Role of Behavioral Biases in Investor Decision Making

Bhavna Yadav

Assistant professor, Department of commerce DCAC, University of Delhi India

Abstract

Now a day we hear market hurestic and irrational behaviour of investor very common terms in the stock market .This terms are related to Behavioral Finance. Behavioural finance is the study of the influence of the psychological factors on financial markets evolution. Investors fall prey to their own and sometimes others' mistakes due to the use of emotions in financial decision-making. Investors are people with a very varied number of deviations from rational behaviour, which is the reason why there is a variety of effects, which explain market anomalies. The present study aimed to investigate the impact of various behavioral biases and contextual factors on the individual investors' investment decision making. Investors do suboptimal investment decision due to various biases which affect the cognitive evaluation of the investors and the final outcomes is not as per the rational thinking of the investors, in which investors are utility maximizer as per the traditional finance theories of Markowitz, CAPM, Sharpe. Behavioural finance paradigm suggests that investment decision is influenced in a large proportion by psychological and emotional factors and even group behaviour.

KEYWORDS: Behavioral finance, Traditional finance, Market efficiency, Investment decision, Psychological biases, Stock market

INTRODUCTION

To making decision is very complex process which includes analysis of several factors and following lots of steps. It is believed that primarily two things: socio economic factors, and technical factors affect decision making. Similarly, these two factors affect an investor, while making decisions in stock market. Decision making by individual investors is usually based on their socioeconomic factors such as age, gender, education, income, and investment portfolio, etc. Simultaneously, their investment decisions are also derived from complex models of finance. These complex models include those based on risk and return trade off,EMH (Efficient Market Hypothesis and risk-based asset pricing models like CAPM (Capital Asset Pricing Model). But in real decisions should never be made only by relying on the socioeconomic factors and complex models, which do not consider the behavioural factors. So, to make appropriate decision, one needs to analyse the variables of the problem by mediating them applying cognitive psychology. Decision making can be defined as the process of choosing an alternative from several alternatives. Itis an activity that follows proper evaluation of all the alternatives. Hence, decision makers need to keep themselves up-to-date by obtaining information/knowledge from diversified fields so that they can accomplish the tasks they must work upon.

Effective decision-making by investor in stock market requires better insight, and understanding of human nature in a global perspective, apart from sharp financial skills and ability to gain best out of investments. Positive vision, foresight, perseverance and drive are must for an investor to be successful in his investment decisions. Investors differ in characteristics due to demographic factors such as socioeconomic background, educational level, age, gender, and alike. So, it is difficult for an investor to make an appropriate investment decision based on the decisions made by someone else. It implies that an investment decision optimum for one investor may not be suitable for the other investor. Every investor has his own investment objectives, risk tolerance level, inflows and outflows of money, and other constraints. And accordingly, he designs his investment portfolio considering all these factors. Institutional investors must estimate the output mean-variance optimization as well. But when it comes to make investment decisions by individual investors, they fail to follow the standard procedure for designing an optimum investment strategy. They are said to be suffering from behavioural biases. Psychological biases may affect their investment decision-making process. The impact of behavioural factors on decision-making is often ignored by individual investors, and this hampers the performance of their investment in stock market. The study of the impact of behavioural aspect of investing is, therefore, the need of the hour.

Concept of Behavioral Finance

Behavioural Finance is a concept that has become widely popular in recent years. Even though the concept has just recently found its place in the literature, it would not be wrong to say that Behavioural Finance has had its place in the subconscious of humans since the times humans started to be engaged in investment and consumption activities. The principles of behaviour used by Behavioural Finance in practice, are based on psychology and sociology. These behavioural principles describe a replicable pattern are prospect theory, regret fullness and lack of comprehension, inaccurate judgement, cognitive errors,over confidence, over reaction and lack of reaction, separation effect, gambling behaviour and speculation, magical thinking, imaginary thinking, interest in anomalies, availability of things that facilitate discovery, socio-cultural influence and global culture, or what is broadly called irrationality

Behavioural Finance focuses on how investors interpret knowledge in order make investment decisions based on information and how they act with their investment decisions. Behavioural Finance has developed because of increasing interest of psychologists in economic. Though the field of economics has propounded many theories over the years on human behaviour, it has not been able to answer why investors are made financial decisions irrational.

