Analysis of Investment Behaviour with Reference to Retail Investors of Ranchi in Indian Stock Market

Synopsis of Doctoral Thesis submitted
In partial fulfillment of the requirements for the award of the degree of

DOCTOR OF PHILOSOPHY

In

MANAGEMENT

BY

Jyoti Kumari
(13JU11300010)

Under the guidance of

Research Co-Supervisor
Dr. Sanjay Kumar Thakur
Head, Treasury Product Control
The Saudi Investment Bank,
Kingdom of Saudi Arabia

Research Supervisor
Dr. Sukanta Chandra Swain
Professor
ICFAI University Jharkhand,
Ranchi, India

ICFAI UNIVERSITY JHARKHAND
RANCHI

January 2017

Introduction:

Despite the fact that India's GDP has increased 5.5 times from $414 billion in 2001 to $2263.52 billion in 2016, the development of the capital market has been bumpy and its penetration has been inadequate. For instance, only 1.7% of Indian population is having Demat Accounts (a measure of direct participation in the stock market) as against 17.7% in USA, 16.4% in UK, and 9.4% in China. Although there is a surge in the number of Demant Accounts in India in recent years, the same trend has not been reflected in the number of active Accounts. Also, the total number of active stock exchanges across India has reduced from 16 at the start of the decade to four now, including two national exchanges, namely The National Stock Exchange of India (NSE) and Bombay Stock Exchange (BSE). Moreover, National Stock Exchange's share of total turnover across stock exchanges has surged dramatically from 61.53% in 2001-02 to 92.52% in 2014-15. Apart from NSE and BSE, the only two stock exchanges that are active are Calcutta Stock Exchange and Uttar Pradesh Exchange. Almost 80% of the NSE's turnover in India continues to come from the top five cities of Mumbai, Delhi, Kolkata, Ahmadabad and Chennai. In fact, Mumbai accounts for more than half the total NSE turnover at 55%; whereas Delhi, contributor of the second largest turnover has a market share of 14.97%. In such context, it wouldn't be difficult to ascertain about the contribution of a city like Ranchi. However, India having one of the highest savings rate in the world, city like Ranchi has potential to increase its contribution in the Indian capital market. However, it is important to study thought processes and perceptions, challenges and bottlenecks i.e., investing behavior of the investors of this city. The Study is confined to the retail investors based at Ranchi (India). Mostly trading houses have Depository Participant (DP) accounts along with trading accounts. However, some other organizations like banks too provide DP account facility. Therefore, the study although mostly considers the retail investors trading through trading houses; it has also been extended to include retail investors of Indian stock market who don't trade through trading houses. On the basis of holistic behavior of the investors, risk tolerant score of each investor has been ascertained, clustered in three categories - Investors with High Risk Appetite, Investors with Moderate Risk Appetite and Investors with Low Risk Appetite; and suggestions are given to stretch the depth of investment. Moreover, in order to elongate the incidence of retail investment in Indian stock market, non-investors have also been studied to find why they don't go for investing on equity.

Although from various studies it has been established that percentage of population investing through shares are very less, but most of the people gets directly or indirectly affected by stock prices movement. For example, suppose ‘A’ does not prefer investing directly into the stock market, but he has a private pension fund. His pension fund will get invested into stock market. And if market is seeing a downtrend from longer period, his pension fund will also get reduced. A genuine question corps up in anybody’s mind that ‘In spite of having high level of bearings with all facets of economic activities, why investment in Stock Markets by retail investors of India is so low?’ It is probably because of risk involved in such investment, ascertaining risk with no or little information and improper rating of risk tolerance capacity of retail investors. Each retail investor has his or her own tolerance of and attitude towards risk so that an investment considered ‘high risk’ by one investor may be considered ‘low risk’ by another investor. Thus assessing investors to their appropriate risk tolerance category and accordingly devising the most suitable strategies to them for investment in stock market has been emerged as the most transparently visible task of the researchers.

A person who purchases securities with the expectation of financial returns is known as an investor. Purchase of securities by an individual for his or her own personal account rather than for an organization is known as retail investment. Typically, the retail investors trade in much smaller amounts than the institutional investors. A retail investor can buy securities directly from the companies issuing those (Through IPOs in Primary Capital Market) or can buy securities from the existing investors through the Depositories, i.e., the stock markets (Secondary Capital Market). The scope of this study is confined to Secondary Capital Market.

