually. All the studies reviewed were arranged on the basis of their commonality with a particular topic and then chronologically.”

Kothari (2004) suggested “two types of literature to be reviewed: the conceptual literature concerning the concepts and theories, and the empirical literature consisting of studies made earlier which are similar to the one proposed.”
Within the study, the literature review was conducted in phases as suggested by Kothari (2004). In order to build the concept about what is Attitude and what is the field of behavioural finance, concept builder papers and books were reviewed. The review done at this level helped as

a. Concept Builder: Attitude, what is attitude, how is it different from perception, Use of Attitude in different fields of management and psychology, how to study attitude in the field of Behavioural Finance?

b. Concept builder: Behavioural Finance, What is Behavioural Finance? How the field originated and the who were the major contributors in the field

c. The various theories and ideas that explained the field of Behavioural Finance.

d. Various behaviour theories of the Indian Investors

e. After reviewing the work done on Behavioural finance and the various heuristics and behaviour patterns of the Indian investors, selected few behavioural heuristics: Overconfidence, Culture, Intuition, Astrology and Numerology, problems to be studied specifically and the review if literature was done in relation to such ideas and concepts.

f. Since the study targeted to study the attitude of individual or retail investor toward secondary equity market, it was important to understand the forces that restrain the investor from investing in the market. Literature was reviewed to understand the various forces that restrained investors from investing in secondary equity market.

g. Later reviewed the literature on the pattern of investment exhibited by the various investors and especially the FII’s, Mutual Funds and Retail investors

**RM 3.6: Pilot Testing**

Jennifer M. Rothgeb (2008), defined “Pilot tests as the "dress rehearsals" of full survey operations that are implemented to determine whether problems exist that need to be addressed prior to putting the production survey in the field”. Gillian A. Lancaster et. al. (2002), indicated that “a well-conducted pilot study, giving a clear list of aims and objectives within a formal framework will encourage methodological rigour, ensure that the work is scientifically valid and publishable”
Objective of the Research

The main aim of a research is to find what is hidden and to explore the answers to questions through the application of scientific procedures. Research theories on the basis of the specific purpose fall into one of the categories identified. The major broad groupings for classifying research on the basis of their specific purpose

a. Exploratory / Formulative Research: Further exploring any idea or theory with the purpose of adding more insights to it.

b. Descriptive Research: Such research tries to portray accurately the characteristics of a particular individual, situation or a group on the basis of a particular trait, behavior, perception or attitude about an idea or event. The concepts and theories used are pre-established, what is different or what is researched is studying their applicability on different individuals or group.

c. Diagnostic Research: Identifies with the frequency of occurrence of events and their association

d. Causal Research: As the name explains the research studied relationship between two variables or behaviors, trying to establish a cause and effect relationship. The other term used to define such research is Hypothesis testing.

The causal research can also support descriptive research, and formulate cause and effect relationship among the different behaviors.

The current research gains the characteristics from Descriptive and Causal research. Few of the research questions are answered by the concepts and theories gained from Descriptive research while few questions are answered by the relationships studied in Causal relationship. The research tried to study the perception of the Indian retail investors, the group is selected as the residents of India and the concepts and ideas of already existing within Behavioral Finance are applied to the group and the applicability is studied. The characteristics of Indian retail investors are studied with reference to while investing in secondary equity market. The study also tried to explore the relativity and associativeness and to establish cause and effect relationship between few peculiar characteristics of Indian individuals. The applicability of such peculiar characteristics is studied with reference to investment decision making. The associativeness among Intuitive decision making, usage of astrology and numerology and investing with special reference to investing in secondary equity market.

Inductive: The researcher collects data and form a theory on the basis of that data
The deductive approach is owes more to positivism and the inductive to naturalism.

Epistemology and Methodology: The term epistemology comes from the Greek word epistêmê, their term for knowledge. In simple terms, epistemology is the philosophy of knowledge or of how we come to know. Methodology is also concerned with how we come to know, but is much more practical in nature. Methodology is focused on the specific ways -- the methods -- that we can use to try to understand our world better. Epistemology and methodology are intimately related: the former involves the philosophy of how we come to know the world and the latter involves the practice.

Various hypotheses are formed and the relationship among the various factors and demographic characteristics are studied and the relationships are explained.

The study conducted Descriptive or Ex post facto research, the technique indicates the relationship between the variables (existed in past and currently running), with having no control over the variables. Same as the theory suggests the study used survey method, including comparative and correlational methods to study the relationships. The research also gained input from Attitude or opinion research i.e., research designed to find out how people feel or what they think about a particular subject or institution is also qualitative research. The current study is studying the perception of the Indian retail investors. Qualitative research is especially important in the behavioral sciences where the aim is to discover the underlying motives of human behavior. The research aimed at identifying the underlying behavioral traits in terms of overconfidence, intuition, culture and astrology and numerology over investing. Other aspect analyzed is to discover the factors responsible for keeping the investors away from investing in secondary equity market. The problems and the difficulties act as a roadblock to the investment process. It is the human nature to shy off from the activities which are difficult, even if he tries and again encounter with problems in the process, the perception turns out to be more favorable to the negative scale, so a conclusion can be drawn that more the difficulties and problems encountered by the investor more will be the negative perception related to the market.

