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"Behavioural Biases and its Implications on Investment Decision-Making: A Literature Review"

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Abstract
The arrival of behavioural finance gave new areas for exploring and investigating the manner through which investors take investment decisions that consider psychological factors. It gives explanations to the questions of why and how investors react to certain information regarding their investment decision making. Behavioural finance is presently becoming an eminent method of sculpting investor behaviour because it heavily influences investment decision-making. The paper is an attempt to highlight the conceptual framework of behavioural biases of investor behaviour and its present importance in investment decision making. The study concluded that behavioural finance treats investors as normal rather than rational. Behavioural biases that are discussed influences investor's decision making and it has considerable implication on it. Thus, the behaviour aspects of investors affect their investment decisions.

Introduction
"Investing isn't about beating others at their game. It's about controlling yourself at your own game".

- Jason Zweig

Decision-making in itself is a complex action which deals with selection of an action among various alternatives available by considering different factors. Mostly, decision making is based on personal means and factors as well as technical factors. In the same way, while making investment decisions, investors often tend to base on these factors knowingly or unknowingly. Moreover, decision-making by an individual investor is mainly based on their personal factors such as age, education, income, investment experience and investment portfolio. Apart from personal and technical factors, investor needs to analyse several mechanical factors as well as the environment.

A good understanding of environment is always required for taking a good decision. There are a lot more factors on which ample amount of researches have been done that must be scrutinized by investors while taking investment decisions. It is almost impossible to take decision by imitating other investor's techniques because each person varies in level of knowledge, experience and other factors that will influence the psychology of investing. The other significant reason for difference in investment decisions is their financial soundness and their risk appetite. Hence it may not be always possible for investors to take rational decisions. In a nutshell, they suffer from different psychological biases which hamper the quality of their investment decision.

Investors usually ignore these biases which ultimately lead to bad decisions. This is thus need of the hour to study and increase knowledge regarding behavioural aspects of investment decision making. This will aid investors to take optimum decision with the information that is available to them and to minimise the mistakes that can convert into risk in near future.

With the help of Behavioural Finance, behavioural biases of investors as well as their investment decisions can be studied. It tells about how investors react and how should they react to the information provided to get the optimum investment decision for them. Behavioural Finance strongly contends that psychological principles is the backbone on which investor behaviour relies and it affects their investment decisions in some or the other way.

Statement of the Problem

Being an emerging field of study, behavioural finance is two decades old only. Hence, it needs more rigorous researches of qualitative as well as quantitative nature. Behavioural biases explained by behavioural finance plays significant role in investment decisions of investors. Therefore, these biases are required to be studied in the view of investment decision-making.

Objectives of the Study

1. To provide theoretical background of how Behavioural Finance came into existence.
2. To identify the behavioural biases and explore their implications on investment decision making.

Significance of the Study

Not a single investor is untouched by behavioural finance as it explains investor behaviour in the light of human psychology. Therefore, it is need to study the dominating behavioural biases which influences the investors. Behavioural biases are needed to be studied because it will help the investors to consider these factors while taking investment decisions and reduce the errors and mental mistakes, they commit during decision making process. This will help them in developing logical thinking. Furthermore, there is scope of quantitative study of these factors and its impact on investment decisions.

Methodology of the Study

This paper is conceptual and descriptive in nature. It is bottomed on the different research papers, journals, articles associated to behavioural finance and psychological biases which are available on internet-based sources. Apart from that, several other related books and journals available are also explored to get the conceptual framework of the paper.

Evolution of Behavioural Finance

The standard finance (neo classical finance or rational finance) model was evolved by people like Franco Modigliani, Merton Miller, Harry Markowitz, William Sharpe, Robert Merton, Myron Scholes and Eugane Fama. It played an important role in increasing our understanding of how psychology influences financial decisions. The concepts and methods of standard finance are very useful for investors and corporate managers while taking investment decisions. However, standard finance has its limitations and weaknesses which were pointed by behavioural economists earlier. Behaviouralists challenged the basic assumption of the standard finance model which states that people behave in a rational manner while making financial decisions. They asserted that people frequently suffer cognitive and emotional biases which can eventually led them to make substandard investment decision which implies that they react in an irrational manner.

The finance field was very much disinclined to accept the views of psychologists who proposed the behavioural finance models. With the emergence of the influence of psychology and emotions on decisions become more potent, behavioural finance has received significant attention. The award of 2002 Nobel Prize in economics to psychologists Daniel Kahneman and experimental economist Vernon Smith made the field of behavioural finance more famous. Further recognition came when the Nobel Prize in economics was given to behavioural economist Robert Shiller in 2013 and to Richard Thaler in 2017.