As we know, one of the most important factors in investment decisions is the emotions. Behavioural Finance approach investigates the influence of emotions and cognitive factors on individual investment decisions.

In the traditional financial research, first a model is proposed. Then the validity and reliability of this model is assessed via experimental methods; with Behavioural Finance approach, first the behavioural patterns in the market are analysed; and then, based on the results of these observations, a model that aims to explain the behavioural patterns is developed. The models developed in Behavioural Finance, aims to understand not how people should act in financial markets, but how they act in such setting.

Economy and finance literature is full of theories that assume that investor made rational decisions (for example high risk high return or low risk low return) and that they strive to maximize the expected returns. We come across a significant portion of these theories with the effective market hypothesis. However, most studies conducted, revealed that investors don't act in a rational manner in some of their investment decisions and thus mostof financial models unable to explain the real investor behaviour. At this point, Behavioural Finance has emerged and filled this important gap and tried to understand and explain how emotions and comprehension errors affect investors and decision making processes. Meit Statman from Santa Clara University has said the following for standard finance "individuals are rational however, for Behavioural Finance, individuals are normal", and has criticized the notion of "rational individual behaviour" as covered by traditional finance.

Behavioral finance identifies various concepts that make people behave irrationally thus leading to suboptimal decisions. For a smart investor to capture the essence of behavioural finance, all he would have to do is to reflect on his own investment decisions. Investors are susceptible to various behavioral anomalies, which can become the biggest obstacle in their attempt to maximize wealth. The only ways in which investors can avoid behavioural anomalies is by understanding the importance of emotions in trading, and train their mind not to mix emotions with decisions.

LITERATURE REVIEW

The review of literature is centred on the theoretical and empirical studies on the behavioural traits that are considered for the present study. The study is based on the gaps that were found in existing literature and is also grounded on the issues that were missed out or those that remain unexplored in the Indian market context.

Kahneman et al. (1971) describes the heart of gambler's fallacy as a misconception of the fairness of the laws of chance. One major impact on the financial market is that investors suffering from this bias are likely to be biased towards predicting reversals in stock prices. Gambler's Fallacy arises when investors inappropriately predict that trend will reverse and are drawn into contrarian thinking. Gambler's Fallacy is said to occur when an investor operates under the perception that errors in random events are self-correcting.

Gupta L.C. (1991) argues that designing portfolio for a client is much more than merely picking up securities for investment. The portfolio manager needs to understand the psyche of his client while designing his portfolio. Per Gupta, investors in India regard equity, debentures and company deposits as being in the same risk category and consider including all mutual funds, including all equity funds, almost as safe as bank deposits.

Kent et al. (2002) in the study of investors psychology also found that it is particularly important to note that the fast movement of prices of the stocks and shares in the stock market is largely due to investors' perceptions such as (1) investors perception of the stochastic process of stock prices (2)investors perception of value(3)investors perception on the management of stock and return (4) investors trading practices.

Wood R (2004) studied attitudes and trading behaviour of stock market investors by conducting a study among 90 individual investors and identified four main segments of individual investors as: risk-intolerant traders, confident traders, less risk-averse young traders and conservative long-term investors. His cluster segmentation analysis shows that each segment purchases different types of stock and had different levels of trading behaviour.

Srivastava (2005) conducted a study on "An analysis and measurement of confidence of stock investors in India". Study reveals an existence of strong influence of investors' behaviour on the financial market and concluded that the individual investors are not rational and market is also not efficient. Investor mainly focuses on the past performance of the stock over other stock valuation methods while selecting their stocks.

Huckle (2007) describe behavioural finance as that aspect of finance that uses scientific models to explain how people make financial decisions in the real world, rather than in theory. Behavioural Finance shows how our human psychology influences our financial decisions and it identifies the consistent, predictable mistakes humans make when investing.