The quantitative data research approach is categorized further into three different approaches:

Inferential The process is to collect data from the technique of survey collection on a particular sample assumed to be a true representative of the population, and from the data through thorough analysis inferences
are drawn about the population. The researcher exerts no control over the variables and the variables are studied in the true environment

The current research follows the same approach for the data collection and analysis

**Experimental** The variables under study are under the control of the researcher and are manipulated to study the effect of the variables in the manner they are desired to be studied by the researcher.

**Simulation** The technique involves the construction of an artificial environment within which relevant information and data can be generated.

The current research is a combination of qualitative and quantitative research, qualitative in the form as it attempts to study the behavioral traits of the individuals, during the initial phases of the research an effort was made to conduct personalized interview with the investors and tried to identify the specific characteristics. The nature of the interview was not indepth because of paucity of time and a general question about their experience with the secondary equity market was observed along their personal characteristics with regard to their level of confidence, usage of intuitive decision making and effect of culture on their investment decision. Later on the basis of the observation a general questionnaire was formed to study the characteristics of the population with the help of survey and using the traits of quantitative research.

Once the research approach is finalized, the next step in the process the identification of the research method and techniques. Research methods may be understood as all those methods/techniques that are used for conduction of research. Research methods or techniques, thus, refer to the methods the researchers use in performing research operations. The research can be conducted in three different types

a. Library Research
b. Field Research
c. Experimental Research

For the current study the most suitable research type is **Field Research**, as the general investors are to be questioned to identify their perception of the secondary equity market. Each research type has various methods of conducting the same.

**RM 3.7: Research Design**

Research Design is the conceptual structure within which research would be conducted.

“A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

Research Design acts as a blueprint of the entire process of research proposed to be conducted. Research design stands for advance planning of the methods to be adopted for collecting the relevant data and the techniques to be used in their analysis, keeping in view the objective of the research and the availability of staff, time and money. The process of research design involved the following design

(i) What is the study about?

(ii) Why is the study being made?

(iii) Where will the study be carried out?

(iv) What type of data is required?

(v) Where can the required data be found?

(vi) What periods of time will the study include?

(vii) What will be the sample design?

(viii) What techniques of data collection will be used?

(ix) How will the data be analysed?

(x) In what style will the report be prepared?

Research designs can be categorized as
(1) Research design in case of exploratory research studies: also known as Formulative Research Design. It includes formulating a problem for more precise investigation or of developing the working hypotheses from an operational. The main aim of the study is to explore new ideas and insights.

(2) Research design in case of descriptive and diagnostic research studies: Descriptive research studies are those studies which are concerned with describing the characteristics of a particular individual, or of a group. The research design was the most suitable as the study targeted to study the attitude of the retail investors residing in the NCR region toward investing in secondary equity market. The design in such studies must be rigid and not flexible and must focus attention on the following:

(a) Formulating the objective of the study (what the study is about and why is it being made?)

(b) Designing the methods of data collection (what techniques of gathering data will be adopted?)

(c) Selecting the sample (how much material will be needed?)

(d) Collecting the data (where can the required data be found and with what time period should the data be related?)

(e) Processing and analyzing the data.

(f) Reporting the findings

(3) Research design in case of hypothesis-testing research studies

Objectives act as the broad statements explaining the work to be done in order to achieve the research topic. After formulation of the broad statements, research questions are written to be more precise about the data which need to be collected and the method to be adopted to collect such data. Several methods like observation, questionnaires, interviewing, examination of records, etc. with their merits and limitations, are available for the purpose of data collection. Whatever data collection method is used it must be structured and free from bias. After finalizing the instrument, it is important to select the group or individuals from which the requisite information is going to be obtained. As census survey has its own limitations and drawbacks, it is advisable that with limited resources and paucity of time, a suitable sample with high representative of the population must be selected and after the data
collected it must be processed and analyzed. This includes steps like coding the interview replies, observations, etc.; tabulating the data; and performing several statistical computations and the last task is reporting the findings. This is the task of communicating the findings to others and the researcher must do it in an efficient manner.

**Detailed Discussion of the Descriptive research Design used by the study**

The Descriptive research design is initiated by formulating the research objective and questions, followed by the formation of the hypothesis to be tested, on the basis of the objectives set, the data on the basis of their usability was collected from different sources as Primary data (Through questionnaire) & Secondary data (Through websites, portals & research reports), the primary data collection technique of questionnaire was

**RM 3.7.1: Objectives and Research Questions: discussed at the end of chapter One**

**RM 3.7.2: Data Collection:**

In order to answer the research questions and objectives, it was important to collect the data to answer them. Depending on the type of the research questions a strategy was decided to collect the data.

First Objective: In response to the first objective set: To study the pattern of investment demonstrated by the participants of Indian Financial market

From the objective, various research questions were formed in order to probe further and to collect the precise data. The market participants studied were FII, Mutual fund and retail Investors. The research questions w.r.t. the first objective were

1. Studying the pattern of investment exhibited by the FII’s in the secondary equity market during the period of 1st March 2008- 31st March 2013
2. Studying the pattern of investment exhibited by the Mutual Funds in the secondary equity market during the period of 1st March 2008- 31st March 2013
3. Studying the pattern of investment exhibited by the Retail Investors in the secondary equity market during the period of 1st March 2008- 31st March 2013
4. Studying cause and effect relationship between the FII investment and stock market movement for the study period of
In order to answer the research questions, it was important to decide the technique to be used for data collection. There are two ways of data collection which can be used to answer the research question: Primary Sources and Secondary Sources

Primary Source data is the data gathered by the researcher on its own with the help of suitable technique. Primary data is the data generated to suit the requirement of a single research on the basis of objective and research questions. The data which is researched and used by the same researcher

Secondary sources are the published documents providing YoY series of data, websites providing the data sources and series.

