

Explaining Individual Investment Decision Making Process: A Fresh Perspective of Behavioural Finance

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In the present times, investment decision making process is a very complex phenomenon for individuals. Theoretically speaking, investment decisions are guided by various economic models which regard man as "Homo economicus" who is rational in his economic choices. In reality, the information required for the decision making process is limited and hence the rationality of man is also bounded. Thus, in some part of investment decision making process, man may even be emotional or irrational. So in order to guide individuals to make correct choices, economic models should integrate and incorporate psychological theory as well. This is the basic premise of a new paradigm in the field of investment decision making called Behavioural Finance. This subject focuses on how investors interpret and act on information to take investment decision. It uses knowledge from both psychological field and financial theory. Behavioural finance asserts that behavioural biases and heuristics play an important part in influencing the investment decision making processes. A bias is a departure from normative, optimal or rational behaviour. In the investment decision making process, biases can either arise when the decision maker forms beliefs about probabilities of events and values of outcomes or when he sets preferences among the available options. Heuristics are rules of thumbs that help individuals to take the most optimum decisions in situations which are cognitively complex. In either case, heuristics and biases if consistently practiced lead to various abnormalities and anomalies.

This is a conceptual paper which aims to study various psychological biases which arise from a variety of cognitive mechanisms. An attempt is made to extract from literature of various authors different frameworks in which most known heuristics and biases can be organized. An endeavour to understand their impact will be of great help to investors to acquire the best outcomes by suggesting remedial action.

Keywords: Investment, Behavioural Finance.

Introduction

In the present world, investment decision making is a complex process. It is dynamic activity which is influenced by many variables and subject to many constraints. These limitations arise due to various environmental and cognitive reasons. Investments are made for earning a return. Investors make investment decisions for maximising their returns but sometimes they are not aware which variables are effecting their decisions due to which they may not be able to maximise

their returns. Many times investors want to know which these variables are and what are the implications on their decision making process especially when they are spending time and money to learn about investment by reading books, attending lectures, listening to all the expert advice on the television and internet chat sites.

If investors reflect back, they will realise that some of the common mistakes which they make are buying stocks which are highly priced, booking profits too soon

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and not liquidating shares on which there could be losses if they hold them, and most commonly buying when others are buying and selling because others are selling. These are examples of investor behaviour. The term behaviour literally means "the aggregate of all the responses made by an organism in any situation" and "a specific response of a certain organism to a specific stimulus or a group of stimuli" (American Heritage Dictionary, 2003).

There is a dire need to understand the behaviour of investors in order to assist them to develop their own trading strategy and investment philosophy. A solution and understanding of many of these issues are the main pedagogical goals of Behavioural finance. Behavioural finance closely combines individual behaviour and market phenomena and uses knowledge taken from both the psychological field and financial theory. In his inaugural address at Interdisciplinary Seminar on Psychonomics on February 6, 2012, Harun R. Khan, Deputy Governor, Reserve Bank of India emphasises on the resurgence of psychology in economics for linking cognitive models of decision making with economic models of rational behaviour to understand and avoid recent market distortions driven by human traits. Behavioural Finance is a new paradigm of finance theory, which seeks to understand and predict systematic financial market implications of psychological decision-making.

Background

During the classical period, economics had a recognized association with psychology. Adam Smith had described psychological principles of individual behaviour in his work, *The theory of Moral Sentiments*. Jeremy Bentham wrote on psychological aspects of utility while propounding his utilitarianism ideas. However, overtime economists in the race of shaping the discipline as a natural science started to distance themselves from psychology. In economics, man or "Homo economicus"

appears perfectly rational and has a complete knowledge and his economic choices are guided by rationality. This means that his choices are consistent, self-contained and he is perfectly rational without being affected by his emotions or his environment. Thus economic theory of Investment decision treats investment decision of an individual as a macroeconomic aggregate and the microeconomic foundations of it are drawn from intertemporal utility theory. This means that individuals maximise their utility based on classic wealth criteria making a choice between consumption and investment through time. However, as per studies conducted by Herbert Simon, rationality of individuals is limited by the information they have, the cognitive limitations of their minds and the finite amount of time they have to make decisions. He has coined the term "bounded rationality" in his book. He argues that most people are only partly rational while are emotional/irrational in the remaining part of their actions. He says that perfect or global rationality is practically and not logically impossible. He claims that classical theories of Rational Choice fail to include some of the central problem of conflict and dynamics which economics are more and more concerned with. Accordingly, concept of rationality has some limits such as risk and uncertainty, incomplete information about alternatives and complexity. (Models of Man, 1972). There was a resurgence of psychology in economics in the 1960s when Ward Edwards, Amos Tversky and Daniel Kahnemann began to compare cognitive models decision making under risk and uncertainty to economic models of rational behaviour. Decision making is a process involving making an optimal choice between various alternatives. Since individuals lack the ability and resources to arrive at the optimal solution, they instead apply their rationality only after having greatly simplified the choices available. As a result, Simon claims that individuals have only bounded rationality and are forced to make decisions not by 'maximization' but by 'satisficing'. Satisficing is the