Chandra (**2008**) explored the impact of behavioral factors and investor's psychology on their decision-making. The research was based on the secondary data. The study concluded that retail investors do not always take rational decision. The decision of investment is influenced by many behavioral factors such as greed and fear, cognitive dissonance, mental accounting, heuristics and anchoring etc. The study focuses that these behavioral factors must be considered while taking the investment decision.

Moran (2008) this study discloses that, to varying degrees, the examined behavioural biases affect professional investors. As the experiment results show that even professional investors are not really protected to behavioural biases and there are certain personal characteristics which may influence the magnitude of the bias. By using logic, probit and linear probability models show that in human behaviour the tested behavioural finance patterns are so deeply rooted and they are difficult to overcome by any one of the personal characteristics which are analysed. In demonstrating the impact of these behavioural biases on investors, the results can support the institution of specific regulation for structured products to improve investor protection.

Firestorm (2008) conducted a study to investigate overconfidence and over optimism in the market and factors that affect human beings in decision making when it comes to investing and analysing. The scientific method of the research is a quantitative back-testing exercise method based on historic data taken from IBES, Institutional Brokers' Estimate System. The data taken is a summary of consensus expected growth of profits for the companies at S&P500 for the upcoming 12 months, compared with the realized outcome for the period February 1986 to April 2008. The results showed that analysts of the S&P 500 were exaggerated by the problems of over confidence and the over optimistic biases. It also confirms theory of Anchoring and Herding.

Sairafi et al.(2008) in their study 'Behavioural Finance- a Student Perspective' examined the characteristics of investment interested business students and their decision-making process and choices from the perspective of behavioural finance. The research holds an abductive approach and is based on qualitative data. Data collection was done through an Internet-based questionnaire. In the study, herd behaviour was found to be the most evident behavioural factor. This paper found that the behaviour of respondents in the chosen population was best described as "student behaviour"; a somehow irrational behaviour explained by the learning process in which business students exist.

Cipriani and Guarino (2008) studied herd behaviour in a laboratory financial market with financial market professionals. The study combines the advantage of the controlled experiment with that of observing the behaviour of professionals, who are engaged in the day-by-day activity of trading, pricing and analysing financial assets. This study compares two treatments, one in which the price adjusts to the order flow so that Herding should never occur, and one in which event uncertainty makes Herding possible. In the first treatment, subjects herd seldom, in accordance with both the theory and previous experimental evidence on student subjects. In the second treatment, the proportion of Herding decisions increases, but not as much as theory suggests; moreover, contrarianism disappears altogether.

Waweru et al.(2008) surveyed the institutional investors at the Nairobi Stock Exchange. The work investigated the role of behavioural finance and investor psychology in investment decision making. The study established that behavioural factors such as Representativeness, Overconfidence, Anchoring, and Gamblers' Fallacy, Availability, Loss Aversion, Mental Accounting and Regret Aversion affected the decisions of institutional investors operating at the Nairobi Stock Exchange.

Cianci (2008) in her study conducted on experiment with 78 postgraduate students as substitutes for real investors and results suggested that investors made higher relevance ratings and lower investment attractiveness ratings while provided with simultaneous negative information in comparison with sequential negative information (consistent with phenomena of multiple loss aversion and loss buffering). Investors' relevance and attractiveness ratings were higher when positive information was provided sequentially (consistent with gain savouring). The study categorized investors as current and prospective. It was examined how they evaluate positive and negative information presented sequentially or simultaneously aimed to determine whether these results can be generalized to apply to investment related information and whether investor status affects this evaluation.

Monti and Legrenzi (2009) investigated the relationships between investment decision making and Hindsight bias. They say that economic studies consider the agent's foresight perspective only, without considering the Hindsight bias possible effects in the decision-making process. They collected data from 25 Master and PhD students attending courses in Finance and Economics at Bocconi University and from 35 financial managers from a leading Italian bank by circulating two sets of questionnaires. The study found strong evidence for the consequences that Hindsight bias can have on the investor's portfolio decisions: the portfolio allocation perception and therefore, the risk exposure

Maheran et al. (2009) intended to investigate the relationship between investment decision making of an investor and their rationality in investing in the Malaysian capital market. The findings of the study indicate that the economic condition and frame of references influence investor decision-making behaviour. The study concluded that Malaysian investors are partially rational in their decision making