In order to answer the research questions derived from first objective it was observed that the data was financial and time series data, it was difficult to gather data from primary source, it was advisable to use the secondary sources. In order to facilitate research, there are numerous websites and govt. agencies providing the data. The study also used these resources to a greater extent. The website and data sources used were like

a. Dbie.rbi.org.in
b. Yahoofinance,
c. Tradingeconomies.com
d. Worldbank.com
e. Moneycontrol.com
f. Bseindia.com
g. Sebi.gov.in
h. Amfiindia.com

From all the above mentioned sources the time series data with respect to the investment pattern of FII’s, Mutual fund and Retail investors was obtained. The data was processed with the help of suitable software like Microsoft excel and Eviews 7.0.

Other objective of research formed to study the behavioral biases of the retail investors, required another sources of data collections. The technique is direct collection of data as the objectives can only be answered when a retail investor correctly responded to the questions posed with the help of a suitable data collection technique. So the technique used was Sampling.
Sampling technique help the researcher to overcome the drawbacks of census method but yet generate most appropriate and acceptable results. Sampling technique provides a range of methods that enable the researcher to reduce the data needed after considering only a subgroup of the total population, not perfect but a generalized version of the conclusions can be suggested (but restricting to the subjects that were assumed to be analyzed). Henry (1990) argues that “sampling makes possible a higher overall accuracy than a census. Through time various sampling techniques have been evolved, these sampling techniques are on the derived to suit different research requirements and conditions.”

Sampling techniques can be segregated in two categories

![Sampling Diagram](image)

Under Probability sampling techniques like simple random, stratified, systematic sampling, cluster, and multi stage sampling techniques are used.

Under Non probability sampling Quota, Purposive, self selection, Convenience, and Snowball sampling technique are used.

Out of the total sampling techniques the technique used for the study was Snowball Sampling under the Non Probability sampling technique. Snowball sampling technique is the process of identification of a second series of respondents, with the help of the first series of respondents identified by the researcher. The technique is also known as the Chain referral sampling. The technique was only used to generate referrals as there were no particular criteria for selecting the first series of respondents.

Apart from using this sampling technique, social networking site Facebook was used to generate sample.
Steps in Sample Design

a. Type of Universe: Universe defines the set of objects, to be studied. Under the current study the set of object was finite population.

b. Sampling Unit: Could be a geographical unit and/or social unit. In case of present study the sampling unit in terms of geographical unit was the region of Delhi NCR and the respondents who resided in the area were considered, in terms of social unit the unit selected was an individual as the study was intended to study the retail investor’s attitude.

c. Source list: It is the source of obtaining the details of the sampling unit. Under the study the main source list was through the referrals and the facebook contact list of self and friends.

d. Sample Size: How many units to be reviewed is a big question in front of the researcher. The size of sample should neither be excessively large, nor too small. It should be optimum. An optimum sample is one which fulfills the requirements of efficiency, representativeness, reliability and flexibility. While deciding the size of sample, researcher must determine the desired precision as also an acceptable confidence level for the estimate. Since the study was conducted with the help of two types of data i.e. Primary & Secondary. The sample size was discussed separately for different data type. First the study discussed the sample size and nature of the participating series for the secondary data.

Secondary Data:
The series included the time series used in various analysis:

a. Data series for Establishing long term relationship between S&P BSE Sensex and CNX Nifty

The analysis included the two series that indicated the performance of the market i.e. The S&P BSE Sensex and CNX Nifty. The two time series indicated the closing price of the movement of price / return of the Indian stock market. The series can be used in the same format given but Verma Jayanth (2006) indicated that “returns on the two indices could be computed in percentage change terms or can be defined logarithmically as ln(\(\frac{I_t}{I_{t-1}}\)) where \(I_t\) is the value of the index on day \(t\)”. The author under the study identified “logarithmic return was approximately the same as the percentage change in the index on day \(t\) \(\frac{I_t - I_{t-1}}{I_{t-1}}\); the author suggested that the logarithmic returns were preferred in the finance literature.
mainly for econometric reasons as they are more nearly normally distributed than the percentage changes”.

In order to study the relationship among the indices, it was important to calculate a variable which commonly measured performance of the indices. The variable was decided to be the return associated with the two indices. As it was decided to apply econometric analysis, it become essential to calculate the return as suggested by Verma,

i.) The study studied the two indices S&P BSE Sensex and CNX Nifty for the period of 5 years starting date 1st March 2008 – 31st 2013 on daily basis. The initial objective was to identify the degree of Cointegration among the two indices, in order to indicate that whether the two indices would move in the same direction in the long run relationship.

ii.) Daily closing data of the two indices was obtained from the respective website of BSE (http://www.bseindia.com/indices/IndexArchiveData.aspx) and NSE (www.nseindia.com/products/content/equities/.../historical_index_data.ht). On obtaining the data and on analyzing the two series of the Index closing. Few of the discrepancies were obtained on the availability of the data for a particular date. So the first task in the analysis was to remove any discrepancy in the data on the basis of date. All efforts were done to find the missing information on either one of the index for the missing date. If unable to obtain the data, so in order to maintain the uniformity, the date with the missing data were removed from the series. The analysis included Descriptive of the two series S&P BSE Sensex and CNX Nifty.