hypothesis which allows to the conception of diverse decision procedures and which permits rationality to operate in an open not pre-determined space (Barros, 2010). This is where psychological theory comes into play. In the real world, individuals make decisions using heuristics or rules of thumb that satisfice rather than maximize utility over the long run. Thus individuals employ the use of heuristics to make decisions rather than a strict rule of optimization. These heuristics are useful as they make cognitively difficult tasks easier. However they can lead to systematic biases. When a behavioural bias is consistently practiced, it gives a foundation for prediction of behaviour. The study of this field will be particularly useful where it can influence returns from investment. There is little doubt that an understanding of how such biases and heuristics influence investment decision or impact investment returns will generate insights that greatly benefit the investors.

Such behavioural biases and heuristics form the subject matter of Behavioural Finance. Behavioural Finance focuses on how investors interpret and act on information to make investment decisions. It also places an emphasis on investors' behaviour leading to various market anomalies. Behavioural Finance closely combines individual behaviour and market phenomena and uses knowledge taken from both the psychological field and financial theory. (Fromlet, 2001). Behavioural Finance seeks to understand and predict systematic financial market implications of psychological decision processes. In addition it focuses on the application of psychological and economic principles for improvement of financial decision making. (Olsen, 1998)

Cornerstones of Behavioural Finance

Behavioural Finance takes into account the effect of human psychology in investment decision making. It overcomes the shortcomings of traditional finance and finds better explanations of investor behaviour by

disregarding the assumptions that investors are rational and markets are efficient.

The first foundation stone of Behavioural finance is Mental Accounting. It is a process which helps the investors in using cognitive skills to organise, evaluate and keep track of their financial activities. Mental accounting has three components. First, the outcomes are perceived and experienced and then decisions are taken and evaluated. Second, investing activities are grouped into categories, including the sources and use of funds. Third, the activities are balanced either daily, monthly or yearly, depending on the preferences of a person. (Thaler, 1999) Mental Accounting violates economics assumptions because money placed in one mental account is not a perfect substitute of money placed in another account.

The second foundation stone of Behavioural finance is Loss Aversion. Since investors engage in mental accounting, investors group the financial transactions either one at a time or in portfolios and myopically evaluate the transactions i.e make short term rather than long term decisions and evaluate gains and losses frequently. According to Kahneman, Tversky and Schwarz and Thaler (1997), individual investors are more sensitive to decrease in their wealth rather than increases and value losses more heavily than gains.

The third foundation stone of Behavioural finance is Framing. According to Kahneman and Tversky (1981), when investors face a decision problem, they try to associate each alternative choice with a decision frame. This frame depends on the personal characteristics of the investor and how the problem is formulated. They have found that choices that involve gains are risk averse and choices that involve losses are risk taking.

The fourth foundation stone of Behavioural finance is Prospect Theory. This is the seminal work of

Kahnemann and Tversky developed in 1979. Prospect Theory is an alternative theory to analyse decision making in situations that involve risk. In Prospect Theory, an outcome is called a prospect and involves a decision with some risk. Instead of wealth, focus is on gains and losses; decision weights replace probabilities and loss aversion is used in place of risk aversion. Decision making process is made up of two stages, the editing phase and the evaluation phase. In the first phase, possible outcomes are arranged on the basis of some heuristic. When investors look at outcomes, they make a mental note of an approximate and possible average outcome. This average is used as a reference point for ordering the lower outcomes as losses and higher ones as gains. Hence, according to Prospect theory, value is a function of the reference point and the distance of the value from the reference point. Many experiments have been carried out to validate the theory in order to show that investors focus on gains and losses rather than final wealth.