An investor may be interpreted as an individual who; a) has purchased securities long back but not active now, b) has been trading securities regularly and c) has just recently purchased securities. For this Study, as referral sampling has been followed to pick up the investors, the respondents selected are active in investment in Indian Stock Market during Study period irrespective of whether they are first timer or regular investors.

There are four ways through which retail investment takes place. Those are;

- Individuals invest of their own

- Through retail brokers (act as per the direction of individual investors)
- Through Managed Accounts (whereby the account manager makes the buy and sell decisions for the individual), and
- Through Investment Clubs (groups of people who pool their savings to make investment).

While approaching the respondents of this Study, the first two ways of retail investment have been considered.

Research Design:

Framework of this research is presented below.

Identification of Research Problem through Literature Survey ⇐ 21 Existing Literatures have been studied

⇓

Identifying the Topic of Research ⇒ Analysis of Investment Behaviour with Reference to Retail Investors of Ranchi in Indian Stock Market

⇓

Setting the Objectives & Scope ⇒

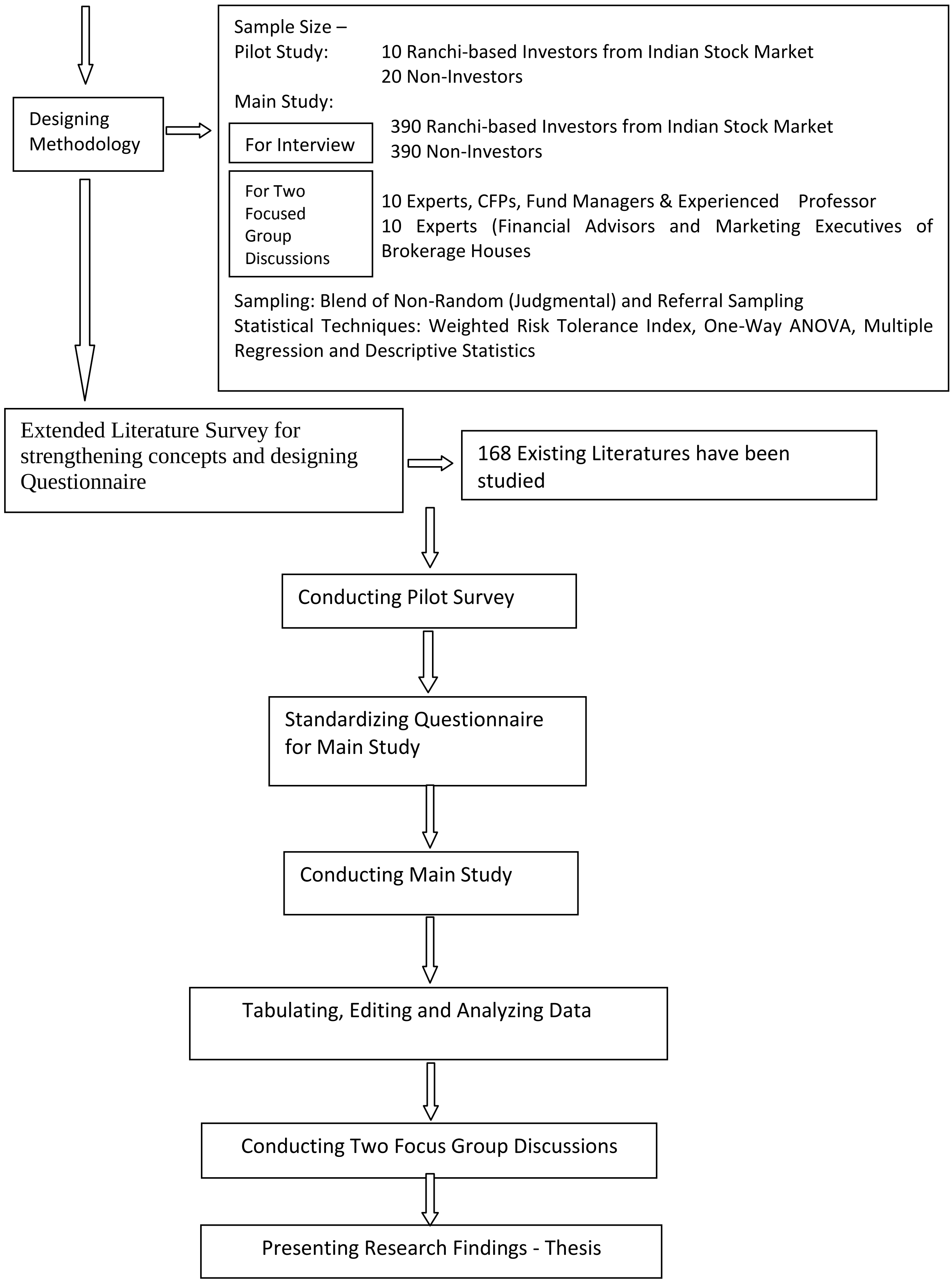
- Scope – Ranchi based Investors and Non-Investors of Indian Stock Market
- Objectives –
    - To trace pattern of investment of retail investors
    - To develop risk appetite scores for retail investors
    - To Map risk appetite scores of investors vis-à-vis Demographic Profiles
    - To devise strategies (cluster-wise) for stretching the depth of retail investment
    - To unfold why non-investors don't prefer to invest on equity

