

**BEHAVIOURAL FACTORS AFFECTING INVESTMENT DECISION:
PROSPECT THEORY APPROACH**

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Abstract

Human beings are made up of emotions in addition to reason but emotions sometimes tend to dictate their investment decision. The behavioural traits which tend to influence the financial decision generally and investment decision of economic agents are numerous. Using content analysis method, this paper reviews some of the behavioural factors influencing investment decisions with emphasis on prospect theory. This is aimed at provoking further empirical research on the subject and to further create the awareness on the need for incorporation of these factors in investment decisions and as well as in financial modelling. From the review, it was discovered that although behavioural factors: mental accounting, regret avoidance, loss aversion and self-control, have impact on investment decision but there is a need for investors to further give adequate recognition and consideration to these factors, manage these biases and strategize to avoid any kind of bias, in their investment decision making so as to minimize losses.

Keywords: behavioural finance, bias, investment, prospect theory, mental accounting

1.0 INTRODUCTION

Behavioural finance as the science, psychology as well as sociology of financial decision making of individuals as well the entire financial market, postulates that human are bounded-rational and not completely rational. This tendency, for instance, reflects in their behavior as they make investment decision. Hence, human decisions like investment decision are subject to several cognitive and emotional illusions. These emotions affect human perceptions hence the tendency of exhibiting biases in financial (investment) decision-making process.

Investment decision is a component of the three basic financial decisions. It involves the use of resources in a business, project, securities, in expectation of returns. Unlike the traditional finance theory which holds that human beings make their investment decision based on purely rational basis without the influence of behavioral factors like biases and heuristics; behavioural finance (BF) recognizes behaviors and mood states of human beings are factors that impact their investment decisions. For instance, Singh (2012) asserted that bias and framing effects cause market prices to deviate from fundamental values. Biases may result in: over or under- reaction to price changes or news; extrapolation of past trends into the future; lack of attention to the fundamentals underlying a stock; undue focus on popular stocks. If such patterns exist, there may be scope for investors to exploit the resulting pricing anomalies to capture superior, risk-adjusted returns. These reflect the potential influences of biases, heuristics and other behavioural factors on the individual investors and the entire stock market.

While few past studies (Islam, 2012; Antony & Joseph, 2017; Joo & Durri, 2017) acknowledge these behavioural factors, quite a considerable number of other works (Olowe, 2007; Yaya & Shittu, 2010; Izedonmi & Abdullahi, 2011; Adaramola, 2012; Akingunola, Adekunle & Ojodu, 2012; Subair & Salihu, 2013; Mohan & Chitravedi, 2014) follow the view of perfect rationality and they seem to omit these behavioural factors in their works. Their failure to discount these human biases in their investigation is a subject of concern, considering the fact that human beings are not made up of reason but are also bundles of emotions and other behavioural traits, which tend to affect everything they do including making of financial decisions like investment. Therefore, this paper attempts to review some of the behavioural factors influencing investment decision of economic agents with a focus on prospect theory. The balance of this paper is organized as follows. First, Introduction, followed by literature review covering concepts of behaviour, and investment, prospect theory, and behavioural factors affecting investment decision. The subsequent section presents the methodology adopted for the paper. This is followed by discussion of findings, and finally, conclusion.

2.0 LITERATURE REVIEW

2.1 Concept of Human Behaviour

Behaviour has been described as the range of actions and mannerisms by individuals, organisms, systems, or artificial entities in conjunction with themselves or their environment (Wikipedia, 2019). In psychology, the interaction or the mutual relations between the stimulant, organism and the reactions is called behavior. Behavior has also been defined as everything that an individual might do or try. Hence, visible actions such as speaking, walking, watching eating, as well as

invisible /internal experiences like thinking, feeling, rejoicing, remembering, forgetting, learning are considered to be behavior (Tutuncu & Kucukusta, 2006). Guez, and Allen (2000) defined behaviour as the way in which an individual behaves or acts or the way an individual conduct herself/himself. It is the way an individual acts toward people, society or objects. Furthermore, Wikipedia (2019) stated that human behavior is the reaction of individuals or groups of persons to internal and external stimuli. Therefore, human behavior can be defined as the sum total of all actions, inactions, reactions, and internal experiences of human beings as they relate with the society, others, objects and themselves.