Being human, investors process information by considering shortcuts and emotional filters. This process affects investors such that they act in apparently irrational manner, and make insignificant decisions. Suboptimal decisions are caused due to processing of wrong information or interpretation with inconsistent decisions. Investor suffers a lot because of their own or sometimes by other’s mistake due to the use of emotional factor in investment decision making. Behavioural finance explores how people deliberately ignore rudiments and make investment decisions considering sentiments and emotions.

Behavioural Finance principles and its implications on Investment Decision-making

Psychologists have propounded systematic structure of biases on how people perceive opinion and take decision. These biases affect decision maker to form investment opinions, and in which ways investors take investment decisions. Moreover, major investment decisions are guided by people’s emotions and connected ubiquitous human unconscious desires, fears and psychological traits. This gives rise to behavioural biases which are bifurcated into: Framing, Heuristics. These biases trickle down in our subconscious mind and consequently affect investment decision making.

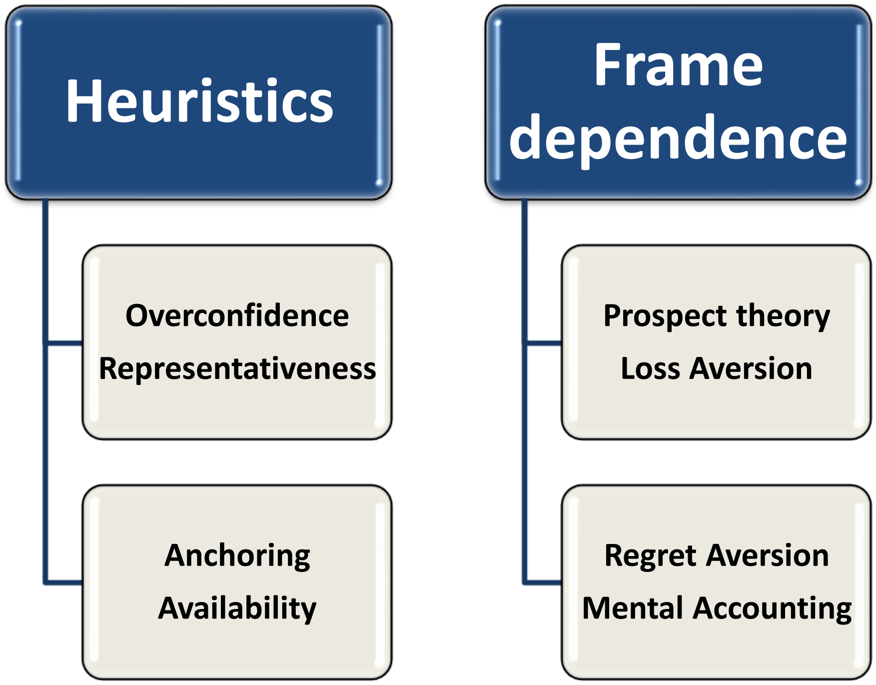

Figure 1

Heuristics

Heuristics are decision processes in which humans attempt to make mental short cuts. Heuristics refers to basic thumb rule in determining probability and potential consequences. It is the process by which the investors look for things in their own way, mostly by trial and error resulting in formation of rules of thumb. In other words, it refers to the rules of rules of thumb, which human beings use to make decisions in complicated and risky environment. Mostly there is high probability that heuristics led to poor decisions. The outcomes of heuristics can result between favourable to unfavourable, and disastrous (Shabarisha, 2015).

It consists:

1. Overconfidence

In the words of M.S. Forbes, "Too many people overvalue what they are not and undervalue what they are". People exaggerate their ability to monitor, overestimate their knowledge, and underestimate risks. Overconfidence is defined as the propensity of people to overestimate that their forecasts is generally valid and precise and their knowledge about market and upcoming events is good enough. Investors with overconfidence overestimate their capacity to foresee market events, and as a result, they frequently incur risks without earning corresponding returns. According to psychological studies, while people's levels of overconfidence vary, practically everyone exhibits it to some extent. This kind of behaviour is predominated in all categories of professionals (Barber & Odean, 1999). Psychologists say that due to overconfidence people overestimate their knowledge, underestimate risks, and exaggerate their ability to control things.

Implication of Overconfidence on investment decision-making

- Overconfident investor often thinks that they are assessing very explicitly a company as a good investment option.