Thus from various studies it is clear that investors rely on heuristics which reduce the complex tasks of assessing probabilities and predicting values to simpler judgemental operations. Individual Investors who use heuristics are prone to biases which may lead to anomalies in the market. An empirical result qualifies as an anomaly if it is difficult to "rationalize", or if implausible results are necessary to explain it within the paradigm. (Thaler, 1987). The understanding of heuristics and biases with the help of research in Behavioural finance will help to develop an awareness of what, why and how of investing and finance. Investors and advisors may be able to improve economic outcomes and attain stated financial objectives. This could save clients from financial misadventures.

Categories and Causes of Biases

Knowledge of biases and modification of or adaptation

to irrational behaviour will lead to superior results. This paper also aims to develop an awareness of biases, their implications and ways of moderating their impact and adapting to them. This may even serve as a fundamental tenet of a successful investment strategy.

Although it is very difficult task to present heuristics and biases because they arise from a variety of cognitive mechanisms, an attempt is made here to extract from the literature of various authors different frameworks in which most known heuristics and biases can be organized. After review of literature available on heuristics and behavioural biases, it is found that the common mistakes caused by cognitive limitations can be classified into two categories; how investors think and how investors feel. These two categories are used to classify various biases to which individual investors are susceptible to in the investment decision making process.

Under the first category of "how investors think", the most commonly existing bias is "Representativeness". Investors tend to judge the probability of an event by finding a 'comparable known' event and assuming that the probabilities are similar. As a part of drawing meaning from what we experience, we need to classify things. If something does not fit exactly into a known category, we will approximate with the nearest class available. For e.g., If stocks of Tata Steel perform extraordinarily, investors will rush to buy stocks of Essar Steel. This representative thinking makes them believe that Essar steel will perform similarly. (Parikh, 2009) Also because of Representativeness bias, investors may make mistakes while examining past stock returns. For example, stocks with strong performance during the past three to five years are considered as winners. As a result, considering past return to be representative of what to expect in future, investors chase the winners and buy such stocks. They tend to be overly optimistic about past winners and overly

pessimistic about losers.

Secondly, investors tend to place more faith in familiar stocks leading to 'familiarity bias'. For example, Investors buy stocks of companies which have local or regional business presence (Huberman, 2011). Investors disproportionately include in their portfolio, stocks belonging to their country despite knowing the benefits of international diversification. This is known as "home bias" (French and Poterba, 1991)

Third very commonly existing bias is "over confidence". Belsky and Gilovich (1999) note that overconfidence is pervasive. It is like an ego trap under the influence of which the investor thinks while picking up winning stocks that their knowledge is more accurate than it really is. This bias may exist because of illusion of knowledge or illusion of control of uncontrollable events. According to Barber and Odean (2002), online investors routinely experience these attributes. Overconfidence causes investors to trade too much and take too much risk.

Fourthly, investors experience "anchoring bias". They become fixated with reference points. According to Benartzi and Thaler (1995), investors start comparing the stock price with the reference point. This reference point may be the purchase price. The brain's choice of reference point is important because it will determine whether the investor will feel the pleasure of obtaining a profit or the pain of making a loss. As justified by Prospect Theory of Kahnemann and Tversky, investor will assign separate value premiums to the profits and losses. This bias also causes investors to periodically update the reference point to reflect unrealized profit. The next list of biases can be placed in the category of how investors feel. It is commonly said that stock markets are motivated by greed and fear. Other emotions which can hamper good investment decisions are hope, pride and regret.

Firstly, due to emotions like pride and regret, investors are predisposed to selling winners too early and holding losers too long. Shefrin and Statman (1985) have shown in their studies that investors tend to avoid regret and seek pride leading to disposition bias which may lead to poor results. Shefrin (2000) further attributes this bias to stem from conservatism.

The second psychological bias which can be placed in this category is attachment bias which is the reason behind why investors become emotionally attached to a security. As a result, the investors fail to recognize bad news about the company and consequently hold the stock too long.

Another bias which many investors fall prey to is Gamblers' fallacy. After large gains and losses, emotions are particularly strong according to Thaler and Johnson (1990). Large gains cause the investors to become greedy and they feel that they are betting with someone else's money. This causes them to accept too much risk. On the other hand, large losses cause investors to either become loss averse completely to the investment activity as defined by Kahneman and Tversky (1979) as loss aversion or they may cause the investors to take more risk in an attempt to recoup their loss. This event is defined by Shefrin (2000) as "get eventitis". In either case these biases clouds judgement and investment decision making process.