⇓

Developing Hypotheses ⇒

- The pattern of investment by the respondents (investors) is not influenced by the risk involved in the avenues of investment
- Weighted Risk Appetite Scores of the respondents are not reasonably high
- Demographic Profile does not influence risk tolerance of the respondents
- Same set of strategies for all respondents as there is no base for clustering them
- Variables identified are not the causes of not preferring investment on equity by the non-investors (respondents).

⇓


Sample Size –
Pilot Study: 10 Ranchi-based Investors from Indian Stock Market
20 Non-Investors
Main Study:
For Interview
390 Ranchi-based Investors from Indian Stock Market
390 Non-Investors
For Two Focused Group Discussions
10 Experts, CFPs, Fund Managers & Experienced Professor
10 Experts (Financial Advisors and Marketing Executives of Brokerage Houses
Sampling: Blend of Non-Random (Judgmental) and Referral Sampling
Statistical Techniques: Weighted Risk Tolerance Index, One-Way ANOVA, Multiple Regression and Descriptive Statistics
Designing Methodology
Extended Literature Survey for strengthening concepts and designing Questionnaire
168 Existing Literatures have been studied
Conducting Pilot Survey
Standardizing Questionnaire for Main Study
Conducting Main Study
Tabulating, Editing and Analyzing Data
Conducting Two Focus Group Discussions
Presenting Research Findings - Thesis

Problem Statement:

On the basis of the existing literature surveyed, the problem statement is defined and research gap has been identified which is the basis of this thesis. Details of a few relevant literatures that contributed for the purpose are presented below.

Literature Details	Gist of the Literature	Gap	Points taken for this Research
Title: An Empirical Investigation of the Relation between Risk Tolerance and Socioeconomic Characteristics Of Individual Investors, **Source:** Advances in Management Vol.4(10) oct.(2011); Syed Tabassum Sultana1* and Prardhasaradhi S.2	Assessment of risk tolerance is essential for optimum asset allocation within an investment portfolio. Low risk tolerance investors may face opportunity losses for not investing in stocks. Demographic profile of respondents has been mapped with risk tolerance capabilities Most investors are reluctant to disclose their investment details so referral sampling method is used. Self Employed investors have high risk taking capabilities, due to their inherent characteristics like self-confidence, high motivation and persistence as compared to salaried class investors.	Risk tolerance capacity of the respondents has been ascertained on financial facet only. Geographically, the study is confined to Metro city in India	The pattern of ascertaining risk tolerance capacity has been followed Referral Sampling has been preferred. Influence of Demographic profile on risk tolerance has been highlighted
Title: Factors Influencing Indian Individual Investor Behaviour: Survey Evidence **Source:** Decision, Vol.39,No.3, December,2012; Abhijeet Chandra, Ravindra Kumar	Indian individual investors are more susceptible to psychological biases while making decision in financial market. More emphasis is given in understanding behaviour of institutional investors belonging to big cities and metros thus ignoring individual investors.	Considering the psychological biases of the Indian individual investors, the study is hovered around only institutional investors	To mitigate psychological biases, multiple facets (besides financial facet) have been considered and individual investors of a small city like Ranchi (India) has been surveyed.
Title: An Empirical Investigation For Determining Of The Relation Between Personal Financial Risk Tolerance And Demographic Characteristic **Source:** Ege Akademik Bakis / Ege	Financial risk tolerance is one key element which should be considered in making investment decision. Investors with more risk averse attitude have lower financial risk tolerance and vice-versa.	Only financial facet has been considered	Laid foundation for clustering the respondents (investors) on the basis of risk appetite score developed considering multiple facets