- Overconfident investors may trade in a large quantity due to the illusion of being well versed of all the necessary information.
- Due to lack of knowledge or understanding or inability to process information optimally, they may take extra risk in their portfolio basket.
- Overconfident investors often have portfolio which is not well diversified, thus envisage extra risk without taking in consideration their degree of risk tolerance.

2. Representativeness

The term "representativeness" refers to our propensity to assess the likelihood of something based on how well it resembles to something else in spite using probabilities. Representativeness is the degree to which an event is common in remarkable features to its population and displays the charecteristics of it. It is a psychomotor driven action in which an individual perceives a situation based on a pattern of prior experiences or opinions about the scenario. One element of representativeness is also referred as the “law of small numbers”, which presupposes that small samples justly represent whole population. It is also termed as getting conclusions from very little data (Kumari & Sar, 2017). Representativeness refers to our tendency to evaluate how likely something is with reference to it resembles. Although representativeness is a good rule of thumb, it can also lead to erroneous conclusions.

Implication of representativeness on investment decision-making

- Investors sometimes conjecture that good companies are mostly good stocks, although the opposite may be true in practical situations.
- Representativeness causes investors to overreact to novel inputs very much importance in building their upcoming forecasts.
- Investors opine that enormous development of earnings in the past will be a fair representative of substantial growth rate in coming future.

3. Anchoring

Anchoring is the tendency to attach or ‘anchor’ our thoughts to a point which is often referred while taking investment decisions, even though it may not be as logical as people suppose. It may be seen as an improbable occurrence; anchoring is very much prevalent in the situations where people are handling with concepts that are novel. Individuals construct their own estimations based on an early and random value and then alter it depending on fresh information, but the adjustment process is often insufficient because emphasis is placed too much on the initial value (Barberis & Thaler, 2003). People who make decision under obscurity use this heuristic by initiating their decision-making process with a certain reference point (anchor) and then adjust it to reach a final result.

Implication of anchoring on investment decision-making

- Investors make market forecasts which are proximate to present levels.
- Investors stick heavily to their original estimates when anything new is absorbed about a company.
- Investors tend to make forecasts of the proportion that a asset class rise or fall on the basis of present level of returns.
- Investors get anchored on the economic conditions and situations of companies.

4. Availability

Availability is referred to the people’s frequency to form their decisions on the basis of the provided facts, reports and data without digging into it. Its first explanation was given by (Tversky & Kahneman, 1974) and termed this as the phenomenon in which decision-making is influenced by the ease with which examples and associations come in mind of the individual. People take decisions subjected to the information apparently available and do not take much effort and pain to search for any detailed evaluation. Availability is a cognitive heuristic in which decision making derived from knowledge that is easily accessible rather than analysing other options or procedures.

Implication of availability on investment decision-making

- Investors may opt investments acquired from information that is available, accessible and simple to them and will not do research in the area before investing their money.
- Investors would select investments based on categories that they made in their minds long ago. They are not able to relate the logical inputs with the future prospects of their decisions.
- Investors may invest in those securities which fit with their limited spectrum of experiences they gained from the relative environment.
- Investors will choose the investments that reverberates their personality traits or that is having features to which investors found sense of belonging to them.

Frame dependence

Investors react to several situations differently considering the context in which a decision problem is framed. The manner a question is formulated in relation to the problem being reviewed is called framing. How questions are constructed positively or negatively—can impact an investor's readiness to embrace risk.

1. Prospect theory

The Prospect Theory is proposed by Kahneman Tversky in which they described how people frame and give weight the decision including qualm. According to prospect theory, people consider the options in terms of potential gains or losses in relation to specific reference point, which is generally a purchase price. The theory was explained by a value function as in figure

