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A Proposed Conceptual Framework on The Determinants of Psychological Biases Towards Retail Investor's Decision Making: Experience as Mediating Role

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Abstract
Throughout this epidemic, retail investors play a crucial role in the Malaysian investment sector, as they must generate, expand, and sustain national investment growth. Therefore, it is essential to investigate the aspects of psychological biases towards retail investors' decision-making. Hence, the study's aims to investigate the factors of psychological biases toward retail investors' decision making in Malaysia and to propose a conceptual framework that influences retail investors' decisions in Malaysia. The proposed conceptual framework for retail investors' decision-making in Malaysia is based on the Prospect and Heuristic theory and a study of previous literature. The previous literature was reviewed using systematic search methodologies. In summary, this study identifies anchoring, herding, risk perception, emotional, financial literacy, and investors' experience (mediator) as psychological biases influencing retail investors' decision-making in Malaysia. The study anticipates that the proposed framework will inspire researchers to continue researching this information by giving a clear image for future research. Furthermore, the significant impact of psychological biases on investor behaviour whereby cognitive limitations and emotional influence were associated in ensuring investors to react rationally.

Introduction

When the COVID-19 outbreak swept the countries in the year 2020, curfews enforced throughout many countries around the world impacted the overall economic climate of practically all countries (Gamal et al., 2021; Liu et al., 2020; Mehmood et al., 2022). Notwithstanding the difficulties, the Malaysian investment market appears to have responded well. Healthcare, technology, and industrial products and services were the top three high-performing industries that drew the attention of Malaysian retail investors in 2020 (Mehmood et al., 2022; Nasihin et al., 2021). Throughout this epidemic, retail investors play a crucial role in the Malaysian investment sector, as they have to generate, expand, and sustain national investment growth. This is underlined by a report from Bursa Malaysia (2020), which stated that retail average trading volume reached a high point of RM1.6 billion in 2020, a 236 percent rise over the previous year. Therefore, retail investors play an essential role in supporting and maintaining investment trading on Bursa Malaysia, mainly where local and overseas institutional investors sell off their investment holding stance.

Similarly, according to a Securities Commission statistics report from 2020, there were nearly 19,000 active CDS accounts, with 75 percent of these accounts held by individuals over the age of 40. Moreover, 80% of them registered their accounts before the year 2020. Based on this data, more experienced and older investors continue to prevail in terms of volume. Additionally, the COVID-19 outbreak scenario has prompted the Malaysian government to enact a series of lockdowns beginning March 18, 2020. Glancing at investing trends and patterns during the pandemic, a variety of reasons may have pushed retail investors to get involved. It involves a comprehensive loan moratorium, conditional withdrawal of employee provident funds, a cut of employee contribution deduction, and a government stimulus package known as Pelan Penjana Semula Ekonomi (PENJANA).

Consequently, the integration of the government stimulus package and the stay-at-home order, which are channelled to reduce consumption and low-interest rates, have urged retail investors to invest "excess savings" and channel their savings into capital market products such as equities and other investment funds. The participation of retail investors in the investment market as well as the reaction of retail investors reflected their intention to put away for debt repayment and were thinking of investing in the investment market for the aim of making returns on the "extra cash". As a response, it is essential to investigate the aspects of psychological biases in their investment decision-making.

At this moment, retail investors' patterns of participation in the investment market in 2020 were giving strong possibilities for researchers to explore the factors of psychological biases towards their investment decision-making in order to better grasp their views and mindsets. Retail investors are generally classified as investors that build their investment portfolios depending on several considerations to maximise their profits while spreading their risk (Dorn & Huberman, 2005). In this context, there are several psychological biases that affect retail investors' investment portfolio decisions. Furthermore, Barber & Odean (2001) discovered that investors are frequently impacted by behavioral biases while making investment decisions for their financial decisions. Moreover, Rasheed et al (2018) investigated the importance of behavioural characteristics that influence investment decisions in the Pakistani stock market, such as confidence, optimism, pessimism, and reasonable expectation. The study discovered that the Pakistani stock market was driven by irrational investment behaviour and plagued by investor pessimism.