Academic Review 10(2) 2010: 503-523; Adem Anbar and Melek Eker			
Title: An Empirical Investigation of Personal Financial Risk Tolerance. **Source:** Financial Services Review 13(2004) 57-78; Robert W.Faff, Terrance Hallahan and Michael D. McKenzie	Risk Tolerance of investors is considered important and the same has been mapped with demographic factors. There is difference between self-assessed risk tolerance and risk tolerance score. Most of the time, investors underestimate their risk tolerance level due to which they suffer from the opportunity loss.	While assessing the risk tolerance capacity, simple index has been constructed without assigning weights to different aspects	Risk appetite score has been ascertained in an indirect way putting questions from multiple facets. Weighted risk tolerance score has been computed.
Title: Influence of demographic profile of equity investors on their level of awareness about equity market (2012) **Source**: The International Journal Of Management (ISSN 2277-5846); Tarak Paul & Sitesh Bajaj	Most of the existing equity investors' possess a moderate level of awareness about equity market. Demographic factors have been considered	Although lack of awareness about this mode of investment has been identified, how to tide over that is beyond the purview of this research	Suggestions to enhance the awareness on equity market in stock market has been taken up in this thesis

Literature surveyed for this research, in nutshell, exhibits that;

1) Researchers have studied the investors' investment pattern and risk tolerance capacity of the Investors in metros and big cities but small cities like Ranchi (India) has not been coming under the purview of such researches and the investors of cities like Ranchi are not alike that of metros.
2) Existing literature surveyed so far depicts a wide spectrum of tools assessing risk tolerance capacity of investors in optimum asset allocation within an investment portfolio and consequential opportunity losses or gains for not investing in stocks. But a concrete approach to assess the investors' attitude towards the risk toleration, as a whole, has been missing.
3) While a host of researchers have studied investors in Indian stock market for assessing the depth of investment and another set studied non-investors to highlight the incidence of investment by unfolding why respondents don't prefer to invest in Indian stock market, a comprehensive study considering both incidence and depth of investment is lacking.

4) As filler, this study putting a set of questions from different facet to each investor with quantified weight attached to every option so as to ascertain wholistic risk tolerating capacity. After assessing the risk tolerating capacity, the investors studied are clustered and the strategies are developed accordingly for different clusters.

And for incidence of investment, a set of non-investors of stock market has been surveyed to find out why they don’t go for investing in Indian stock market.

Objectives:

The Objectives of this study are as follows;

1) To study the pattern of investment (including return expectations) of retail investors’ based at Ranchi
2) To develop risk appetite scores for retail investors of different background and cluster them in accordance with risk appetite scores.
3) To find out whether risk appetite scores of investors are dependent on their demographic profiles.
4) To devise strategies for different clusters on the basis of risk appetite score in order to stretch the depth of investment in Indian stock market.
5) To unfold why non-investors don’t prefer to invest on equity; for stretching the incidence.

Methodology:

The study is an empirical one concerning the depth and incidence of investment in Indian Stock Market. For the purpose, the primary data is collected from; a) the retail investors on their trading pattern, risk appetite and behavioural facets that determine the investment decisions and b) the non-investors on why they don’t prefer to invest on equity . On the backdrop of this, there has been concrete information about the stock markets of India containing types of market, the way of functioning, scope and perceptions of investors from secondary sources.

