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Topic: The Dynamics of Behavioural Decision Making: Analysis of Investors' Behaviour in the Indian Stock Market

ABSTRACT

Behavioural finance studies how financial decision making and in turn financial markets are affected by psychology of the market participants (Shefrin, 2001). It deals with individual investors' behaviour incorporating psychology, sociology and conventional finance. When behavioural finance is applied to explain how individuals make investment decisions, then it is the subject matter of behavioural finance micro, and when it is applied to explain market mechanism, then it is called behavioural finance macro (Pompian, 2006). The present study belongs to behavioural finance micro.

The present study is micro in nature, that is, the study proposes to examine the behaviour of individual investors. The main purpose of this study is to find out the presence of behavioural biases among investors residing in Delhi and how these biases affect the decision making process of investors. The study seeks to find the answers of questions such as:

What are the various behavioural and rational factors which affect the individual investors?

What are the various psychological biases, emotional biases and rational factors which impact the Indian individual investors' decision making process?

Is the risk attitude of individual investors affected by their demographic characteristics such as age, gender, income, saving and investment?

Are individual investors rational with regard to their investment decisions?

What is the association between overconfidence and risk attitude?

To answer the above mentioned questions the study first conducted extensive literature survey and then collected data from individual investors residing in Delhi. On the basis of literature survey the study identified 17 biases. CFA (2014) has classified these biases into two categories: cognitive errors and emotional biases .

Cognitive errors: For making investment decisions, investors process data in various ways. However, people tend to make mistakes such as wrong statistical analysis, faulty reasoning and other errors in data processing. These errors are called cognitive errors and are subdivided into broad headings, namely Belief Perseverance which includes Conservatism, Hindsight, Illusion of Control , Representativeness & Confirmation and Processing Errors which include Mental Accounting, Anchoring & Adjustment, Availability and Framing.

Emotional biases: Emotional biases arise primarily due to use of intuition and impulses. The financial decision making process of investors is also influenced by the way they frame the available options. This category includes biases, namely Loss-Aversion, Overconfidence (Illusion of Knowledge, Self-Attribution, Illusion of Control), Self-Control, Status Quo, Endowment, Regret-Aversion.

Once the biases were identified, then the data was collected with the help of a structured questionnaire for examining the influence of these biases on the decision-making process of individual investors. The sample consisted of 380 individual investors. EFA was performed and three psychological factors, one rational factor and three factors related to decision-making process were identified.

The identified factors were: (i) cognitive dissonance biases; (ii) overconfidence biases; (iii) emotional biases; (iv) rational factor; (v) demand identification; (vi) search information; and (vii) evaluate alternatives. In addition, to verify the validity of constructs, confirmatory factor analysis (CFA) was performed. The results of CFA revealed that the constructs had both convergent and discriminant validity. In addition, the CFA model is also found to be a good fit. To examine the structural relationship between psychological biases, rational factor and decision-making process, structural equation modelling (SEM) has been employed. The results of SEM revealed that the first stage of decision-making process, namely demand identification is affected by overconfidence biases, emotional biases and rational factor. The second stage, namely search information, is affected by cognitive dissonance biases, overconfidence biases and rational factor. The third stage, namely evaluate alternatives, is affected by emotional biases and rational factor. The noteworthy point is that rational factor was found to affect the decision-making process in all the three stages.

The study has also investigated the relationship between demographic and financial attributes of individual investors and their risk tolerance. Independent t-test revealed that men are more risk tolerant than women. Welch's test suggested that age and income are significant determinant factor of risk tolerance. Consistent with intuition, younger and richer investors were found to be more risk tolerant. In addition, ANOVA suggested that level of savings and investments also affect risk tolerance. The result revealed that there is a positive relationship between the level of saving/investment and risk tolerance. This result is also intuitive, as savings and investments depends largely on income which has been found to have positive impact on risk tolerance.

To sum up, the study found that investors in Delhi suffer from all the behavioural biases which have significant impact on their investment decision-making process. Demographic and financial attributes, namely age, gender, income, savings, investments are significant determinant of risk-tolerance of individual investors. Investors are partially rational as they mostly consider relevant fundamental information for making investment decisions. In addition, Overconfidence and risk tolerance are positively related. The findings of the study are important for individual investors, portfolio managers, financial planners and regulators. Individual investors can make better investment decisions by understanding their biases and thereby avoiding them as far as possible. Financial planners and portfolio managers can design the portfolio for their clients by considering their biases and risk tolerance. Similarly, regulators can formulate policies and organize various financial awareness campaigns for enhancing the welfare of the investors.