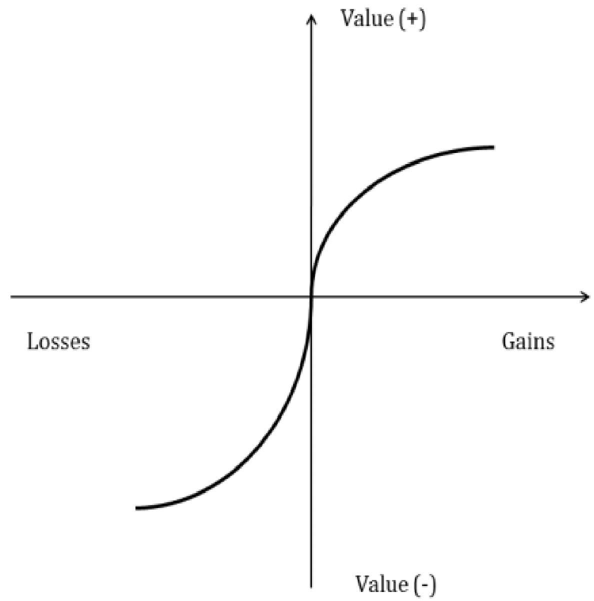

Figure 2 Value Function under Prospect Theory

- The value function is concave for gains. These means that people feel good when they gain, but twice the gain does not make them feel twice as good.
- The value function is convex for losses. This means that people experience a pain when they lose, but twice the loss does not mean twice the pain.

2. Loss Aversion

Loss Aversion is a pervasive phenomenon in investment decision making along with risk and uncertain situation. Due to which people are more sensitive and responsive to losses than gains. Investors develop propensity to be risk seeking after consecutive losses but becomes risk averse with the potential gains. Aversion is a feeling of dislike or disinclination, as well as a sense of loss. Aversion refers to a dislike for or discomfort with a loss (Sharma, 2016).

Implication of Loss Aversion on investment decision-making

- Loss aversion leads to detain the non-profitable investments which must be get excluded from the portfolio.
- Investors are prone to sell profitable investments soon in order to mitigate their losses.
- It can cause investors to undertake risk which may become unbearable after a point of time.
- It can cause investors to hold unbalanced and undiversified portfolios.

3. Regret Aversion

Regret Aversion is the term which is used to describe the emotion of regret experienced after making a choice that either turns out to be bad choice or at least an inferior one (Loomes, Graham and Sugden, 1982). Regret Aversion is the tendency to eschew taking decisions because they cultivated agitation that, in hindsight whatever alternative they will pick it will prove less than what they want. Basically, they try to ignore the feeling of regret related with suboptimal decision making. Regret is the feeling of disappointment that comes from not making the best decision. It's a sense of loss and feeling of disappointment (Kumari & Sar, 2017). It is a cognitive phenomenon that arises in investors which ultimately leads to keep not-so-good investments for relatively longer in order to avoid committing errors and suffering losses. It is the tendency of investors to escape the pain of a bad investment decision, resulting to delay selling stocks in order to avoid finalizing their loss (Konstantinidis et al., 2012). **Implication of Risk Aversion on investment decision-making**

- Regret aversion can cause investors to be conservative regarding their investment alternatives. Previous experiences of losses will make them to back out taking any fearless decision.
- It can cause investors to flee away from the markets that are showing downturn so that they are not prone to potential losses.
- It can cause “herding behaviour” as they may think that people are investing in the same company or set of securities to avoid risk aversion.
- It may lead investors to occupy their portfolio with profitable and secure investments for certain period; this is done to procure more and more profits.

4. Mental Accounting

Individuals and households employ a series of cognitive procedures called mental accounting to manage, evaluate, and keep records of their financial actions (Thaler, 1999). People have a proclivity to code, classify, and analyse economic results by organizing their assets into a variety of diverse mental accounts. In other words, people segregate their money into different mental accounts and treat a rupee differently from a rupee in another because each account has a different significance to them. People's propensity to categorize incidents into various mental accounts based on trivial characteristics is known as mental accounting (Station & Shiller, 1999).

Implication of Mental Accounting on investment decision making

- Mental accounting can cause investors state of dilemma relating to dividend gains and capital appreciation.
- It may cause investors to obtain assets differently when employer interests and stock is also considered while investing.
- It can cause investors to avoid taking out the investments which were profitable for a period but now is not anticipated to do well in markets.

Conclusion

Though all the behavioural biases are thoroughly ascertained it does not mean that all the investors will suffer from all the above biases simultaneously. Investors are prone to all the psychological aspects but may face some of them during investment decision making process. This is because investors are not machines but are human beings who can get affected by past actions, information and by emotions and social influences. Biases put forth by the Behavioural Finance is considered while taking decisions, it will reduce cognitive errors and mental mistakes that leads to suboptimal investment decisions. By analysing biases and increasing concentration, the investors make their decision more efficiently and there will be fewer chances of psychological errors while making investment decisions. These psychological biases will also develop logical thinking, making investment decisions better than before and will make their investment portfolios profitable over a long horizon. The study is concluded with a statement.

“The investor’s chief problem-and his worst enemy is likely to be himself. In the end, how your investments behave is much less important than how you behave”.

-Benjamin Graham

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