iii.) Next process was computation of the return within the two series. As suggested by Verma, the returns of the two series were computed on the basis of their Log returns. There are two ways of obtaining the return. Either Compute the log of the two series and then take the difference. Or first take the ratio (not difference as the log for the negative value cannot be computed as the natural logarithm function ln(x) is defined only for x>0) of the two series and then take the log the value obtained. As suggested by H. Kaur (2004),

\[ R_{Sen} = \ln \left( \frac{CS_t}{CS_{t-1}} \right) \]  
Eq1

Where \( CS_t \) : Closing Sensex at time t (Today)
\( CS_{t-1} \): Closing Sensex at time t-1(Previous Day)

\( \ln \): Natural log
Return on the Nifty series was obtained by the same formula.

Or

The other method of obtaining the return was to first take the log of the two series
\( \ln(\text{CS}) : \) Natural log of the Closing Sensex \( t \) (where \( t = 1, 2, 3 \ldots 1256 \)).

1256 was the total number of observation obtained of the two series after removing the discrepancies.

\[ \text{RSen} = \ln \text{CS} _{t} - \ln \text{CS} _{t-1} \] \hspace{1cm} \textbf{Eq2}

The analysis began with the analysis of return of the two time series of the indices. The return was computed according to the \textbf{Eq1}. Initially the graphical analysis of the two series was conducted

Graph: Fama’s (1965) observation that stock returns exhibit volatility clustering where large returns tend to be followed by large returns and small returns by small returns leading to contiguous periods of volatility and stability. Later the study conducted the Johansen Cointegration test to establish long term relationship followed by Granger Causality Test to establish cause & effect relationship among the two series.

\textbf{b. Data Series to study the factors responsible for the movement in Sensex}

i.) Daily data of “BSE Sensex” The duration of the study was 5 years done on daily basis 1\textsuperscript{st} March 2008-31\textsuperscript{st} March 2013.

ii.) The study was done on Interday Difference i.e. the Opening and closing values of the Sensex for the same day.

- Opening - Closing = Positive: market fell and lost few points
- Opening - Closing = Negative: market rise and gained a few points
- The market was studied at both levels positive and negative

\textbf{c. Data series to study the pattern of investment of different market participants}

The investment pattern exhibited by different agencies can be studied by different methods like

\textbf{I. In terms of Foreign Institutional Investors}

a. The Number of FII registered with the regulatory authorities during the study period of 10 years (2003-2013) studied on yearly basis

b. The increase or decrease in the number of transactions performed by the FII’s during the study period (2003-2013) studied on daily basis

c. The increase or decrease in the Net investment (Purchase - Sales) during the study period (2008-2013) on daily basis.
II. **In terms of Mutual Funds**
   a. The schemes for analysis were selected and studied on the basis of the classification given in the AMFI (Association of Mutual funds of India).
   b. The increase or decrease in the number of schemes offered by the different fund houses during the study period of 10 years (2003-2013) on yearly basis.
   c. The increase or decrease in the corpus of investment made by the fund houses during the study period of 10 years (2003-2013) on yearly basis.
   d. The Net investment made by the fund houses in equity market studied over the period of 5 years (2008-2013) studied in daily basis.

III. **In terms of Retail investors**
   a. Proportion of investment in Financial Assets and Physical assets during the study period 10 years.
   b. Proportion of investment made by the Household investors in terms of shares and debentures.

IV. Apart from studying the investment pattern of investors separately, an effort was made to study the interrelationship among the different investors. Do the different investors affect or cause the performance of other investors. The two investors studied for the purpose were FII and Mutual Funds.

- **FII & Sensex**

   For the purpose of the daily return on the Sensex, the series considered as the raw data was

<table>
<thead>
<tr>
<th>Series tested (Raw)</th>
<th>Duration (Study)</th>
<th>Series Computed (Return)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FII Daily Data</td>
<td>March 2008-2013</td>
<td>Return FII = Net FII purchase - FII sell</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Sensex Daily Closing Price</th>
<th>Return Sensex =</th>
</tr>
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<tr>
<td>March 2008-2013</td>
<td>Closing Price / Closing Price t-1</td>
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</table>
FII & Mutual Fund
The causality among the two institutions was studied on daily basis and the series indicated the Net investment made by both the agencies was studied. The study period was 5 years (1st March 2008- 31st March 2013). The data was matched on daily basis and removed the entries when the data was not available for any one of the institution.
Mutual Fund Net Investment = Gross Purchase - Gross Sales
FII Net Investment = Gross Purchase – Gross Sales

Mutual Fund & Sensex
Two series were used for the analysis, the daily net investment data of Mutual Funds (moneycontrol.com) and the daily closing value of Sensex for the study period of 5 years. The study observed 1281 observations used for the analysis. The net investment series were used for the analysis rather than NAV as the market do not indicate the total NAV (Net asset value) value of all the equity schemes taken together, but the data was available for the net investment made by the mutual fund for a particular day in totality. Though the value of NAV indicates the effect of stock market movement, but in the current study the net investment made by the Mutual fund in the secondary equity and the impact was studied on “Sensex”.