Another bias which causes faulty decisions in investment decision process is herd behaviour. Investors show a tendency to mimic the actions of a larger group though individually, they would have not made the same choice. The cause behind this may be the social pressure of conformity and another may be a common rationale that a large group is unlikely to be wrong.

Although it is a very difficult task to present heuristics and biases because they arise from a variety of cognitive

mechanisms, an attempt is made here to present those psychological biases which arise out of individual investors' cognitive and emotional limitations. If the individual investors overcome these biases and take appropriate steps to check themselves at the right time, such mistakes will have less influence on investment decisions and potentially lead to improved investment results.

Conclusion

Behavioural finance presents a paradigm shift in explaining investment decision making process of individual investors by throwing light on various psychological biases. No easy solutions exist for overcoming the affects of these biases according to Belsky and Gilovich (1999). Merely learning about them will also not eliminate them but at least it will be the first step towards appreciating the importance of this field of study and the limitation of traditional finance in explaining complex phenomena in the financial markets. Baker and Nofsinger (2002) suggest that investors should understand and recognize biases and develop quantitative investment criteria to achieve their investment goals.

This paper is an attempt to understand individual investment decision making from a behavioural perspective. The awareness and knowledge of this field of study is at a very nascent stage in India. An emotionally restrained approach to investing based on behavioural finance will go a long way in helping them attain their desired objectives.

References

- American Heritage Dictionary, 2003.
- Baker, H.K, Nofsinger J.R, (2002), Psychological Biases of Investors, *Financial Services Review*, 11, 97-116.
- Barros, G. (2010). Herbert A. Simon and the concept of rationality: Boundaries and procedures. *Brazilian Journal of Political Economy*.
- Belsky, G, and Gilovich, T, (1999), *Why smart people make big money mistakes and how to correct them*, Simon and Schuster, New York.
- Benartzi S, and Thaler, R, (1995), Myopic Loss aversion and the equity premium puzzle, *Quarterly Journal of Economics*, 110(1).
- French, K, and Poterba, J, (1991), Investor Diversification and international equity markets, *American Economic Review*, 81(2).
- Fromlet, H. (2001). Behavioural Finance - Theory and Practical Applications. *Business Economics*, 36(3).
- Huberman, G, (2001), Familiarity breeds investment, *Review of Financial Studies*, 14(3).
- Kahneman, D. and Tversky, A (1974). *Judgement under Uncertainty: Heuristics and Biases Science*, 185.
- Kahneman, D. and Reipe, M.W. (1998) Aspects of Investor Psychology *Journal of Portfolio Management* 24(4).
- Kahneman, D. and Tversky, A (1979), Prospect Theory: An analysis of decisions under Risk *Econometrica*, 47(2).
- Olsen, R. (1998). Behavioural Finance and its implications on Stock Price volatility Association for Investment Management and Research, *Financial Analysts Journal* 54(2).
- Parikh, P. (2009). *Value Investing and Behavioural Finance: Insights into Indian Stock market Realities*. Tata McGraw Hill Education Pvt Ltd.
- Shefrin, H, (2000), *Beyond Greed and Fear: Understanding Behavioural Finance and the psychology of investing*, Harvard Business School Press, Boston.
- Shefrin, H and Statman, M, (1985), The disposition to sell winners too early and ride winners too long: Theory and evidence, *Journal of Finance*, 40(3)
- Simon, H.A. (1957). *Models of Man, Social and Rational: Mathematical Essays on Rational Human Behaviour in a social setting*. John Wiley

and Sons, New York.

Simon, H.A. (1972). *Theories of Bounded Rationality*.

McGuire C.B., Radner R. (eds), Decision and Organization, North Holland Pub. Co. Amsterdam

Smith, A, (1759) *The theory of Moral Sentiments*, Second Edition, Printed for A. Millar, in the Strand; and A. Kincaid and J. Bell, in Edinburgh

Thaler, R.H, Tversky, A, Kahneman, D, Schwartz, A, (1997), The effect of Myopia and Loss Aversion on Risk taking - an experimental Test, *Quarterly Journal of Economics*, 112(2).

Thaler, R, and Johnson, E (1990), Gambling with the house money and trying to break even: The effects of prior outcomes on risky choice, *Management Science*, 36(6).

Thaler, R, (1999) Mental Accounting matters, *Journal of Behavioural decision making*, 12(3).

Tversky, A, Kahneman, D, (1981), The framing of decisions and psychology of choice, *Science*, 211, 4481.