Methodology for studying the trading pattern of retail investors, 390 retail investors are surveyed for knowing;

a) The investable capacity of the investors
b) Whether the investors are first timer or matured

c) Whether they get actively involved in trading

d) Whether they are traders or investors

e) How frequently they invest

f) Whether they invest for need or take investment as an adventurous move

g) Whether they are well-informed investors or mere speculators

h) Whether they are investors of their own or due to persuasion/moral pressure.

Methodology for developing risk appetite score for retail investors;

A Questionnaire, capturing multiple facets of human behavior in the form of 10 questions with five options each, has been administered on 390 investors to know their risk tolerance capacity and quantification is done by assigning a score to them (on the basis of literature surveyed) so as to know whether their risk appetite is high or low or moderate. Facets identified and put in the questionnaire are based on the literature surveyed and the same is presented in the Questionnaire annexed towards the end of the thesis. On each facet, five options are given and each option has been assigned with a risk tolerance score. Score is zero if the option is risk free; it is 25, if there is some amount of risk is there in the option; it is 50, if the risk involved in the option is moderate; it is 75, if the risk involved in the option higher than the moderately riskier and it is 100, if the risk involved in the option is the most. Respondents have ticked an option without knowing the risk score attached to the options. Each question/facet has also been weighted on the basis of risk involved in the each facet/question. Question/facet with least level of risk is given weight 1 and the question/facet with most level of risk is given weight 10 (as 10 facets have been identified). Weighted Risk Tolerance Score of an individual (respondent) in a facet has been ascertained by multiplying the risk tolerance score of the option selected with the weight of the facet (i.e., RTS*W)

Methodology for Mapping Demographic Data vis-à-vis Risk Tolerance Capacity of the Respondents;

For ascertaining whether demographic factors influence the risk tolerance capacity of the respondents, the independent variables taken are demographic factors such as; Gender, Age-Group, Educational Qualification, Number of Family Members, Occupation and Income level. And the dependent variable taken is the risk tolerance capacity, i.e., Weighted Risk Tolerance

Score (RTS_W). RTS_W of an individual (respondent) in a facet has been ascertained by multiplying the risk tolerance score (RTS) of the option selected with the weight of the facet (i.e., RTS*W). All the respondents' RTSw has been calculated in the similar fashion and they have been presented in the form of a rating scale as given below so as to test the hypotheses through ANOVA.

Range of RTSw	Converted Rating
0-20	1
21-40	2
41-60	3
61-80	4
81-100	5

Methodology Pertaining to Strategies for different Clusters of Respondents-

On the basis of RTSw, Respondents (Investors) studied are segregated into three clusters; a) Investors with High Risk Appetite (i.e., the range of RTSw 60 and above), b) Investors with Moderate Risk Appetite (i.e., the range of RTSw less than 60 but ≥ 40) and c) Investors with Low Risk Appetite (i.e., the range of RTSw less than 40). For framing the strategies, a Focused Group Discussion has been conducted considering 10 experts, i.e., fund managers, trainers, certified financial planners and experienced finance professors.

Methodology Pertaining to Non-Investors' no preference to invest on equity-

Primary data has been collected from 390 non-investors through a questionnaire capturing 'why they don't prefer to invest on equity?' Independent variables identified, on the basis of literature surveyed, are; 1) Lack of knowledge, 2) Lack of risk taking capacity, 3) Lack of Surplus Income, 4) Lack of time to be vigilant every now and then, 5) Negative word of mouth, 6) Fear of being cheated, 7) Stock Market Volatility and 8) Misleading data.

Standardized Regression Coefficients have been computed to prioritize the variables that are identified in the context of preference of not investing on equity.

In order to substantiate the findings regarding why people don’t invest in Indian Stock Market, opinions of 10 experts (financial advisors and marketing executives of different brokerage houses) who have direct interface with the potential investors and work for stretching the incidence of retail investment in Indian Stock Market, have been collated through a Focus Group Discussion (FGD) .

Summary and Conclusion:

A) Pertaining to Pattern of Investment by Investors:

- A great chunk of the respondents (i.e., 37%) invest about 20-30% of their income.
- Highest percentage of respondents prefers to park their surplus income in Banks in the form of Fixed Deposits and also average percentage of investible amount (of all who are parking surplus in banks) is highest in Banks.
- ‘Major Purchase’ followed by ‘accumulation of funds and preparedness for retirement’ is Primary goal for the funds in Respondent's Investment Account.
- Major objective of the most of the respondents is to ‘generate aggressive capital growth over the long-term’ followed by ‘generating long-term capital growth’.
- A great percentage of respondents prefer a combination of both fixed income and variable income securities.
- A very high percentage of respondents prefer long term investment, i.e., more than five years of investment term.
- Most of the respondents either check the performance and status of the Fund ‘quarterly’ or ‘without any specific time gap’.
- Highest percentage of respondents gets the information on Funds from ‘friends and relatives’ followed by from ‘financial advisors’.
- Most of the investors studied prefer less risky avenues and with the expectation of higher rate of return, they prefer long time period.

Thus the pattern of investment by the respondents (investors) is influenced by the risk involved in the avenues of investment.

B) Pertaining to Risk Appetite Scores for Retail Investors:

- Since maximum number of respondents, i.e., 53.8% are having Weighted Average Risk Tolerance Score (ARTSw) of 4.55-39.55, Weighted Risk Appetite Scores of the respondents are not reasonably high.
- Demographic factors such as income level, occupation, no. of family members and age-group of the respondents significantly impact their risk appetite scores but Demographic Factors such as educational qualification and gender of the respondents do not significantly impact their risk tolerance scores.
- Owing to a huge range (one extreme is as low as 4.55 and another extreme is as high as 90.91) of ARTSw, there is strong base for clustering the investors.
- On the basis of ARTSw, Investors studied have been segregated into three clusters – High, Medium and Low.
- The highest percentage of investors (53.8%) is in the cluster of low risk tolerance capacity.

Thus, different set of strategies for different clusters with demographic variations has been formulated to stretch the depth of investment.

C) Prioritization of Variables for Non-Investors' Preference:

- Variables such as Lack of knowledge (V1), Lack of risk taking capacity (V2), Lack of investible surplus (V3), Lack of time to be vigilant every now and then (V4), Negative word of mouth (V5), Fear of being cheated (V6), Stock Market Volatility (V7), and Misleading data (V8) are identified that insist the non-investors not to invest on equity.
- These eight variables, i.e., the barrier factors, significantly impact the investment on equity.
- On the basis of degree of influencing preference of non-investors not to invest on equity, the priority list of variables is as follows; V_6 , V_7, V_1 , V_2 , V_8 , V_3 , V_5, V_4.
- As per the experts' opinion, factors like 'Stock Market Volatility' and 'Misleading Data' are the bye-product of factors like 'Lack of knowledge' and 'Negative Word of Mouth'. Similarly, as per the experts, factors like 'Lack of Surplus Income' and 'Lack of time to be vigilant every now and then' are the plea for avoiding owing to factors 'Fear of being cheated' and 'Lack of risk taking capacity'.

D) Societal Contribution of Research Findings:

The findings of this research, besides contributing to the literature base in behavioural finance in the form of methodology, data analysis and interpretation, it will help in addressing the basic problem that the Indian Stock Market has been facing. It will act as a foundation for stretching the depth of investment (business) of any broking firm. If the broking firms take initiatives in such studies of their investors and suggest in a customized way, depending on the risk appetite scores of the investors, then investment volume and frequency of trading of the existing investors may increase. Moreover, findings of study of non-investors will facilitate expanding the incidence of investment.

E) Limitation of the Study:

- The limitation of this study is its scope, i.e., only the investors based at Ranchi
- The Referral Sampling used for the purpose may not represent the universe and hence generalization of inference on the basis of findings of this research may not be appropriate.
- Data used for Risk Appetite could have also been collected in a rating scale so as to do clustering through cluster analysis and the same might have been mapped with the clusters created by risk appetite score and a model could have been developed.

F) Scope for Future Research:

- It will have interesting result if research takes place in similar fashion with investors and non-investors based in the outskirt of Ranchi or any sub-urban areas of India where penetration is almost nil.
- With a broadened time frame, stratified random sampling may be thought of doing research in future.
- Research needs to be there in getting data in rating scale on the facets identified so that the same can be used for cluster analysis and designing a model by mapping the risk appetite scores with clusters from cluster analysis.