Additionally, the psychological biases and emotions involved in decision-making, as well as their influence on stock price movement, reflect the underlying nature of stock markets and give a credible explanation for rapid market shifts (Sharma & Kumar, 2020). Psychologists have criticised those who speak about rationality in decision-making (Nofsinger, 2014). The presence of psychological biases provided evidence of irrationality in the Indian equities market (Jain et al., 2020). Furthermore, behavioural finance is the study of the influence of psychology on investment behaviour. It is naïve to assume that investors are always sensible, that their self-control is limited, and that they are impacted by their own prejudices (Adil et al., 2021; Mittal, 2018; Sarkar, 2017). Given the preceding discussion, even though retail investors are aware of many cognitive and emotional biases that influence their decision-making, it is critical for them to comprehend how the factors can affect the psychological biases that directly influence the decision-making process of their investments. In a nutshell, this study will concentrate on the link between the factors of psychological biases retail investors' decision making. Therefore, the study's aims are as follows

- To investigate the factors of psychological biases toward retail investors' decision making in Malaysia.
- To propose a conceptual framework that influences retail investors' decisions in Malaysia.

Considering the integration of previous studies and a comprehensive literature review, this finding suggests that the conceptual framework proposed can indicate the various gaps and the consistency factor that defines the factors of psychological biases on retail investors' decision making in Malaysia.

Literature Review

Theoretical Foundation

Kahneman and Tversky (1979) created the theory of behavioural finance in the 1970s, which covers the study of psychology, sociology, and finance. Moreover, Montier (2005) proposed three types of biases, all of which fall into separate categories: self-deception, heuristic simplification, and social interaction. Moreover, the investors' illogical and inconsistent behaviour has been linked to psychological variables in which the action decisions can be influenced by emotions, personality, knowledge, preferences, and other human attributes. As a result, they overreact and either become overconfident or excessively pessimistic (Septian et al., 2022). Prospect theory was introduced as a best practise alternative to common knowledge by (Kahneman and Tversky, 1979; Tversky and Kahneman, 1981). Prospect theory is a conventional behaviour theory that proposes how an individual or group responds in an uncertainty environment.

According to a key concept of behavioural finance, individual choice behaviour continually deviates substantially from general understanding assumptions (Fama, 1970; Malkiel, 2003; Shleifer, 2000). Prospect Theory is a model of the theory that describes the retail investor's propensity to make investment decisions on profits and losses rather than a reference point. The prospect theory gives insight into how investors behave in decision-making under risk and uncertainty. Moreover, in heuristic theory, a basic practical rule of thumb is used to describe how individuals make decisions, draw inferences, and find solutions when faced with difficult situations or little knowledge. In most circumstances, these principles are followed correctly, but in certain cases, they result in persistent cognitive biases. Tversky and Kahneman (1974) explored how human heuristics influence decision-making. Tversky defined heuristic as a strategy that may be used in a broad variety of situations and typically but not always provides a right answer. Individuals typically use heuristics (or shortcuts) to reduce complicated issue resolution to some simpler judgement processes (Kahneman & Tversky, 1979; Tversky & Kahneman, 1974). In other terms, it refers to the rule of thumb that individuals have used to make judgements in complicated and ambiguous situations. Behavioural finance gives financial professionals a magnifying glass through which they may explore, understand, and overcome several well-known psychological pitfalls including behavioural biases such as emotional and cognitive biases (Gill & Bajwa, 2018).

Retail Investors' Decision Making

When it comes to making reasonable or correct decisions, retail investors encounter more challenges than funding managers. Therefore, investors lack access to official information and all essential information for speedy, sensible, or logical investment decision-making. Therefore, they make reckless judgements (Lu, 2010; Sohail et al., 2020). This tendency can lead to impulsive behaviour and unwise judgements particularly in the investment sector (Pompian, 2006; Septian et al., 2022). Furthermore, investors depend on their judgements on readily available information, which can contribute to poor market performance, especially when investors are misled by inaccurate information. As a consequence, this study explains why investors' behaviours lead stock markets to deviate from market efficiency (Rasheed et al., 2018). However, since retail investors' decisions to make investment should then be impacted by the stock market today, it is vital to understand how they make their investment judgments (Jaiyeoba & Haron, 2016). Furthermore, retail investors struggle to digest financial information and analysis (Lu, 2010; Sohail et al., 2020). As a result, individual perceptions create cognitive shortcuts that alter the mindset of providing standard financial theory on illogical and ineffective decision-making.