Primary Data
The study considered 650 respondents for collecting responses. The study observed a response rate of 84.5%, making the respondents to be 550, out of which the usable 43 were unusable because of non disclosure of demographic details, investment details, and the rating of the statements were unusable. The number of respondent count finally came to 507 to be used for analysis made the effective response rate to 78%.
After determining the appropriate level of sample size, the next important task was to identify the most appropriate tool to collect the information as desired by the study objectives. In the field of research methodology, different research types require different data collection tools. There are several methods of collecting primary data, particularly in surveys and descriptive researches. Important ones are: (i) observation method, (ii) interview method, (iii) through questionnaires, (iv) through schedules, and (v) other methods which include (a) warranty cards; (b) distributor audits; (c) pantry audits; (d) consumer panels; (e) using mechanical devices; (f) through projective techniques; (g) depth interviews, and (h) content analysis. All the methods of data collection have their own pros and cons, and the tool of data collection must suit the requirement of the study and should meet the three criteria of: Time, Effort & Money.

The study adopted the tool of Questionnaire survey. Questionnaire is a technique of data collection in which the standard set of question is framed with no ambiguity and the questions follow a particular sequence of. The type of questions can be both open ended and close ended. Before formation of the questionnaire, it was important to consider the data which need to be collected from the respondents. On the basis of the type of data to be collected, the format and type of question is decided. Next is to consider the way in which the data is going to be measured. By measurement it is meant that the process of assigning numbers to objects or observations, the level of measurement being a function of the rules under which the numbers are assigned. Measurement is also important as only quantitatively measured data can be further analyzed through application of proper statistical technique. So while forming the questionnaire, While formation of the questionnaire, a background work on the scaling and rating techniques is very important. While collecting the data, two types of data can be observed: Exact (height, weight, age, Income etc.) and Abstract (Level of Confidence, Intuitive ability, degree of problem faced etc.). A questionnaire may possess questions based on data with both these types of features. So in order to measure the data with these features, it is important to devise some form of scale in the range (in terms of set theory, range may refer to some set) and then transform or map the properties of objects from the domain (in terms of set theory, domain may refer to some other set) onto this scale. Nominal, ordinal and rating scales were used to measure the responses. According to Dillman (2000), distinguished between three types of data that can be collected through questionnaire

- **Opinion:** idea or thought (may differ based on the circumstances)
- **Behavior:** Actual performance by the respondent (in the past, current)
c. **Attribute: (Respondent’s Characteristics)**

Opinion variables record how respondents fell about something or what they think or believe is true or false. Data on Behavior and Attributes record what respondents do and are. When recording what respondents do, the researcher is recording the behavior of the respondent. Attributes are the things that the respondents actually possess (Dillman 2000). The attributes are used to explore how opinions and behavior differ between respondents as well it enable the researcher to check that the data collected is the true representative of the population. Attributes include characteristics such as age, gender marital status, education, occupation and income.

Based on the classification suggested by Dillman (2000), the questionnaire initially targeted on the collecting information regarding the attributes of the respondents

Demographic Profile included questions on.

1. Age: Ordinal
2. Gender: Nominal
3. Marital Status: Nominal
4. Educational Background: Nominal
5. Occupation: Nominal
6. Income: order

The questions on demographic profile are suggested to be closed ended questions as the information is required to fall in a particular category as it is a factual data and the respondent’s view point and idea cannot create different options. The categories are made on the basis of and the respondents were required to furnish the details.

**Demographic Profile**

Initially it was important to study the Demographic profile of the investor of the investor. The demographic profile of the investor was studied on following factors

a. Gender
b. Age
c. Marital Status
d. Educational Qualification
e. Occupation
f. Income

On the basis of observation, convention and general environmental factors, the above demographic variables were classified in following categories

**Demographic Variables:**

The initial method of studying the attributes of the sample or the initial explanation of the subjects under study was observed to explain the subjects according to their demographic profile. Retail investors are the individual investors investing the market, so it becomes important to draw the demographic profile of the investors. An effort was made to represent the sample with the individuals encompassing respondents with the representation with all the types of demographic characteristics.

The first variable studied under demographic characteristics was **Gender**. The respondents were segregated on the basis of their Gender i.e. Male & Female.

a. Male
b. Female
Upon observing the data, out of the total 507 usable responses, Male represented 66.9% (339) of the respondents with female represented 33.1% (168). A good representation of both the gender classes was obtained, tried to obtain the equal representation but was able to achieve 30% responses from the female respondents.

**C 1.17: Gender Wise Distribution of the respondents**

![Gender Distribution Chart]

Next the characteristics of the respondents were studied or the respondents were segregated on the basis of their Age. The individuals below 18 years of age were not considered for analysis only the adult individuals even falling in the category of the students were studied. Age is considered to be a major influence in the formation of attitude toward the stock market, as aging individuals are considered to avoid risky investments. The main categories were

a. 18-25  
b. 26-35  
c. 36-50  
d. 21-65  
e. 65 & above

After collection of data on the above mentioned parameter, the two categories that majorly represented the population of the NCR region were the young generations that fall in the range of 18-25 and 26-35, these categories of investors were important to be studied as they are considered to be the active class, high earning and most importantly perspective investors. Out of total 100%, these two categories represented 67.5% of the respondents when combined. Among these two categories, the respondents in the age group of 18-25 were
26.6% (135), while the respondents in the age group of 26-35 were 40.8% (207), though these two categories represented the maximum population, but the other categories were not left behind, as observed in the culture of the area of study i.e. NCR (Delhi), even the individuals representing higher age group were also found active either in working as well as investing. 20.1% respondents (102) represented the age group of 36-50. During the survey the respondents falling in the higher age group i.e. more than 50 represented a total of 12% of the total sample, with 5.9% (30) & 6.5% (33) respondents in each category of 51-65 and more than 65 years of age. Through the 5th category, the survey studied the inclination of the senior citizens also (as they were found to be still working and earning). The category that represented the population of NCR region was the age group of 26-35.

**C1.18: Age Wise Distribution of the respondents**

Retail investors were then grouped on the basis of their Marital Status. On conventional terms they were categorized in two, in order to understand that whether the married individuals exhibited a different attitude toward the stock market or not.

a. Married

b. Unmarried
C1.19: Marital Status Wise Distribution of the respondents

The two sub groups under marital status indicated almost same percentage distribution, with married respondents were 54.4 % (231) and the unmarried respondents were 48.2% (276).

Another important demographic variable which could create huge impact on the attitude formation of the investor was identified to be their Educational Qualification. Four categories were identified. It is believed that an individual with higher educational level is more aware about the functioning, ways and modes of investing in the secondary equity market, so it was important to identify the education level of the respondents.

a. HSC / SSC (Higher secondary and Senior Secondary)
b. Graduate
c. Post Graduate (General)
d. Post Graduate (Professional)

C1.20: Qualification Wise Distribution of the respondents
As expected, the respondents that represented highest percentage in the category of Qualification were the Post Graduate (Professional), most of the respondents living in the NCR region were found to have Post graduate degree of Professional nature (MBA, MCA, CA etc.) with a percentage of 64.9% (329), simple graduate were the next category that represented the sample at 21.5% (109), followed by Post Graduate (General degree, MSc, MCom) with a percentage of 13.6% (69), the study was not able to identify the respondents to fall only in the category with only qualification of Higher Secondary / Senior Secondary. The study also revealed the fact that individuals preferred gaining a professional degree while doing post graduate rather than a simple post graduation.

The next demographic variable studied was the **Occupation** of the respondents. The category of occupation also involved the category of Students, as it was very important to understand the attitude of the student toward stock market as they can be considered as the prospective investors. It was observed during the initial analysis that in the Indian society and especially the people living in the NCR region, the retired individuals have adopted alternative means to work and earn, so it was important to understand their attitude also. Housewives though not earning but can act as major participants in the market, as the main input required for stock market investment is time and housewife’s though busy can contribute to the family but reaping profits from the stock market as they can devote a little more time than their working counterparts. Housewives should be targeted by the broking firms by expressing the dual benefits: Earn for self (regular update of the market) and Advisors to others (Commission earning).

a. Govt./ Semi Govt.  
b. Professional Practice  
c. Private Service  
d. Own Business  
e. Retired  
f. Housewife  
g. Students

The study did not concentrated on a particular occupation in order to study the attitude of the respondents, but the occupation prominently occupied most representation was Private Service, as the region under study is represented by corporate offices, so majority of the population was found working in the corporate offices. The respondents working in Private service were 42.2% (214), next the occupation represented second major part of the population were students and the students targeted were the students studying in professional program across different colleges and the percentage came out to be 29.6% (150). The students acted as an important input of analysis, as the students acted as perspective investors
and their attitude toward stock market would help understand the future prospect of the market. Understanding their attitude toward the problems encountered while investing in secondary equity market enabled formation of strategy regarding how to address the problems and how to avoid these problems to motivate the potential investors to invest in secondary equity market.

C1.21: Occupation Wise Distribution of the respondents

The next position was occupied by respondents employed in professional practice with 9.1% (46), only 5.3% (27) respondents owing own business could be contacted. During the survey it was also important to record the opinion of the Housewife’s and Retired individuals as the Housewife’s 4.1% (21) and retired individuals 3.6% (18) could be motivated to efficiently utilize the spare time by watching the market and making money out of market movement. The individuals employed with Govt. /Semi Govt. agencies occupied 6.5% with 33 respondents. The survey mainly relied on the employees working in the private sector and the students pursuing their professional degree.

Next demographic variable studied was considered as the base of investment activity i.e. the Income of the individual. Income holds the basis for making conducting investment activity. Among the classification minimum income considered was No Income as the study also involved study of the attitude of the students also. For the maximum limit the amount of 15 lac & above was considered as the organizations located in the NCR region are the corporate headquarters and the individuals earning corresponded with the type of organization. Individuals residing in tier II cities are earning less than tier I cities and NCR is the Tier I city.
In the NCR: Delhi region great variation was seen across income level, and since the area was crowded with the corporate offices, so the survey was able to capture the essence of all the income levels. The category occupied the maximum percentage was the income class of 3-5 lac with 32.5% (165) of the respondents, but with no major difference the next income class with stood respondents with income 5-10 lac were close behind with 28.4% (144), the study was able to generate responses from employees working at the lower and middle level management, “No Income” representing the students were 19.5% (99), all the students did not fall in the category of no income, as few of the students were found to be simultaneously studying and earning. The study was also able to generate responses from individuals earning 10-15 lac with 6.7% (34) and More than 15 lac 5.5% (28).

