

A Study of Behavioral Finance in Investment Decisions

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Abstract—Behavioral finance is a broad field that incorporates the exploration of psychology, sociology, and finance. It delves into the intricate behaviors and biases of investors on a micro level, while also addressing anomalies within the efficient market on a macro scale. In today's context, behavioral finance is a well-established concept, as the influence of behavioral biases on investor actions and human decision-making is substantial. In this paper, we will critically examine a range of studies in this domain to gain a comprehensive insight into the realm of behavioral finance and its importance in shaping the financial choices made by investors.

Keywords – Behavioral Finance, Biases, Anchoring, Herd Behavior

INTRDUCTION

As standard finance has advanced, and intricate econometric models have become more prevalent, the realm of economics has increasingly shifted its orientation from a social science perspective to align more closely with the natural sciences. However, the rise of behavioral finance has played a crucial role in preventing a complete detachment of economics from the social sciences. It has achieved this by incorporating specialized scientific insights from disciplines such as psychology, sociology, anthropology, and economics, ultimately refocusing its primary attention on individuals—the human element of economic phenomena.

Behavioral finance redirects the attention of economic theorists and researchers away from intricate mathematical and statistical models, emphasizing instead the examination of human conduct and psychological factors. Its primary objective lies in scrutinizing the decision-making process in finance, where proponents of behavioral finance often highlight the frequent deviations from the ideal of rational financial decision-making. Furthermore,

beyond these departures from rationality, another even more substantial concern arises—the recurring patterns of irrational behavior within the system. Behavioral economists attribute the irrational behaviors observed in the intricate realm of finance to cognitive biases, which arise due to the finite cognitive abilities of decision-makers. Essentially, systemic flaws in logical reasoning and irrational results stemming from the decision-making process are outcomes directly linked to these cognitive biases.

REVIEW OF LITRATURE

Though the literature of behavioral finance are very large, it is proposed to present some empirical case studies to focus light insight to behavioral finance and its application in decision-making.

Tversky and Kahneman who were known as the father of behavioral finance can be best explained in various phases by their works. Kahneman and Tversky (1979) authored a paper titled "Prospect theory: An analysis of decision under risk." This paper has been recognized as a significant contribution to the realm of behavioral finance because it introduced the foundational concept of prospect theory. This theory elucidates how investors make decisions when faced with uncertain prospects and known risks in their investment choices.

De Bondt and Thaler (1985) published paper titled: "Does the Stock Market Over-react?" in a Journal of Finance. It was observed that the investors are systematically over-reacting to unexpected and dramatic news consequences in substantially weak form inefficiencies in the security market. Mental accounting is a set of cognitive operations used by individuals and households to organize evaluate and keep track of financial activities.

In Nofsinger's 2001 study, he affirmed that traditional finance, prevailing for several decades, operated on the assumption that individuals make rational decisions and exhibit unbiased predictions about the future. A rational investor, in this context, is defined as someone who consistently (i) updates their beliefs promptly and appropriately upon receiving new information and (ii) makes choices that align with normative standards. However, the 2008 Financial Crisis, originating in the USA and triggering a global recession, raised widespread doubts about the extent of human rationality. A significant number of economists and influential figures in governmental and financial institutions found themselves caught off guard by the crisis and its subsequent repercussions, such as insolvencies and failures. Even as the crisis unfolded, many of them struggled to comprehend its magnitude and depth. Looking further back, the case of the hedge fund Long-Term Capital Management (LCTM) stands out, notably because it counted an ex-vice chairman of the Federal Reserve Board and two Nobel Prize-winning economists among its partners, along with 24 Ph.D.-holding employees. Despite this, LCTM ultimately faced failure. These instances of economists' failures, and by extension the theories they adhere to, have prompted the question: Do people genuinely make rational decisions in their financial choices? Or are they susceptible to being swayed by emotions such as fear and greed, which can lead to poor decision-making? Bernstein (2001) lends support to this perspective by suggesting that there is evidence indicating impracticality, divergence, and an inability in how individuals arrive at decisions and choices when confronted with uncertainty. Nofsinger (2001) also points out that psychologists have long challenged the assumptions of rationality and objectivity in human behavior.