Behavior has been categorized into three classes (Kiyilar & Acar, 2009). Firstly, directly observable behaviors are behaviors that can be observed be expressed numerically like gestures, mimics and speech. Secondly, indirectly observable behaviors are such behaviors such as being loved, understanding and forgetting that can only be felt or expected but cannot be observed directly. Thirdly, the behaviors that occur by means of the nervous system. These occur at the sense organs by means of muscles (Kiyilar & Acar, 2009).

2.2 Investment

The term investment refers to the current commitment of money or other resources in the expectation of reaping future benefits (Bodie, Kane & Marcus, 2011). According to Copeland and Weston (1988) the investment decision is essentially how much not to consume in the present in order that more can be consumed in the future.

Investment could be short term investment, medium term investment or long term investment. Investment, whether in real assets like plants and machinery, motor vehicles or in financial assets like shares and bonds which last for a maximum of twelve months may be regarded as short term investment; and any investment which matures between 1 to 5 years may be considered as medium term investment. Long term investments are investment in securities and/or real assets whose duration exceeds five years (Babarinde, Muhammad & Abiodun, 2015). Similarly, investment could also be classified as either real or financial. The former refers to commitment of resources in long term capital assets that are tangible like investment in machinery, plants, furniture while the latter means investment in securities like bonds, shares, stocks, debentures and other financial assets which are not tangible.

2.3 The Prospect Theory

Prospect theory as developed by Kahneman and Tversky (1979) states that people tend to express a different degree of emotion toward gains than losses. Accordingly, people tend to be stressed more by prospective losses than they are buoyed by the

prospect of equal gains. Human beings are assumed to be only risk-averse in gains but risk-takers in losses and hence they place much more weight on the outcomes that are perceived more certain than those that are considered mere probable. Consequently, people make decisions based on the potential value of gains and losses rather than on the utility of the decision. As described by Chandra (2008), prospect theory as an alternative model for expected utility theory describes how people frame and value a decision involving uncertainty. Therefore, the key elements of the theory are mental accounting, loss aversion, regret aversion and self-control.

According to the theory, people look at choices in terms of potential gains or losses in relations to a specific reference point which is usually the purchase price. Investors value gains/losses based on an S-shaped utility function as illustrated in Fig 1 below.

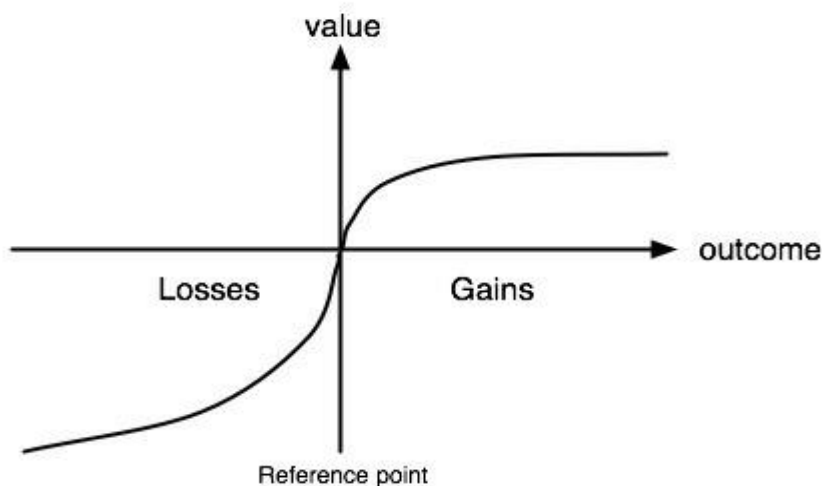


Fig. 1: Prospect Theory Value Function

Source: Cohen (2015)

Chandra (2008) identified three features of the prospect theory's utility function. First, the utility function is concave for gains. This implies that investors feel good when they gain but twice the gain from investment does not make them feel twice good. Second, the utility function is convex for losses. This means that people experience pain when they lose, but twice the loss does not mean twice the pain. Finally, the utility function is steeper for losses than for gains, a phenomenon termed loss aversion.

The implication of this feature is that people feel more strongly about the pain from a loss than the pleasure from an equal gain, which is about two and half times as strongly.

2.4 Behavioural Factors Affecting Investment Decision

The behavioural and psychological factors affecting investment decision are in the form of biases and heuristics. The rules-of-thumb, simple and approximate rules, guiding procedures, shortcuts or strategies that are used in solving problems are called heuristics (McMahon, 2005). On the other hand, biases, according to Taleb (2008) means prejudices, preferences, predisposition and inclination towards something/event/phenomenon (Siminova, 2015). Differentiating between biases and heuristics, McMahon (2005) asserts that biases occur when cognitive abilities limit capacities, which generally bring about inferior decisions. Heuristics, on the other hands, may, or may not change the qualities of decision outcomes.

Financial decision makers especially investors usually engage in brain/emotion war when making decisions. Hence, the involvement of behavioural biases in investment decision making process of most investors. The following behavioural factors, considered to be the building blocks of prospect theory: mental accounting, loss aversion, regret avoidance and self-control are examined.

2.4.1 Mental Accounting

This means the set of cognitive operations employed by individuals and households to organize, evaluate and keep record of financial activities, resulting in a tendency for people to segregate their money into separate accounts based on a variety of subjective reasons. It is the set of codes people use when evaluating an investment decision resulting in low or no diversification of investment. It is a tendency of the brain to create short cuts of how it perceives the information and ending up with outcomes that are difficult to be viewed in any other way (Sherif, 2016).

Researchers have opined that mental accounting means the human tendency to put things in boxes and track them individually. In other words, it the failure to consider all elements of the portfolio as an integrated whole (Elton, Gruber, Brown & Goetzman, 2007). It is a specific form of framing in which people segregate certain decisions that results in the propensity of individuals to organize their world into separate 'mental accounts' (Bodie, Kane & Marcus, 2011; Singh 2012). Framing is basically concerned the way a problem is presented (framed) to a decision-maker and how this affect response of the decision-maker to the problem at hand. Hence, to a decision maker, there is a significant difference in terms of decision outcome, if the problem is framed in terms of losses as opposed to gains (McMahon, 2005). For example, an individual may not accept a bet when is framed in terms of the risk surrounding potential gains but may accept the bet when presented in terms of the risk surrounding possible losses. This means therefore that the individuals may act risk averse in terms of gains but risk-loving in terms of losses (Bodie, et al., 2011). Similarly, people generally have the tendency to perceive and treat their hard-earned

money different from inherited money. Therefore, mental accounting is the behavioural tendency of people to evaluate, classify and record different financial decision problems in separate mental accounts, without the rationality of these choices into a single portfolio decision.

2.4.2 Loss Aversion

As one of the concepts of Kahneman and Tversky (1979)'s prospect theory, loss aversion simply refers to the tendency that makes people dislike losses more than they like gains (Sharma, 2016). Loss aversion can thus be summarized using the expression: 'Losses loom larger than gains' (Kahneman & Tversky, 1979, p.279). It is thought that the pain of losing is psychologically about twice as powerful as the pleasure of gaining. Consequentially, as people are more willing to take risks to avoid a loss, loss aversion can explain differences in risk-seeking versus aversion (www.behaviouraleconomics.com, 2018).

2.4.3 Regret Avoidance

Regret as a painful experience is the feeling of ex-post remorse about a decision which led to a bad outcome. Also called regret aversion, it is a psychological error that arises out of excessive focus on feelings of regret at the time of decision making, which eventually turns out to be poor, because the outcomes of the alternative are visibly better for the investor to see. People naturally avoid actions that create regret and seek actions that cause pride (Sherif, 2016). It arises out of the desire to avoid feeling the pain of regret resulting from a poor [investment] decision. It entails more than just the pain of financial loss, but also embodies the regret of feeling responsible for the decision, which gave rise to the loss. Regret aversion can also encourage investors to continue to hold poorly performing shares. Similarly, it could encourage herding on the part of investors, for example, to invest in respected companies as these investments carry implicit cushion against regret (Singh, 2012).

2.4.4 Self-Control

This is a form self-restraint, a caution, and discipline put in place by investors to avoid excessive consumption and at the same time ensuring safe investment. Kannadhasan (2015) argues that self-control is required for all the investors to avoid the losses and protect the investments. In other words, investors are prone to temptation in investment and as result they look for tools and methods that facilitate self-control. Investors do mentally segregate their financial resources into classes: capital and available for expenditure, which can help them control their urge to over consume (Thaler & Shefrin, 1981).