Factor of Psychological Biases Affecting Retail Investors' Decision-making.

Anchoring

As a result of anchoring bias, many investors make bad financial judgements, such as buying inexpensive stocks or selling overpriced products (Rehan et al., 2021). Furthermore, Saivasan and Lokhande (2022) mentioned that anchoring bias is an important of psychological bias that affects investors perceived risks in an unavoidable and repeating manner. The anchor might be previous price, performance, or any other reference point that encourages investors to overreact or negatively respond (Owusu & Laryea, 2022). Additionally, Gavrilakis and Floros (2021) said that anchoring is a human tendency to rely investment decisions too substantially on a single source of data (e.g., news, unusual trading volumes, dramatic one-day returns, and historical pricing). Anchoring behaviour occurs when an investor enables certain facts to impact his cognitive decision-making process. Additionally, when individuals seek to predict an unspecified amount of information, they refer to a certain value and make an evaluation that is close to the value that those referring to which this is served as an "anchor" (Dervishaj, 2021).

Herding

Retail investors are frequently influenced by herding when collecting information and analysing financial concerns. They lack the ability to analyse the market. Herding is the process through which the judgements, choices, and volume of other investors impact investors' investment type and intensity decisions, as well as how fast they respond to other investors' activities (Goyal et al., 2021). Furthermore, herding is a component in which investors' behaviour is influenced by others' purchasing and selling actions, investment selections, investment expectations, and information from reputable media (Gavrilakis & Floros, 2021). When the value of a stock grows exceptionally high, the herding effect reduces. As a result of the herding effect, which impacts their investing decisions, investors typically overestimate the value of a share (Rehan et al., 2021).

Risk Perception

Risk perception is crucial in the financial market because it influences investor behaviour.

While investors consider the past or how risk is related to investing, their risk perception shapes their decision (Daskalaki & Skiadopoulos, 2016). Investor risk perception is a mental capacity or sense of judgement that distinguishes individual investors based on their level of competency and inner feelings assessed in view of experiences (Bairagi & Chakraborty, 2018). Furthermore, if the retail investor is knowledgeable about many elements of his or her investment behaviour as well as the reason for the perceived risks, risk perception may be adjusted (Deb & Singh, 2018; Singh & Bhowal, 2008). With a better knowledge of behavioural finance, industry practitioners can better comprehend investor preferences and provide investing strategies and products that match the investor's risk tolerance (Saivasan & Lokhande, 2022). On the other hand, risk is a component that every investor sees or reacts to. Risk is taken lightly by some investors, while it is taken extremely seriously by others. It differs since each investor has a unique set of investment beliefs and perspectives (Ishfaq et al., 2017).

Emotional

Most studies and researchers have found a variety of aspects that will impact retail investors' decision-making process, the vast majority of which have direct touch with an individual's psychological behaviour. As a result, traditional economic theory assumptions expanded on the implications of emotional factors towards the decision-making process of investors (Nayak & Kumar, 2021). Furthermore, Jaiyeoba et al (2018) that while both Malaysian retail and institutional investors experience psychological biases, the latter use more extensive ways to resist such affects during investing choices. It should be noted that emotional biases are tough to overcome; as a result, investors should develop and employ a good analysis approach while making investment selections (Akinkoye & Bankole, 2020). Moreover, Zweig (2007) mentioned that if emotion appears to be an obstacle in making strong financial decisions, then a probable explanation is related. Individuals who have had a head injury and are unable to use their emotional functions in their brains can be poor investors. Additionally, P.H & