

R.Kiruthika

Research Scholar(FT),PG and Research Department of Commerce, Srimad Andavan Arts and Science College(Autonomous), (Affiliated to Bharathidasan University), Tiruchirappalli, Tamilnadu, India

Dr.S.Ramya

Research Advisor, PG and Research Department of Commerce, SrimadAndavan Arts and Science College(Autonomous), (Affiliated to Bharathidasan University), Tiruchirappalli, Tamilnadu, India – 620005. Con. Email: sramya.commerce@gmail.com, ORCID ID:0000-0002-5058-4230

ABSTRACT

Purpose: This article reviews research articles on behavioural finance with the goal of analysing and describing the conduct of investors and how cognitive bias factors influence investors' decision-making and their effect on investments in financial markets. Some of the analytical and foundational work done over the years to establish behavioural finance as a respected and independent field of study is also discussed. Investor investment behaviour and investor investment patterns in the financial market are the subjects of this investigation.

Design/ Methodology/Approach: Using a descriptive research methodology, data on cognitive bias behavioural factors were gathered from 109 of 130 survey respondents. The survey used a form of stratified sampling. All variables, both nominal and on the Likert scale, were calculated using the quantitative aspect of the instrument. Journal articles, conference proceedings, working papers, and books were searched for behavioural finance-related keywords. The collection covered several decades, from beginning pieces to the most recent works (2023). The table details the various sources the writers consulted in order to compile their data. Investors investment decisions are analysed in terms of the extent of influence of cognitive bias elements using reliability test analysis, correlation analysis, and linear regression analysis.

Findings - Our research shows that only three of the five independent variables examined significantly impact investor behaviour, including confirmation bias, loss aversion, and the illusion of control. The research confirms the existence of the five cognitive behavioural biases that affect investors' decision-making in the financial markets. The results will aid financial advisors in providing personalised guidance to their clients.

Research implications - The existing procedure for making investment decisions has been proven to benefit from a deeper familiarity with the behavioural biases of individual investors. Cognitive biases, which might prevent investors from fully utilising their rationality while making investment decisions, are one topic of study in the field of behavioural finance, which investigates the irrational aspects of human investment behaviour.

Originality/value - Despite the fact that numerous studies have shown that investors are susceptible to cognitive and behavioural biases when making financial decisions, some groups of investors have reaped the benefits of these biases more than others, while still others have yet to see any return on their investment. The article suggests that cognitive behavioural biases are significant contributors to their investment decisions.

Keywords: Behavioural Finance, Cognitive Psychology, Cognitive Bias, Individual Investors, and Investment Decisions.

INTRODUCTION

"People in standard finance are rational. People in behavioural finance are normal." — Meir Statman Pompian (2012).

Behavioural finance is a relatively new school of thought within finance that seeks to enhance classic ideas by incorporating human psychology and intuition. It is the study of human interpretation and the ways in which people take action in response to information through interpretation that constitutes the field of Behavioural Finance Linter (1998). Investors thought processes, emotions, and the extent to which they play a role in decision-making are all things that behavioural finance hopes to shed light on Ricciardi & Simon (2000). Investor psychology and its impact on financial decisions is the focus of behavioural finance. We understand that people are susceptible to the influence of their sentiments and emotions. Such decisions are typically inefficient and arbitrary, which can have negative effects on the stock market. Behavioural finance is a subfield of financial economics that aims to explain the mental and emotional factors that play a role in the choices made by individual investors. Traditional financial theory holds that investors are rational actors who carefully consider all relevant data before making portfolio allocation judgements (Gopinath et al., 2019). Behavioural economists, on the other hand, argue that human cognitive and psychological shortcomings cast doubt on this premise.

Behavioural finance "studies how people actually behave in a financial setting," and it was established in the 1980s on the theoretical and experimental works of two psychologists, <u>Daniel Kahneman and Amos Tversky</u>, who contributed to psychology literature in the 1970s. More specifically, it's the study of how mental processes have an impact on the economy, corporations, and financial markets (<u>Nofsinger</u>, 2001).

Investors and financial professionals' financial decisions are influenced by psychological factors and biases, according to behavioural finance, a branch of behavioural economics (Selvam et al., 2019). As an added bonus, the influences and biases can be utilised to explain price fluctuations in the stock market, such as sudden increases and decreases. The SEC has dedicated personnel studying behavioural finance because of its significance to the investment process. Financial psychology is a subfield of economics that challenges the three tenets of classical economics—"rationality," "self-interest," and "perfect information"—by applying psychological principles to the study of individual and group investment decisions. Both limits to arbitrage, which argues that intelligent traders may find it challenging to undo the dislocations caused by less rational traders, and cognitive psychology, which catalogues the many deviations from full

rationality, serve as bedrock for the field. This field of study attempts to close the gap between Normative and Rational Acts. The factors that affect investors' financial decisions are not yet adequately addressed by a unified theory of behavioural finance. Neither basic nor technical studies have as much of an impact on investment decisions as do psychological considerations.