Hoffmannet al. (2010) analyse how systematic differences in investor's investment objectives and strategies influence the portfolios they select and the returns they earn. The data in this study draw by analysing transaction records of a sample of clients, from the largest online broker in the Netherland. The study revealed that investors who rely on fundamental analysis have higher aspirations and turnover, take more risks, are more overconfident, and outperform investors who rely on technical analysis

Adetiloye (2012) In a study the researcher examine the effects of behavioral biases on security market performance in Nigeria and find out the strong evidence that behavioral biases exist but not prevailing in the Nigeria security market because the results of study shows a weak negative relationship exists between behavioral biases and stock market performance in Nigeria. The study concludes that investors should be aware of the impact of behavioral biases on investment decision making process.

ChandraandKumar(2013) try to investigate the factors influencing individual investor behaviour in Indian Stock Market and found that there are five underlying psychological axes that appear to be driving the Indian individual investor behaviour. These five underlying variables are named as prudence and precautious attitude, conservatism, under confidence, informational asymmetry, and financial addiction. The results reveal some psychological biases such as conservatism and under confidence which are consistent with the prior literature to some extent; but there are some contrary behavioural biases reported by the multivariate analysis such as prudence and precautious attitude and informational asymmetry which are not yet considered in prior literature in growing economies, particularly in Indian context. Thus, there are many studies available some of which support the traditional finance and some are against the theory. Those critics have given birth to the new discipline named behavioral finance.

Bashiret al. (2013) investigated the influence of behavioral biases on investment decisions. The study was conducted through questionnaire. About 100 respondents were targeted out of them 55% were employees and the remaining students. They took female and male as dependent variable and confirmation biases, illusion of control, overconfidence, loss aversion as independent. The methodology used in this study was chi-square. The finding concluded that there is no significant difference between decision making regarding overconfidence bias of male and female.

An investor faces several hurdles, minor and major both. These include personal ones like lack of knowledge and ability to invest at the optimum levels. Some of the well documented biases that are observed in investment decision making are:

Disposition Bias: An important hurdle that often comes in the way of realizing an investor's financial dream is the emotions of the person that divert him what he should ideally need to do. It's always better to be informed about such emotional hurdles in investing before it is too late. For example, people often keep on holding stocks bought years ago, and are still in the red, but prefers to sell off those stocks in which they have made profit and has further potential to make more profit. In this case termed as disposition bias in financial economics literature, investors tend to hold on to their losing bets in the hope of recouping their losses sometime in the future but feel good to make some small profit by disposing off their winners.

Optimism or Confidence Bias: This is common bias that makes people too confident about their knowledge and skills and ignore the risk associated to investment. Investors have a belief that they can out-perform in the stock market based on some investing successes. Such winners are more often short-term in nature and may be the outcome is by chance rather than skill. If investors do not recognize the bias, they will continue to make their decisions based on what they feel is right than on objective information.

Availability Bias: This refers to phenomenon of determining the likelihood of an event per easiness of recalling similar instances. This may be asset class they are familiar with or stocks/sectors about which they have greater information and so on. Investors holding an only real estate portfolio or a stock portfolio concentrated in shares of a company or sector are demonstrating this bias. It leads to concentrated portfolios that may be unsuitable for the investor's requirements and feature higher risk of exposure to the preferred investment. Since other opportunities are avoided, the portfolio is likely to be underperforming.

Anchoring: It arises when a value scale is fixed or anchored by recent observations. Investors hold on to some information that may no longer be relevant, and make their decisions based on that. He ignored new information and feel irrelevant new information in the decision-making process. Investors who wait for the 'right price' to sell even when new information indicate that the expected price is no longer appropriate, exhibit this bias. For example, take a company whose stock is trading at $10 a share. The company then announces a 300% earnings increase, but its stock price increases only to, say, $12 a share. The small rise occurs because investors are "anchored" to the $10 price. They believe that the earnings increase is temporary when, in fact, the company will probably maintain its new earnings level.