**C1.22: Income Wise Distribution of the respondents**

![Annual Income Chart]

The respondents with less than 3 lac represented 7.7% (39) of the population, the respondents with income less than 3 lacs were considered as novice and their attitude was also important to be influenced and studied.

Another set of questions that were formed or were targeted to the respondents were the Questions or the statements formed to gain an insight about the Psychology, Behavior and opinion. The statements were formed to judge the attitude of the respondents toward secondary equity market. Since the questions seek the opinion from the respondent, so instead of a questionnaire, the instrument now
becomes an “Opinionnaire”. In social science studies, while measuring attitudes of the people, researchers generally follow the technique of preparing the *Opinionnaire* (or attitude scale) in such a way that the score of the individual responses assigns him a place on a scale. Under this approach, the respondent expresses his agreement or disagreement with a number of statements relevant to the issue. While developing such statements, the researcher must note the following two points:

(i) That the statements must elicit responses which are psychologically related to the attitude being measured;

(ii) That the statements need be such that they discriminate not merely between extremes of attitude but also among individuals who differ slightly.

Various types of rating scales are exiting in the field of research. The researcher on the basis of its suitability selects a particular type of scale.

The study found Summated scales (or Likert-type scales) are the most suitable scales developed by utilizing the item analysis approach wherein a particular item is evaluated on the basis of how well it discriminates between those persons whose total score is high and those whose score is low. In the scale the respondent is asked how strongly they agree or disagree with a statement or series of statements usually on a four, five six or seven point rating scale.

The questionnaire was further divided on the basis of the questions based on Behavior and Opinion. In order to record the Investment behavior of the respondent, two questions were asked.

**Actual Behavior**

a. **Experience in Investing**: Since how long the respondents are involved in the process of making investment

b. **Investment Portfolio**: the question was formed in an effort to gain insight of the investment avenue i.e. the actual behavior of the respondent while making the investment and In what type of securities / investment avenues the respondent had made investment.

Few of the behavioral traits are such that a direct question may not generate correct and genuine response. So in order to gain insight about the Level of Confidence and role of Intuition, usage of astrology and numerology were asked with the help of scales. The Next task was to frame statements to seek the Opinion of the respondent about investing in secondary equity market and the anticipated behavior of the respondent under different personal and market conditions while investing in secondary equity market. A separate question was formed to seek the opinion of the
respondents regarding the restricting factors i.e. the reason behind not investing in secondary equity market.

RM 3.7.3: Pilot Testing:

The purpose of pilot test is to refine the questionnaire so that the respondents will have no problems on answering the questions and there is no problem in recording the data. Further it will enable the researcher to check the validity and reliability of the questionnaire. The researcher must ask an expert, researcher or group of researchers to test the content validity (Mitchell 1996).

For the study, the Content validity was examined by sending the questionnaire to the experts, and pilot testing was done on 45 respondents. The questionnaire was administered through the website of surveymonkey.com, google drive / forms, and personally. After collecting the responses from the respondents, few loopholes were found in the questionnaire and also the respondents found the questionnaire to be lengthy, as the last statements were found to be unanswered.

For the hard copy questionnaire in order to avoid the feel of lengthy questionnaire, the format seems to be lengthy was also changed. The problems relating to the content, wording, layout, length, instructions, or the coding were resolved in the pilot study and were amended accordingly. Baker (1994) noted that “a pilot study is often used to pre test or try out a research instrument, he found out that the sample size of 10-20% of the sample size of actual study is a reasonable number of participants.”

RM 3.7.4: Final Testing:

After conducting the pilot testing, few of the problems identified were sorted out and the questionnaire was launched for final testing to the 650 respondents as initially decided. The questionnaire was distributed through in hard copy, mailed and distributed through social networking sites. After collecting the responses, on the usable 507 responses with a rate of 78%, the analysis was done with the help of suitable software: Microsoft Excel and IBM SPSS & AMOS V. 20.

The responses were sorted and coded in Microsoft excel and SPSS as per the requirement of the software. The missing data was treated and was assigned a value different from that of the conventional and expected responses.
RM 3.7.5: Analysis and Interpretation:

The analysis in the study was done at two stages on the basis of the type of data collected. The data collected indicated two nature: Time Series Data and ordinal, nominal and scaler data. The data collected in the form of time series was obtained from secondary sources, while the nominal, ordinal and scaler data was of primary nature and collected through questionnaire.

i.) Analysis of Secondary data

The analysis of the secondary data with the nature of time series was analyzed with the help of the software of Eviews 7.0, and the techniques used for the analysis of data were

a. To test the stationarity of data the study used Augmented Dickey Fuller Test
b. In order to establish the long term association between the two time series variables like value of Sensex and Gold Rate, Johansen Coinetgration Test was used, followed by Granger causality Test to establish the direction of cause and effect relationship. The techniques were applied when the data was cointegrated to the same degree
c. Wald test was used for the time series variables when the variables were not cointegrated to the same level.

ii.) Analysis of Primary Data

Once the data was coded and sorted in the software “MS Excel”, for further analysis the data was introduced in the software of SPSS 19.0, the analysis of the data was done with the help of various statistical tools available in the software. The range of techniques used for analysis were from the simplest form: studying the Descriptive statistics of the respondents, testing the validity of the entire questionnaire and constructs used in the questionnaire through Cronbach alpha, testing the normality of data through one sample Kolmogorov-Smirnov (KS) test, tested the data for sampling adequacy for factor analysis through KMO (Kaisen Meyer Oklin) test, studied the difference in variance with the help of different sets of ANOVA analysis (to study the variance among different groups), once the respondents indicated difference of opinion when categorized on the basis of different variables, in order to understand how one group was different from other Post Hoc analysis (LSD) was also conducted. Along with the techniques initially decided other techniques were also used as the necessity aroused.