Behavioural finance is the study of how human behaviour and market events can be combined with insights from psychology and economics. Studies show that investors who rely on emotion instead of logic are more likely to make poor decisions, especially when it comes to active individual traders dealing in short-term investments (Pavithran et al., 2018). The context in which a choice is made has a greater impact on its outcome. Behavioural finance is a subfield of economics that tries to make sense of market inefficiencies by considering them from both a psychological and a financial standpoint. By incorporating psychological insights into economic decision-making, it seeks to improve conventional financial theory and correct common financial blunders made by individuals. The study's overarching goal is to learn how individual financial decisions influence markets. Investors' emotional and physical well-being affects their ability to make sound financial decisions, which might shift as their health does. There are many causes of bias, and these causes can be broken down into five main categories. When examining the outcomes and results of a business or sector, it is essential to understand and categorise different types of behavioural finance biases.

"People suffer cognitive dissonance when they are confronted with knowledge that contradicts their previously held views or preconceptions (Montier, 2002).

Many generations' worth of scholars have delved into the field of cognitive psychology. With the rise of the behaviourist paradigm in psychology in the early and mid-20th century, the study of cognition fell out of favour. Some behaviourists, including Wundt, claimed that introspective methods like his own were flawed because they relied too heavily on the subject's own point of view. Instead, behaviourists focused on what could be observed immediately, paying less attention to the underlying cognitive processes. The majority of the newly specified actions are mental ones. The vast majority of the things we do every day as humans require some degree of mental acuity. To think of a single time in one's day that does not entail some form of cognition is an exercise in futility. Cognition, in its simplest form, refers to the mental processes involved in thinking. The cognitive is therefore expansive and has many points of contact with other fields, both inside and outside of psychology, including social psychology, philosophy, and cognitive science.

The field of cognitive psychology investigates how we take in, process, and use information. Perception, curiosity, memory, language, choice, and problem solving are all areas that fall under this umbrella. The origin of the field may be tracked back to the early 20th century. Cognitive psychologists delve deeply into a certain type of human conduct. Assessments of accuracy, memory, and perception are all frequent ways to evaluate performance on a task. Time is another common measurement, and it can be used to assess how long it takes to do anything like recognise the environment or solve a problem. Some activities, such as measuring brain activity in cognitive neuroscience, may be unique to the field of cognitive psychology.

A cognitive bias is a fallacy of reasoning that occurs when an individual's values and beliefs influence the decision they make. Both investors and scholars study the impact of cognitive biases in behavioural finance. In this study, we examine the cognitive psychological biases (Confirmation Bias, Hindsight Bias, Loss Aversion, Illusion of Control, and Mental Accounting) that influence investors' investment decisions from a behavioural perspective. The irrationality of our financial choices could be the result of cognitive biases. As a result, we run the risk of jumping to the wrong conclusions when evaluating potential investments or financial actions, which could have negative consequences. Long-term investment success requires awareness of and, ideally, avoidance of common cognitive biases. This may lead to more prudent judgement, which in turn may lessen investment risk and boost long-term profits.

I discuss the role of cognitive bias in influencing investors investing decisions and its application to the field of behavioural finance in this article.

REVIEW OF LITERATURE

The field of behavioural finance owes a great deal to the pioneering research of Richard Thaler. This subfield offers an alternative to traditional economics by incorporating insights from psychology. Socio-economics and economic psychology are two more examples of non-mainstream approaches to economics.

It is assumed that emotional considerations are an integral aspect of the financial markets. The study of how investors' feelings and cognitive biases affect their choices is known as behavioural finance (<u>Ricciardin & Simon, 2000</u>).

The term "behavioural finance" refers to research into the ways in which human psychology impacts economic markets and individual choices. The term "behavioural finance" is used to describe a fresh approach to the financial markets that arose in reaction to the limitations of more conventional approaches. It is understood to be a monetary event in which participants' actions are not entirely logical (Barberis, 2003).

<u>Shefrin(2000)</u> argues that the way in which individuals process information and create opinions is influenced by their preexisting biases. The term "behavioural finance" refers to research into the ways in which human psychology impacts economic markets and individual choices. Decision-making "biases" encompass a wide range of actions, according to psychological research. Although the effects of such biases are felt globally, they have particularly deep roots in the world of finance, especially in the realm of investing.

Research in the field of behavioural finance, as described by <u>Jay R. Ritter(2003)</u>, challenges the standard premise of expected utility maximisation by rational investors operating in efficient markets. The foundations of behavioural finance are the study of cognitive psychology and the concept of arbitrage constraints. <u>Hirschey and Nofsinger(2008)</u> provide an explanation of behavioural finance as an in-depth analysis of cognitive biases and emotional influences on economic judgements. It stands apart from the competition thanks to a study that helps quantify the psychological impact on incumbents and the market's monetary behaviour as a whole <u>Sewell</u> (2007).