3.0 METHODOLOGY

This paper being a review paper adopts content analysis method. The method is considered to be suitable because it enables the researcher to gather from the literature, current state of affairs on the subject matter research, so as to further synthesize novel ideas for further empirical/ theoretical research. The paper reviewed those behavioural biases influencing investment decision as embedded in prospect theory.

4.0 DISCUSSION OF FINDINGS

Although traditional finance (TF) assumes perfect rationality of the behavior of financial agents in a world of perfect information and certainty but in reality, where imperfections and uncertainty exist, human emotions and biases do influence their decisions like investment decision, consciously or unconsciously. This, therefore, brings about the need for human beings to be aware of these behavioural traits and strategize to avoid any kind of bias, and possibly manage them in their investment decision making process so as to minimize losses.

As an alternative approach to financial decision, BF, does not theorize principles that will eradicate emotions and biases. Rather, what it does is to suggest strategies of managing them so as to make prudent financial decisions. Understanding investor behavioural biases as well as market anomalies will ultimately result in improved decision making of individuals as well as the entire market.

Accordingly, many empirical works have been carried out on behavioural factors and investment decision. For instance, Islam (2012) found that among psychological factor, micro economic factor and social factor, psychological factor has the most dominating influence upon investor's decision making process. Also in their study, on the influence of behavioural factors affecting investment decision, Antony and Joseph (2017) discovered that overconfidence bias, representative bias, regret aversion, mental accounting, and herd behavior were among these factors. Specifically, based on the priority vector, it was found out that the investors of Kerala were significantly influenced with overconfidence bias and regret aversion but herd behaviour had less impact on their financial decision-making.

In the same vein, Alquraan, Alqisie and Al-Shorafa (2016) explored the behavioral finance factors influencing the stock investment decision of individual investors at Saudi Stock Market. Results of the study indicated that, behavioral finance factors such as loss aversion, overconfidence and risk perception have significant effect on the stock investment decisions of individual investors in Saudi Stock Market but herd has insignificant impact.

Joo and Durri (2017) also found that the influence of these biases or psychological traits ‘Overconfidence and Optimism’ and ‘pessimism’ vary from person to person and their impacts differ also. These biases play a significant role and may influence the rationality of the investors while they take financial decisions. Similarly, the two psychological traits, “Overconfidence and Optimism” and “Pessimism”, in individual investors are negatively correlated with rationality, with the degree of correlation of the former higher compared to the latter. In a related study, Javed and Marghoob (2017) investigated the effect of behavioural elements on individual investors and institutional managers in the stock exchanges of Pakistan. The study revealed that market factors, overconfidence factor, prospect factors, anchoring factor and behavioural factors are important factors affecting investment decision making.

Investment decision is colored by certain behavioural traits which are far from being perfectly rational but with inherent biases, emotionality which tend to significantly influence the investment decision process of economic agents. Both empirical and theoretical are in harmony on the reality as well as the impact of these behavioural factors on investment decision but the proper management of these traits in investment decision has not reached the desired level to fully harness the benefits of proper management.

5.0 CONCLUSION

Behavioural finance attempts to factor in sociological, psychological and behavioural factors into financial decisions of individuals as well as the entire financial market under the assumption of bounded rationality of the financial agents. For instances, while market prices of securities are assumed to be the intrinsic/true values by traditional finance, but these prices are affected by oddities of human behavior and human psychology thereby causing mispricing of securities sometimes. From the review, it was found that investors cannot shy away from the influence of emotions, biases and feelings in investment decisions. Specifically, mental accounting, loss aversion, regret aversion and self-control do influence investment decisions.

Investors cannot cure biases but can only attempt to mitigate its effects in their investment decision. Therefore, as part of the strategies for mitigating the effects of biases in investment decisions, it is recommended that: as investors you should learn to outsmart yourself and make better decisions that are free from any type of biasness of emotions; keep your emotions aside while making any investment; do your research to get enough information about your investment options; narrow down your investment options in order to reduce complexity; avoid the illusion of knowing everything and being in charge of all; prepare yourself for the good as well as the bad in investment; diversify your investment: don’t put all your eggs in one basket.

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