Loss Aversion: Aversion means the feeling of dislike or disinclination impacts the overall portfolio returns. and loss aversion means disliking or feeling uncomfortable about a loss. Studies show that the pain of loss is much more than pleasure of gain of a similar magnitude. Investors prefer to do nothing despite information and analysis favouring an action that in the mind of the investor may lead to a loss. Holding on to losing stocks, avoiding riskier asset classes like Equity, when there is a lot of information available on market volatility are manifestations of this bias. In such situations investors tend to frequently evaluate their portfolio's performance, and any short-term loss seen in the portfolio makes inaction the preferred strategy.

Herd Mentality: This bias is an outcome of uncertainty and belief that others may have better information and made good decision, which leads investors to follow the choices that others make or majority make. Such choices may seem right and even be justified by short-term performance, but often lead to bubbles and crashes. Due to this biases, investor lose their own individuality in decision making process.

Demonstrative Effect: Investors, especially new to investing, often get carried away by what their friends or relatives say. There are people who boast how they have made multiple times in some stock, which has a demonstrative effect on the new comer, who without understanding even the basics of investing, just dive into putting his money into something which could be an extremely risky bet or may not even be suitable for him. In such situations, it is also seen that the person claiming his multiple winning stock to people known to him, may also have hidden stocks and investments in which he has lost money. So, it's very important for investors to keep away from such demonstrative effects which could, in the long run, prove to be a loss-making proposition.

Regency Bias: One of very strong emotional bias is "regency bias ", the phenomenon of a person most easily remembering something that has happened recently, compared to something that may have occurred a while back. The impact of recent events on decision making can be very strong. This applies equally to positive and negative experiences. Investors tend to extrapolate the event into the future and a repeat. A bear market or financial crisis lead people to prefer safe assets. Similarly, a bull market make people allocate more than what is advised to risky assets. The recent experience overrides analysis in decision making. So, everybody expects the recent performance to continue over a future period which is not true.

Confirmation bias: people seek out only that information which support her belief about an investment and avoid or ignore that information that contradict to their belief. Investors, who focus only one sided view of the situation and take poor decision while taking investment decision.

CONCLUSION

The research found that unlike the traditional finance theory suggests, individual investors do not always act rationally while making investment decisions. Individual investors suffer from several cognitive and emotional biases. These biases play an integral role in an investors decision-making. Heuristics such as representativeness, overconfidence, and anchoring, regret aversion, anchoring, and mental accounting (drawn from the Prospect theory), cognitive dissonance, and greed and fear all influence investors perception of risk and subsequently his decision making. The findings of the research are that investors display risk-seeking behaviour and avoid selling stocks when faced with loss. They segregate their investments into separate mental accounts created to meet a specific investment objective. Their decisions of asset allocation to their portfolios are to great extent affected by greed and fear. There is suggestive evidence that these emotional and behavioural factors need to be incorporated in the investment strategies formulated for individual investors. Investors while taking investment decisions must consider these biases as risk factor associated with their investment portfolios.

It is the individual investors who are the most susceptible to behavioral biases and mental errors. Recent turmoil in the financial markets around the world has shattered individual investors' confidence in the stock markets. With an objective to create investors' confidence in the stock markets, behavioural issues are the newest of the things which must be considered while formulating investment strategies for individual investors. Investment advisors and finance professionals must incorporate behavioural issues as risk factor to formulate efficient investment strategies. This research will help them judge investors attitudes towards risk with a new perspective, and in a better way, thus leading to better investment decision making.

REFERENCES

Babajidi &Aditiloye (2012). Investors' Behavioral Biases and the Security Market: An Empirical Study of the Nigerian Security Market. *Accounting and Finance Research* ,Vol. 1 No. 1

Baker & Nofsinger (2002). Psychological Biases of Investors. *Financial Services Review*, 11 PP 97-116

Barber, Brad M., &Odean, T.(2001).Boys will be Boys: Gender, Overconfidence and Common Stock Investment. *The Quarterly Journal of Economics*, 116(1), 261-292.

Bashir (2013). Impact of Behavioral Biases on Investor Decision Making: Male Vs Female. *IOSR Journal of Business and Management.* Vol.10, Issue 3, PP 60-68.