Psychologists investigate how people's physical, mental, and social surroundings affect their thoughts and behaviours. Studies in cognitive psychology have shown that people make use of heuristics and are biassed in the way they develop opinions and understand new information. Behavioural finance relies on heuristics and biases to account for people's illogical actions in the financial markets. When two different parts of your brain are at odds with one another, you experience cognitive dissonance and may begin to block out relevant data. In an effort to maintain a positive self-image, many people will downplay or dismiss evidence that points to the falsity of their decisions or beliefs (known as "cognitive dissonance"). As a result of herding, where people congregate in groups of like-minded peers, this bias can be reinforced and information processing efficiency can be increased. As it gets more difficult to disregard incongruous information, this idea may account for market hypes and panics. Due to growing discord as the group shrinks, the herd abruptly changes course (Prast, 2004).

The results of the studies conducted by <u>Chandra (2008)</u> show that behavioural characteristics such as greed, fear, cognitive dissonance, heuristics, mental accounting, and anchoring have a role in the investing decisions made by individual investors. Investment decisions need to take them into account as potential risks. Financial experts and investment consultants need to take these considerations into account when designing strategies for individual investors who are looking to build their trust in the stock market.

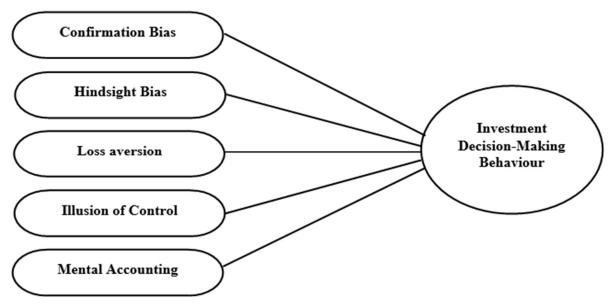
To determine if the market overreacted, Thaler and De Bondt collaborated on the premise that cognitive biases would lead to predictable mispricing of equities on the New York Stock Exchange. People tend to overreact to unexpected and dramatic news events, therefore they applied this result from experimental psychology to stock market fluctuations. Specifically, <u>Thaler and De Bondt(1985)</u> found that portfolios of previous "Losers" consistently outperform portfolios of previous "Winners," lending credence to the idea that people do, in fact, overreact to awful news and allow that overreaction to have a significant impact on investment decisions.

Joo and Durri (2018) found that investors decisions are heavily influenced by a variety of psychological traits, including confirmation biases, herd behaviour, pessimism, faith, heuristics, and overconfidence. Investors' portfolios were split into short-term and long-term options, each of which was subject to the influence of psychological factors related to market performance and predicted returns.

OBJECTIVES

To determine the Cognitive bias factors (Confirmation Bias, Hindsight Bias, Loss aversion, Illusion of Control, Mental Accounting) influencing investors investment decisions making behaviour.

THEORETICAL FRAMEWORK



Source: The author Confirmation Bias

People are more likely to accept new information that confirms their existing opinions due to confirmation bias, which is the unwillingness to abandon one's existing set of beliefs. Symptoms of this bias include favouring a candidate's statement because it aligns with one's moral values or unintentionally ignoring evidence that contradicts one's opinions. These actions are typically unintentional; thus, it may take an outsider's perspective to spot them <u>Costa et al. (2017)</u>. People have a psychological phenomenon called confirmation bias, which explains why they look for evidence that supports their pre existing opinions and ignore or discount evidence that contradicts them. Another form of cognitive bias is the confirmation bias. Males are more susceptible to its influence than females when it comes to making decisions (Onsomu, 2014).

Investors may fall prey to confirmation bias and become overly enthusiastic about a company or investment strategy. They stop caring as much about spreading their money around and start putting all their eggs in one basket, putting their wealth at greater risk. Confirmation bias refers to the tendency for people to seek for evidence that corroborate their existing beliefs. Information that confirms one's preconceived notions is often given disproportionate weight. They also prefer to ignore data that contradicts their worldview. It's a cognitive and belief-perseverance bias wherein people give more weight to thoughts that back up their existing beliefs and less to those that challenge them Pompian (2017). Every element of our lives is affected by confirmation bias. Nonetheless, it has a major effect on people's spending habits.

Hindsight Bias

"The tendency to think that one would have known actual events were coming before they happened, had one been present then or had reason to pay attention," as defined by Shiller (1999).

In 2009, researchers <u>Monti and Legrenzi</u> looked into the phenomenon of hindsight bias and how it affects financial choices. They argue that economic research focuses solely on the foresight perspective of the actor and ignores the potential consequences of hindsight bias on decision

making. A cognitive and belief-perseverance bias in which individuals falsely attribute greater accuracy to their own future predictions than they actually have.

Loss aversion

Investors psychological state is generally characterised by a greater aversion to failure than to success. When an investment performs as anticipated, the investor's level of satisfaction may be represented by a gradual rise, whereas discontent may be depicted by a precipitous drop. Investors are more reluctant to sell any investment that could result in a loss due to loss aversion, the belief that losses affect one's emotions more than equivalent profits. It has been shown that <u>Doviak</u>, (2016); Jordan *et al.* (2015).

profits and losses elicit various emotional responses from people, with people being more worried about potential losses and more pleased by potential profits. A loss always seems greater than a gain of the same magnitude, and while it's digging a gaping hole in our pocket, the purchasing power of money fluctuates. Given that people will often take greater risks to prevent losses than to realise profits, prospect theory explains why investors stick onto failing companies. As a result, traders continue to hold onto hazardous stock positions in the expectation that the rate would eventually recover. Bet doubling is a common strategy for gamblers who are on a losing run.

According to loss-aversion theory, investors can choose to keep losing positions while selling winning ones, betting that the losers would eventually catch up to, and even surpass, the winners. Research shows that money moves into high-performance mutual funds more quickly than it flows out of underperforming funds, but many investors make the error of "chasing market action" by investing in the companies or funds that receive the most attention.

Illusion of Control

2017's Pompian those who suffer from control bias illusion mistakenly feel they can affect their portfolio's performance. Online traders typically make unnecessary trades due to the illusion of control bias. Individuals' confidence in their own estimating abilities rises after they have correctly predicted the outcomes of a string of coin flips. This also includes stock traders and investors who play by the rules. Riaz and Iqbal (2015) explain that people's belief that they can influence the results of a seemingly chance event is an example of an illusion of control.

People make poor financial decisions due to the illusion of individual control bias, the false belief that one has more control over one's life than one actually does <u>Rudski (2004)</u>. Several more biases are highlighted by prospect theory as contributing to irrationality in investment decisions. Investment decisions can benefit from increased knowledge and understanding of financial matters, as shown by a number of research (<u>Ullah</u>, <u>2015</u>).

Cognitive talents and their effects on stock investment and financial gain were also studied by <u>Bashir et al.</u> (2014). The belief that we are in charge of our own decision-making is an illusion that is not always accurate. According to research published in 2011, conducted by <u>Fernández et al.</u>, investors' decisions are heavily influenced by their sense of agency.

Mental Accounting

It was Richard Thaler who coined the phrase "mental accounting," which he defined as the "set of cognitive operations used by individuals and households to organise, evaluate, and keep track of financial activities."

According to <u>Thaler (2008)</u>, mental accounting is the process of assigning meaning to events by categorising them in ways that may have a greater impact on behaviour than the events themselves. As an illustration, when a market declines, an investor may be reluctant to sell because they have created a separate mental space for their profits and are waiting for the good times to return. Market events and their effects on behaviour can be misunderstood because of this inclination to categorise them.

Mental accounting is used by people everywhere to keep track of and make sense of their money transactions. It's possible that this process will lead to people dividing their money into multiple accounts for arbitrary reasons. This may lead to less purchasing and other undesirable actions. Mental Accounting codes have been utilised for analysing financial investments.

Investment decision-making behaviour

Investment decisions, as emphasised by Lourrine and Nairobi (2017), include picking the correct security or asset, deciding how much to invest, when to invest, and for how long to invest. Shares, bonds, marketable securities, and other assets are available to investors with varying degrees of risk tolerance. Understanding the fundamental causes influencing individual investors' investment decisions is a complicated cognitive activity in and of itself. Financial decision-making has progressed alongside the development of numerous tools, approaches, and models. However, a proper understanding of individual investor behaviour and the investment environment is essential for making full use of these complex tools and models.

Risky investment decisions are made mostly on the basis of guesswork about the future. The impact of news and rumours, as well as the speed and accessibility of information, is substantial in the financial markets. Investment behaviour is heavily influenced by a person's risk propensity, risk preference, and attitude. Customer investment decisions are influenced by cognitive biases such as confirmation, hindsight, loss aversion, illusion of control, and mental accounting.

METHODOLOGY

This study used a descriptive research approach and a web-based survey to collect data on cognitive bias behavioural characteristics from 109 out of 130 participants. The survey used a form of stratified sampling. All variables, both nominal and on the Likert scale, were calculated using the quantitative aspect of the instrument. Each statement-related question had a 5-point Likert-style scale with possible responses ranging from 1 to 5. In order to apply more robust statistical procedures for hypothesis testing, the Likert style was selected because it may produce data with equal intervals. Multiple linear regression analysis is performed to determine how much each cognitive bias element affects investors investment decisions, and the Cronbach's alpha test and the Pearson correlation between cognitive behavioural biases and investment decision-making are also investigated.

RESULT AND DISCUSSION

This chapter presented the findings and analysed the data. Cronbach's alpha was first used to determine the degree of reliability. Second, this chapter examines the Pearson correlation between cognitive behavioural biases and investment decision-making, and third, this chapter examines the multiple linear regression analysis used to study cognitive behavioural bias and investment decision-making.

Cronbach's alpha reliability analysis

| Cronbach's alpha | Cronbach's Alpha based on Standardized Items | No. of Items |
|------------------|----------------------------------------------|--------------|
| 0.777 | 0.771 | 6 |

The results of the reliability test indicated that the value of Cronbach Alpha coefficient is 0.777. Therefore, the scale is reliable as the value of Cronbach alpha is more significant than 0.70. So, the reliability test of Cronbach alpha value of the study is very reliable and good internal consistency.

| Item-Total Statistics | | | | | | | |
|-------------------------------|-------------------------------------|--------------------------------|----------------------------------------|------------------------------------|----------------------------------|--|--|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted | | |
| Confirmation bias | 50.5413 | 90.028 | 0.473 | 0.469 | 0.757 | | |
| Hindsight bias | 51.0550 | 76.256 | 0.683 | 0.516 | 0.698 | | |
| loss Aversion | 50.2569 | 81.748 | 0.692 | 0.550 | 0.701 | | |
| Illusion of Control | 51.2936 | 101.543 | 0.305 | 0.156 | 0.791 | | |
| Mental Accounting | 50.8716 | 83.650 | 0.564 | 0.403 | 0.733 | | |
| Investment Decision-making | 50.9358 | 93.524 | 0.431 | 0.219 | 0.766 | | |

The above item total statistics table indicates the scale mean and variance when individual items are deleted, as well as the total correlation for corrected items, square multiple correlations, and Cronbach's Alpha value when an item is eliminated. The corrected item of the total correlation column value of confirmation bias, hindsight bias, loss aversion, illusion of control, mental accounting, and investment decision-making values are above >40.

Investors demographic profile

| Demographic components | Frequency | Percent | Cumulative Percent |
|------------------------|-----------|---------|---------------------------|
| Gender | | | |
| Male | 70 | 64.2 | 64.2 |
| Female | 39 | 35.8 | 35.8 |

| Age | | | | | | | |
|------------------|----|------|-------|--|--|--|--|
| Below 25 years | 17 | 15.6 | 15.6 | | | | |
| 26 - 35 years | 32 | 29.4 | 45.0 | | | | |
| 36 - 45 years | 33 | 30.3 | 75.2 | | | | |
| 46 - 60 years | 23 | 21.1 | 96.3 | | | | |
| Above 60 years | 4 | 3.7 | 100.0 | | | | |
| Education | | | | | | | |
| Higher Secondary | 13 | 11.9 | 11.9 | | | | |
| Undergraduate | 40 | 36.7 | 48.6 | | | | |
| Postgraduate | 50 | 45.9 | 94.5 | | | | |
| Experience | | | | | | | |
| Less than 1 year | 16 | 14.7 | 14.7 | | | | |
| 2 - 5 years | 27 | 24.8 | 39.4 | | | | |
| 6 - 8 years | 19 | 17.4 | 56.9 | | | | |
| 9 - 10 years | 36 | 33.0 | 89.9 | | | | |
| Above 10 years | 11 | 10.1 | 100.0 | | | | |

The above table clearly shows that of the 109 respondents, 64.2% of the respondents are male, and remain 35.8% are female. 30.3% were under 36–45 years old, 29.4% were 26–35 years old, 21.1% were 46–60 years old, 15.6% were belowv25 years old, 3.7% were above 60 years old. 45.9% of respondents are postgraduate, 36.7% undergraduate, and 11.9% of respondents are higher secondary. 33.0% of the respondents are experienced in 9-10 years, 24.8% of the respondents are experienced in 2-5 years, 17. 4% of the respondents are experienced in 6-8 years, 14.7% of the respondents are experienced in less than 1 year, and 10.1% of the respondents are experienced in above 10 years.

Correlation analysis of Karl Pearson

| | | Investme nt Decision- making | Confirmati on bias | Hindsig ht bias | loss Aversi on | Illusio n of Contr ol | Mental Accounti ng |
|-------------------------|----------------------------|---------------------------------------|-----------------------|--------------------|----------------------|--------------------------------|--------------------------|
| Investment Decision- | Pearson Correlati on | 1 | 0.284 | .350** | .380** | .295** | .339** |
| making | Sig. (2-tailed) | | 0.05 | 0 | 0 | 0.002 | 0 |
| Confirmati on bias | Pearson Correlati on | | 1 | .539** | .623** | 0.046 | .237* |

| | Sig. (2-tailed) | | 0 | 0 | 0.032 | 0.013 |
|------------------|----------------------------|--|---|--------|-------|--------|
| Hindsight | Pearson Correlati on | | 1 | .593** | .230* | .554** |
| bias | Sig. (2- tailed) | | | 0 | 0.016 | 0 |
| loss Aversion | Pearson Correlati on | | | 1 | .218* | .477** |
| Aversion | Sig. (2- tailed) | | | | 0.023 | 0 |
| Illusion of | Pearson Correlati on | | | | 1 | .332** |
| Control | Sig. (2-tailed) | | | | | 0 |
| Mental | Pearson Correlati | | | | | 1 |
| Accountin g | on Sig. (2- tailed) | | | | | |

^{**.} Correlation is significant at the 0.01 level (2-tailed

Every single one of the variables was shown to have a statistically significant connection to every other variable in the analysis. Investment decision-making is positively related to the cognitive bias characteristics of confirmation bias, hindsight bias, loss aversion, illusion of control, and mental accounting. It's r=0.284, n=109, and p=0.05 at the 1% level of confidence. This depicts how investors' investment decisions change as their levels of confirmation bias increase. The link between hindsight bias and financial investment choices is moderate (r=0.350, n=109, p0.01). This demonstrates that there is a strong positive correlation between hindsight bias and features of investment decision-making, and that an increase in hindsight prejudice results in better investment decisions. Similarly, there is a positive correlation between loss aversion and investment decision-making (r=0.380, n=109, p=0.01 at the 1% level of confidence).