After conducting the analysis, the test results were interpreted and the relevant suggestions were made separately to the investors, broking houses and researchers.
Limitation of the Study

1. The study was confined only to Delhi NCR, the residents of the area participated in the survey, so the research cannot be generalized.

2. The research was restricted to English reading respondents, the perception of the Hindi reading respondents cannot be collected as the questionnaire was designed in English.

3. Although there are various agencies participating in the Indian stock market like FII’s, Mutual funds, Insurance Agencies, Government Institutions, HNI’s and retail investors, studying the pattern of investment of all the agencies would have made the thesis complex and a bit deviation from the main objective. Paucity of time also influenced the decision of selecting a few agencies than studying all the agencies together. The agencies selected for study included FII, Mutual funds and retail investors. As the basic objective of the thesis was to identify the retail investor’s attitude toward the secondary equity market and during the initial exploratory research it was identified that the retail investors decision of investing in secondary equity market is greatly affected and influenced by What the Big Agencies are doing and among those big agencies most prominent one’s were the FII’s and mutual funds. So the study was only restricted to study the pattern of investment followed by the FII’s and Mutual Funds along with the pattern of investment exhibited by the retail investors.

4. In order to be precise and to concentrate, it was necessary to fix the duration of the study. As it was necessary to fix a base year and the extent of expansion. For the secondary data analysis, the duration of the study 10 years started from April 2003- March 2013.

5. Behavioral finance theory had identified various behavioral heuristics explaining the irrationality of the investor. Because of the limited resources and time all the heuristics cannot be covered and studied.

6. Respondent’s attention is of utmost important while they answer the questionnaire. The length of the questionnaire was tested by forming different length questions. The numbers of questions were limited to the extent the interest of the individuals is maintained and are answered with interest and not vaguely.

7. For the analysis planned, the investors were categorized in three categories based on their exposure in the investment environment. Few assumptions were made to restrict the number of categories of investors. The study did not considered dual representation if invested in different investment categories, the respondent were included in one category at a time, if invested in Fixed and Indirectly: moved to upper category as Indirect investment, when exhibited indirect and direct exposure, the respondent was included in direct exposure. The
study could be extended by taking a combination of the investment avenues and could develop further categories.

8. The option of selecting dual occupation was not provided in the online questionnaire, so if the respondent was occupied in two occupations mentioned only one and that too on personal bias.

9. Few discrepancies in the data provided could not be confirmed as in the questionnaire the contact details were not made mandatory, as during pilot study the respondents were willing to disclose their investment details only when they were allowed to not disclose their contact details.

10. The WISDOM equation or the Intuition theory developed needs a naturalists approach to be followed, which is going to be conducted as Post Doctoral Work. Separate questionnaire to judge the Intuitive ability of the investors and studying the acumen in the filed used for the investing activities.

11. The study only observed the news articles published in the Times of India and Economic times, Help was taken of the other news sites when the times did not declared justifiable data.

12. The factors identified were on the sole observation and self analysis of the researcher i.e. me, effort was made to justify the movement and identification of the factors created the market volatility.

13. The study only focussed on the volatility experienced by the market during the study period of 5 years (1st March 2008 – 31st March 2013).

14. The assumption made of the factors to create same volatility across the two indices i.e. S&P BSE Sensex and CNX Nifty were same, because of their high degree of relative performance may not be valid. But there is always a scope of factors to be studied separately.

15. The analysis did not considered the time duration volatility created by the factors i.e. for how long the same factor created volatility.

16. The analysis was conducted in theoretical format of identification of the factors affecting the stock market movement and studied the volatility created. The analysis did not included quantitative analysis of the variation caused. One reason behind was that for many factors quantitative details were not generated.
17. Does the same reason or a combination of reason cause same volatility every time or its different.

18. Estimation can be made regarding the number of days before the investors start for profit booking. Further the psychological barrier in the mind of investors can be studied, the barrier that the investor create a about the maximum price that a share can attain.

19. The study could be extended to further more 5 years, so that the results can be more justified.

20. Studying the rates of gold during the period of fluctuation in Sensex, establishing a link between the two.

21. Further the fluctuation intraday can also be studied. Identifying the factors responsible and identifying a similarity or conflict exists among the Interday and Intraday factors.

22. Simultaneous increase and decrease within a series of days can also be studied.

23. As the current study through the observation indicated a strong link between the Global Bourses and the Bombay Stock Exchange, the study can be extended by establishing a link between the different bourses and finding the closest link.

24. Daily transactional analysis of retail investors as done for FII and Mutual funds in order to study the pattern of investment was not able to be conducted because of unavailability of the data on the transaction done by retail investors.

25. Demat account holding data presented no clarity about the type of investor involved i.e whether Individual, HNIs, or NRI’s, so the analysis was restricted to generalized analysis.