Jay R Ritter (2003) has given a brief overview of behavioral finance published in Pacific Basin Finance Journal. In his research article, he rejected the traditional assumption of expected utility maximization with rational investors in efficient market. The two building blocks of behavioral finance, cognitive psychology and the limit of arbitrage. The article further highlights several empirical patterns like stock market bubbles in Japan, Taiwan and the US.

Simon Gervais (2009) in "Behavioral Finance; Capital Budgeting and Other Investment Decision",

Researcher had made a survey of literature on the effects of behavioral biases on capital budgeting.

Barberis and Huang (2001) have made an effort to investigate the incorporation of loss aversion into utility functions. Loss aversion, in this context, refers to the concept that investors experience more dissatisfaction from a decrease in wealth compared to the satisfaction gained from an equivalent increase in wealth in absolute terms. Their study demonstrates that when individuals exhibit loss aversion in relation to individual stocks, it results in excessive fluctuations in stock prices. This phenomenon occurs because when investors experience gains in a stock's value, they become more inclined to hold onto the stock, effectively lowering the discount rate, which, in turn, causes the stock price to rise. Furthermore, the effect of loss aversion is also evident in stocks with high market-to-book ratios, as these stocks have performed well and, as a result, require lower returns to reach equilibrium.

Grinblatt and Han (2002) argue that loss aversion can also provide insight into the momentum phenomenon. To elaborate, stocks that have experienced past gains face additional selling pressure, while stocks that have incurred past losses are not discarded as swiftly as they should be. This leads to an underreaction to publicly available information. In the equilibrium state, previously successful stocks are undervalued, and previously underperforming stocks are overvalued. This dynamic creates a tendency for mis valuation to correct itself over time.

According to Goyal, et al. (2023) the influence of herding on heuristics varies between equity and mutual fund investments. When it comes to millennials, it's probable that their reliance on the investment decisions of others in the realm of equity investments will correspond directly to their reliance on heuristics. Moreover, if this reliance on herd behavior, based on the trading activity of other investors, proves to be profitable for millennials.

Gavrilakis & Floros (2022) The study indicate that heuristic bias had a noteworthy and positive influence on how private investors construct their portfolios and their level of satisfaction with their performance. It was concluded that overconfidence stemming from heuristic factors significantly impacts how private investors built their portfolios and their satisfaction with their performance. The robustness test reinforces the idea that heuristics continue to be a fundamental

predictor of both portfolio construction and performance satisfaction. Additionally, it is observed that herding bias has a detrimental and statistically significant effect on the portfolio construction and performance satisfaction of finance professionals. Decision-making influenced by herding behavior can create an environment where asset correlations are elevated, leading to distortions in returns and deviations from the efficient market hypothesis. In summary, the field of behavioral finance has seen significant growth in recent years, but there is still a considerable amount of work to be undertaken in this area. One key area for further exploration is gaining a deeper understanding of which individuals exhibit biases and how these biases impact their investment decisions. Additionally, there is ample room for examining how behavioral biases influence the decision-making processes of individual investors. This study focuses on two important facets of behavioral finance: firstly, it delves into the factors that contribute to irrational behavior, and secondly, it addresses the identification of causal factors that influence people's investment behavior.

OBJECTIVES

The study has two objectives:

- To explore the theoretical framework of the origins of behavioral finance.
- To pinpoint a range of behavioral factors or variables that could potentially impact investment choices.

RESEARCH METHODOLOGY

The majority of the paper relies heavily on an extensive analysis of existing information from books and articles pertaining to investment strategies and theories in behavioral finance. The research objectives are oriented towards qualitative research methods, aimed at comprehending how behavioral theories influence individual decision-making.

History of Behavioral Finance

The field of behavioral finance originated in 1979 with the groundbreaking work of psychologists Daniel Kahneman and Amos Tversky, who developed prospect theory. This theory introduced a framework for understanding how risk influences financial decision-making. Through their research on the

psychology of risk, Amos Tversky and Daniel Kahneman pioneered the discipline of behavioral finance. Their contributions challenged the fundamental assumption of rationality inherent in the traditional economic model of decision-making. Tversky and Kahneman focused their studies on three key areas: risk attitudes, mental accounting, and overconfidence.

In 2002, Daniel Kahneman, often regarded as the father of behavioral finance, was awarded the Nobel Prize in economics. Another early influencer in the field was Richard Thaler. During the 1980s, Richard Thaler significantly expanded the domain of behavioral finance by forging strong connections between psychological concepts and economic principles. Over the past thirty years, the field of behavioral finance has evolved, gaining substantial backing from academic institutions and research bodies.

Some of the prominent causes of Behavioral Finance are defined below:

Anchoring

The principle of rationality posits that our thoughts and opinions should consistently derive from relevant and factual information. However, in reality, this is not always the situation. Instead, people often tend to attach or "anchor" their thoughts to a reference point, even when that reference point has little logical connection to the decision at hand. For example, despite a company's increased profitability, its stock price may not rise because investors assume that the rise in earnings is only a temporary phenomenon. Consequently, these investors remain anchored to their previous perception of the company's potential profitability, as they have not adequately adjusted to the new, positive information. It's important to note that this doesn't imply that investors will never deviate from their initial reference point or anchor. They may eventually recognize that the company is likely to maintain its profitability in the future, making its stock an attractive potential investment.

Overconfidence

Individuals often exhibit an inclination to overestimate their own skills and understanding. They commonly underestimate the level of uncertainty in their opinions or predictions, while simultaneously exaggerating their own competence. Terrence Odean, in his

research, identified that overly confident investors tend to engage in more frequent trading activities because they hold the belief that they excel in selecting superior stocks and determining the optimal moments to enter or exit positions. Consequently, this overconfidence can result in investors not fully responding to new information, ultimately leading to lower returns compared to the broader market.

Herd Behavior

Herd Behavior, a phenomenon where individuals tend to mimic the actions of a larger group, whether rational or irrational, can be attributed to two primary factors. Firstly, there is often a social pressure to conform, as most individuals prefer not to be isolated from their social groups. Secondly, there is a widely held belief that a large group's actions are less likely to be incorrect. Within the realm of behavioral finance, the act of buying stocks based solely on price momentum, while disregarding fundamental economic principles of supply and demand, is referred to as herd behavior, which often leads to flawed decision-making. An illustrative example from the late 1990s is the rush of venture capitalists and private investors who poured substantial amounts of money into internet-related companies, despite the majority of these companies lacking sound financial business models.

Over and Underreaction

In the financial market, we frequently observe an exaggerated response to news, whether it's positive or negative. Investors tend to exhibit heightened optimism when the market is on an upswing and increased pessimism when it's in a downturn. The overreaction and underreaction of investors illustrate instances of irrational optimism and unwarranted pessimism.

Loss Aversion

Loss aversion refers to a phenomenon where an investor tends to adopt a risk-seeking attitude when confronted with potential losses but becomes risk-averse when considering potential gains. Daniel Kahneman has described investors as being characterized by "loss aversion." This implies that individuals are more inclined to take on greater risks to prevent losses compared to the risks they are willing to take to achieve gains.

Role of Behavioral Finance in Investment Decisions

Behavioral finance examines how the emotions and psychology of investors influence their investment choices. It investigates why people, including investors, make common errors in financial decision-making due to emotional factors. Despite being rational beings driven by the pursuit of financial gain, humans are also emotional beings, and many life decisions are influenced by emotions.

Investors often make decisions in the financial world based on irrelevant data, such as buying stocks that have recently experienced significant declines after a period of growth. They may perceive this as an opportunity to buy stocks at a lower price, ignoring the fact that underlying fundamentals can also lead to stock declines.

Cognitive dissonance refers to the perception of inconsistency between two cognitions, including attitudes, emotions, beliefs, or behaviors. When faced with contradictory thoughts, individuals may modify their beliefs to reduce this internal conflict. In financial contexts, investors may change their investment styles or beliefs to justify their financial decisions, particularly when they deviate from traditional norms. Regret theory suggests that individuals evaluate their expected reactions to future events and may experience regret if their decisions turn out unfavourably. This theory can apply to investor psychology in the stock market, where investors may avoid selling declining stocks to evade the regret associated with a poor investment choice. Conversely, they may follow popular trends to reduce emotional discomfort if those investments decline in value.

Prospect theory posits that people do not always make rational decisions and that psychological factors play a role in investment choices under uncertainty. It considers preference as influenced by "decision weights," which may not always align with probabilities. Moreover, it highlights that individuals tend to take riskier decisions when faced with potential losses, altering their risk preferences.

Strategies for Overcoming Behavioral Finance

In recent times, behavioral finance has gained significant importance within the decision-making process due to its substantial impact on investor performance. Comprehending the principles of behavioral finance can empower investors to make more informed choices when selecting investment

instruments and, importantly, avoid costly mistakes in the future. By recognizing their own biases and common judgment errors to which all individuals are susceptible, investors have the potential to enhance their performance. The central challenge in the study of behavioral finance revolves around identifying methods to reduce or eliminate the psychological biases that influence investors' decisions.

After an in-depth exploration of the behavioral finance literature, it is apparent that its effective application could lead to investors making fewer errors and achieving success. Decision-making by investors is influenced by a variety of psychological and behavioral factors. To mitigate mental errors and psychological obstacles when investing in stocks and mutual funds, it is essential to implement protective measures. All types of investors benefit from adhering to a disciplined trading strategy as a means of managing these psychological impediments.

Stock Market Investment

To effectively mitigate "mental errors" made by investors, it is imperative to adopt a "specific investment strategy" and maintain its focus over an extended period. Investors should diligently document the particulars of each stock acquired for their portfolio. Additionally, they ought to establish precise criteria that dictate their decisions to buy, sell, or hold positions.

Before making any decisions regarding the purchase, sale, or retention of new shares, investors should also consider the following questions:

- What is the basis behind the purchase of these securities or shares?
- What is the intended investment time horizon?
- What level of expected return is anticipated?
- How has the stock performed over the past year in comparison to expectations?
- Are there plans to buy, sell, or maintain the current position?
- What is the risk associated with this stock within the broader portfolio?

Mutual Fund Investment

Tomic and Ruccuardi have put forward a recommendation for investors to choose mutual funds through a straightforward four-step approach, as follows:

- Opt for no-load mutual funds with minimal operating expenses.
- Seek out funds that boast a robust historical performance track record spanning 5-10 years.
- Invest in funds managed by experienced Portfolio Managers who adhere to a strong investment philosophy.
- Gain a clear understanding of the specific risks associated with each mutual fund.

Achieving success in investing hinges on recognizing your investor profile and implementing a robust investment strategy. Behavioral factors can assist investors in avoiding errors, a practice known as employing defensive behavioral finance applications in the decision-making process for investments.

CONCLUSION

Behavioral finance offers insights into the reasons behind investors' irrational financial choices by examining how emotions and cognitive mistakes impact decision-making. It delves into several factors that have contributed to the development of behavioral finance, including anchoring, overconfidence, herd behavior, overreaction, underreaction, and loss aversion. In essence, the behavioral finance approach explores the behavior exhibited by investors and seeks to comprehend how these behaviors shape their investment decisions. This perspective not only provides valuable insights for investment professionals but also furnishes a foundation for assessing active investment strategies employed by investors.

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