This seems to imply that the process of investing speeds up as loss aversion does. There is a positive correlation between the illusion of control and financial investment decision-making at the 1% confidence level (r=0.295, n=109, p=0.02). Investors feel more in control, so they put their money to work. In addition, there is a statistically significant (r=0.339, n=109, p=0.01) link

^{*.} Correlation is significant at the 0.05 level (2-tailed).

between using mental accounting and making investment choices. This seems to imply that with improved mental accounting, investment choices become easier to make.

Regression analysis

| N | Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|---|-------|-------|----------|-------------------|----------------------------|---------------|
| | 1 | .468ª | 0.219 | 0.182 | 2.28950 | 1.801 |

- a. Predictors: (Constant), Mental Accounting, Locus of Control, Loss Aversion, Hindsight bias, Confirmation bias
- b. Dependent Variable: Investment Decision-Making

Linear regression is responsible for the aforementioned analyses. Confirmation bias, hindsight bias, loss aversion, illusion of control, and mental accounting are the other five cognitive bias components that will be studied alongside investment decision-making as independent variables. The model fitness hypothesis has been determined by doing a comprehensive analysis of the model's overall fitness. According to the model's executive summary, the model can account for 0.219 standard deviations in investment decisions. Adjusted R squared is 0.182, which is quite near to R squared. If R is high, it means the model is good enough. According to the numbers, predictability is just 21.9%. It's possible that this is due to the model's failure to account for other behavioural finance factors, such as the ratio.

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|-------------------|-----|----------------|-------|-------|
| 1 | Regression | 151.761 | 5 | 30.352 | 5.790 | .000b |
| | Residual | 539.908 | 103 | 5.242 | | |
| | Total | 691.670 | 108 | | | |

- a. Dependent Variable: Investment Decision-Making
- b. Predictors: (Constant), Mental Accounting, Locus of Control, Loss

Aversion, Hindsight bias, Confirmation bias.

The ANOVA table provides an F-test (5.790) for the null hypothesis that is related to investment decision-making and the p-value is less than 0.01 was significant at this level.

| Model | Unstandardized Coefficients | | Standardized Coefficients | Т | Sig. |
|-------------------|--------------------------------|------------|------------------------------|-------|-------|
| | В | Std. Error | Beta | | |
| (Constant) | 4.23 | 1.311 | | 3.228 | 0.002 |
| Confirmation bias | 0.329 | 0.154 | 0.411 | 2.240 | 0.27 |
| Hindsight bias | 0.126 | 0.105 | 0.15 | 1.204 | 0.231 |

ISSN:1539-1590 | E-ISSN:2573-7104

Vol. 5 No. 2 (2023)

| Loss Aversion | 0.258 | 0.124 | 0.265 | 2.088 | 0.039 |
|---------------------|-------|-------|-------|-------|-------|
| Illusion of Control | 0.202 | 0.102 | 0.184 | 2.014 | 0.047 |
| Mental Accounting | 0.083 | 0.1 | 0.093 | 0.828 | 0.409 |

a. Dependent Variable: Investment Decision-Making

The above coefficient reveals that Confirmation bias, Loss Aversion, and Illusion of Control have a significant influence on the investment decisions of investor decision-making because their significance values are less than 0.05. The other factors, Hindsight bias, and Mental Accounting have significance values exceeding 0.05, proving that disposition bias and anchoring bias have little influence on investors' investing decisions.

FINDINGS AND IMPLICATION OF THE STUDY

For <u>Mitroi and Oproiu (2014)</u>, emotional considerations trump logical ones when it comes to budgeting.

Finding the best investing method and anticipating price fluctuations based on historical data is a major source of anxiety for investors. If they are acting rationally, investors will select financial instruments that allow them to achieve their desired gain/loss profile". The ups and downs of the stock market's past can help us forecast its potential future. The authors Ahmad et al., (2017) According to the study of behavioural finance, investors' perception of their own rationality when making investment decisions is hampered by cognitive biases. Considering both logical and irrational variables is crucial because of the high levels of uncertainty and risk that accompany any investment possibility Slovic (1972) Various forms of human thought and action bias contribute to these dangers and uncertainties. The focus of these cognitive biases is on the actions and decisions of investors in the financial markets. In behavioural finance, human psychology and economic events are brought together through the concept of "behavioural biases." In the realm of behavioural finance, biases abound. Overconfidence, anchoring, the disposition effect, and the herding bias have all been taken into account here.

The modern research also sheds light on market psychology, explaining why investors make certain investing decisions (such as whether or not to purchase or sell stocks) and others (such as whether or not to invest at all). The results of the current research show that investors' successes and failures are largely attributable to their skill at making investment decisions. It found that in the current context, a deeper comprehension of the behavioural biases of individual investors is necessary for the investing decision-making process. Since previous research has shown that individual investors are more prone to making psychological errors due to their lack of knowledge about the application of traditional finance theories in decision-making, this study focuses on them.