Chandra, A., & Kumar, R. (2008). Determinants of Individual Investor Behaviour: An Orthogonal Linear Transformation Approach. Retrieved from *http://www.mpra.ub.uni-muenchen.de297221MPRA_paper*

Chaudhary, A. K. (2013). "Impact of Behavioral Finance in Investment Decision and Strategies-A Fresh Approach". *International Journal of Management Research and Business Strategy* , 2 (2).

Chira, Adams & Thornton (2008). Behavioral Bias Within the Decision Making Process. *Journal of Business & Economic Research.* Volume 6, Number 8.

Cipriani, M., & Guarino, A. (2008). Herd Behavior and Contagion in Financial Markets. *The B.E. Journal of Theoretical Economics (Contributions)*, 8, Art. 24. Retrieved from http://dx.doi.org/10.2202/1935-1704.1390.

Cipriani, M., & Guarino, A. (2009). Herd Behavior in Financial Markets: A Field Experiment with Financial Market Professionals. *Journal of the European Economic Association*, 7(1), 206-233.

Decourt, R. F.,(2007). Behavioral Finance and the Investment Decision Making Process in the Brazillian Financial Market. *Social Science Research Network* .

Denis, A., Zoran, B., & Velim, S. (2012). The Efficient Market Hypothesis: Problems with interpretations of empirical tests. Retrieved from *http://hrcak.srce.hr/file/116381*.

Harikanth, D.(2010).Role Of Behavioral Finance In Investment Decision Making- A Study of Selected Districts of Andhra Pradesh, India. *Shiv Shakti International Journal in Multidisciplinary and Academic Research ,* 1 (2).

Hoffmann (2007). Investors' Needs and the Investment Professional: Lessons from Marketing. *Journal of Investment Consulting* vol.8, pp.80-91

Huckle, P. (2007). Behavioural finance and the psychology of investing. Paper presented at Harvard Business School Association alumni dinner ,Hong Kong Club, Central. Retrieved from *www.philippahuckle.com*

Kahneman, Daniel & Tversky (1971).Belief in law of small numbers.Psychological Bulletin 76(2):105-110

Kannadhassan, M. (2006). Role of Behavioural Finance in Investment Decisions. Retrieved fromhttp://dl4a.org/uploads/pdf/52.pdf.

Kishore, D. R. Theory Of Behavioral Finance and its Application to Property Market: A Change in Paradig. Paper presented at Twelfth Annual Pacific Rim Real Estate Society Conference. Auckland, New Zealand. 6. (n.d.).,

Konstantinidis, A., Kataracheia, G., Borova, & Voutsa, M. (2012). From Efficient Market Hypothesis to Behavioural Finance: Can Behavioural Finance be the New Dominant Model for Investing, *Economic Sciences*, Vol: 11, No. 2.

Pompian, M. (2006). Behavioural Finance and Wealth Management. John Wiley & Sons, New Jersey.

Seth L. (2010). Report on " BEHAVIORAL PATTERNS AND PITFALLS OF U.S. INVESTORS. Retrieved from http://www.loc.gov/rr/frd/pdf-files/SEC_Investor-Behavior.pdf

Sharma, A. J. (2014) (1). Understanding Cognitive Dissonance-The Behavioural Finance Principle, *International Journal of Commerce, Business and Management,* Vol. 3, No. 1, February 2014.

Sharma, A. J. (2014) (2). The Herd Behaviour- Attempting to an Insight, *ZENITH International Journal of Multidisciplinary Research,* Vol.4 (9), SEPTEMBER (2014).

Shiller, R. J. (1998). Human Behavior and the Efficiency of the Financial System (NBER Working Paper No. 6375). National Bureau of Economic Research.

Srivastava, A. (2005). An analysis and measurement of confidence of stock investors in India. *International Journal of Theoretical and Applied Finance.*

Weber, M., & Camerer, C. F. (1998). The Disposition Effect in Securities Trading: An Experimental Analysis. *Journal of Economic Behavior and Organization*, 33(2), 167-184.

Wermers, R. (1995). Herding, Trade Reversals, and Cascading by Institutional Investors. (Unpublished Paper), University of Colorado, Boulder.