Our research found that only three of the five independent variables studied had any significant effect on investment decision-making (t-values of 2.240, 2.088, and 2.014 for Confirmation bias, Loss Aversion, and Illusion of Control, respectively), while the other two (Hindsight bias and Mental Accounting) had no effect. Confirmation bias, hindsight bias, loss aversion, the illusion of control, and mental accounting are only few of the cognitive biases that were the primary focus of this investigation. Other behavioural finance biases that also have a

significant impact on individual investing decision-making can be explored in greater depth in future studies.

CONCLUSION

Cognitive-biased investors may provide profitable returns and provide desirable results. Friends are a common source of inspiration and information when it comes to making important financial choices, according to research by <u>Talha et al.</u> (2015) and the <u>Chan & Kogan (2002)</u>. In order to ensure they are making sound decisions, investors seek out validation from others. Investment decisions are serious business, therefore it's important to do them correctly. According to <u>Bikas et al.</u> (2013), investors decision-making in the financial markets is heavily influenced by psychological variables rather than knowledge of the market.

Behavioural finance is the study of how one's level of social and emotional awareness and tolerance influences the way they makes financial decisions. The study disproves the theory that cognitive psychological aspects influence decision-making by showing that investors do not always make rational investment choices. Specifically, the research found that investors are affected by confirmation bias, hindsight bias, loss aversion, the illusion of control, and mental accounting. Researchers found that no subset of investors benefited financially from falling prey to any of the tested cognitive biases.

Future research directions are suggested, such as expanding the scope of the study to include additional biases, assessing the impact of individual and institutional decisions on mutual funds, and investigating additional biases.

REFERENCES

- 1. Ahmad, Z., Ibrahim, H., & Tuyon, J. (2017). Institutional investor behavioral biases: syntheses of theory and evidence. *Management Research Review*, 40(5), 578-603.
- 2. Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. *Handbook of the Economics of Finance*, 1, 1053-1128.
- 3. Bashir, T., Fatima, T., Ilyas, H., & Chudhary, A. (2013). *Impact of cognitive profile and information uncertainty on herding behavior of investor*. SSRN.
- 4. Bikas, E., Jurevičienė, D., Dubinskas, P., & Novickytė, L. (2013). Behavioural finance: The emergence and development trends. *Procedia-social and behavioral sciences*, 82, 870-876.
- 5. Chan, Y. L., & Kogan, L. (2002). Catching up with the Joneses: Heterogeneous preferences and the dynamics of asset prices. *Journal of Political Economy*, 110(6), 1255-1285.
- 6. Chan, Y. L., & Kogan, L. (2002). Catching up with the Joneses: Heterogeneous preferences and the dynamics of asset prices. *Journal of Political Economy*, 110(6), 1255-1285.
- 7. Chandra, A. (2008, December). Decision making in the stock market: Incorporating psychology with finance. In *National Conference on Forecasting Financial Markets of India*.

- 8. Costa, D. F., de Melo Carvalho, F., de Melo Moreira, B. C., & do Prado, J. W. (2017). Bibliometric analysis on the association between behavioral finance and decision making with cognitive biases such as overconfidence, anchoring effect and confirmation bias. *Scientometrics*, 111, 1775-1799.
- 9. De Bondt, W. F., & Thaler, R. (1985). Does the stock market overreact?. *The Journal of finance*, 40(3), 793-805.
- 10. Fernández, B., Garcia-Merino, T., Mayoral, R., Santos, V., & Vallelado, E. (2011). Herding, information uncertainty and investors' cognitive profile. *Qualitative Research in Financial Markets*, 3(1), 7-33.
- 11. Fromlet, H. (2001). Behavioral finance-theory and practical application: Systematic analysis of departures from the homo oeconomicus paradigm are essential for realistic financial research and analysis. *Business economics*, 63-69.
- 12. Hirschey, M., & Nofsinger, J. R. (2008). Investments: analysis and behavior. (No Title).
- 13. Joo, B. A., & Durri, K. (2018). Impact of psychological traits on rationality of individual investors. *Theoretical Economics Letters*, 8(11), 1973.
- 14. Jordan, B. D., & Riley, T. B. (2015). Volatility and mutual fund manager skill. *Journal of Financial Economics*, 118(2), 289-298.
- 15. Kahneman, D., & Tversky, A. (1977). *Intuituve Prediction: Biases and Corrective Procedures* (p. 0044). Decision Research, Perceptronics.
- 16. Kim, K. A., & Nofsinger, J. R. (2008). Behavioral finance in Asia. *Pacific-Basin Finance Journal*, 16(1-2), 1-7.
- 17. Kumari, N., & Sar, A. K. (2017). Cognitive and behavioral biases influencing investment performance. *ZENITH International Journal of Multidisciplinary Research*, 7(8), 49-62.
- 18. Lintner, G. (1998). Behavioral finance: Why investors make bad decisions. *The planner*, 13(1), 7-8.
- 19. Lourrine, A., Nairobi, O., Ullah, S., Islamoğlu, M., Apan, M., Ayvali, A., & Shahzad, K. (2017). Factors Affecting the Preference of Investments Among Women-A Study Based on Cochin and Coimbatore. *A Research Project Submitted to the School of Business, University of Nairobi*, 6(1), 1-5.
- 20. Mitroi, A., & Oproiu, A. (2014). Behavioral finance: new research trends, socionomics and investor emotions. *Theoretical and applied economics*, 21(4), 153-166.
- 21. Monti, M., & Legrenzi, P. (2009). Investment decision-making and hindsight bias. *Retrieved January*, 5, 2014.
- 22. Montier, J., & Strategy, G. E. (2002). Applied behavioural finance: Insights into irrational minds and market. *Unpublished manuscript*.
- 23. Nofsinger, J. R. (2001). Investment Madness: How Psychology affects your investing and what to do about it. (*No Title*).
- 24. Onsomu, Z. N. (2014). The impact of Behavioural biases on investor decisions in Kenya: Male vs Female.

- 25. Peggy Doviak PhD, C. F. P. (2016). Applying behavioral finance to ourselves. *Journal of Financial Planning*, 29(6), 46.
- 26. Pompian, M. M. (2012). Behavioral finance and investor types: managing behavior to make better investment decisions. John Wiley & Sons.
- 27. Pompian, M. M. (2012). Behavioral finance and investor types: managing behavior to make better investment decisions. John Wiley & Sons.
- 28. Pompian, M. M. (2017). Risk tolerance and behavioral finance. *Investments and Wealth monitor*, *Boston*, 20(31), 34-45.
- 29. Prast, H. M. (2004). Investors psychology: A behavioural explanation of six finance puzzles.
- 30. Riaz, T., & Iqbal, H. (2015). Impact of overconfidence, illusion of control, self control and optimism bias on investors decision making; evidence from developing markets. *Research Journal of Finance and Accounting*, 6(11), 110-116.
- 31. Ricciardi, V., & Simon, H. K. (2000). What is behavioral finance? *Business, Education & Technology Journal*, 2(2), 1-9.
- 32. Ricciardi, V., & Simon, H. K. (2000). What is behavioral finance? *Business, Education & Technology Journal*, 2(2), 1-9.
- 33. Ritter, J. R. (2003). Behavioral finance. Pacific-Basin finance journal, 11(4), 429-437.
- 34. Rudski, J. (2004). The illusion of control, superstitious belief, and optimism. *Current Psychology*, 22, 306-315.
- 35. Sewell, M. (2007). *Behavioural finance. London: University College London*. Working paper available at:http://www.behaviouralfinance.net/behavioural-finance.pdf
- 36. Shefrin, H. (2000). Behavioral Corporate Finance. Available at SSRN 4385175.
- 37. Shiller, R. J. (1999). Human behavior and the efficiency of the financial system. *Handbook of macroeconomics*, *1*, 1305-1340.https://doi.org/10.1016/S1574-0048(99)10033-8
- 38. Silva, P., Mendonça, J., Gomes, L. M., & Babo, L. (2023). Cognitive Biases in the Investment Decision Process. In *Perspectives and Trends in Education and Technology:* Selected Papers from ICITED 2022 (pp. 185-197). Singapore: Springer Nature Singapore.
- 39. Slovic, P. (1972). Psychological study of human judgment: Implications for investment decision making. *The Journal of Finance*, *27*(4), 779-799.
- 40. Talha, M., Ramanakumar, K. P. V., & Neelakantan, P. R. (2015). Investor psychology and its influence on investment decisions. *MAGNT Research Report*, *3*(9), 281-292.
- 41. Thaler, R. H. (1999). Mental accounting matters. *Journal of Behavioral decision making*, 12(3), 183-206.
- 42. Thaler, R. H. (2008). Mental accounting and consumer choice. *Marketing Science*, 27(1), 15-25.
- 43. Ullah, S. (2015). An empirical study of illusion of control and self-serving attribution bias, impact on investor's decision making: moderating role of financial literacy. *Research Journal of Finance and Accounting*, 6(19), 109-118.

- 44. Gopinath, R., Vasan, M. & Sumathy, M. (2019). Attitude of Individual Investors towards Commodity Trading in Disruptive Technological Era, International Journal of Engineering and Advanced Technology, 8(6), 1720-1723. DOI: 10.35940/ijeat.F8426.088619. https://www.ijeat.org/wp-content/uploads/papers/v8i6/F8426088619.pdf.
- 45. Selvam, M., Thanikachalam, V., Gopinath, R., Kathiravan, C., Amirdhavasani, S., & Dhanasekar, D. (2019). Intellectual Capital Performance and its Impact on Indian Commercial Banking Industry, Journal of Engineering and Applied Sciences, 14(8), 2610-2619. DOI: 10.36478/jeasci.2019.2610.2619
- 46. Pavithran, A., Selvam, M., Gopinath, R., & Kathiravan, C. (2018). Effects of Adopting International Financial Reporting Standards: An Empirical Evidence from selected Indian Companies, International Academic Journal of Accounting and Financial Management, 5(4), 137-147. ISSN 2454-2350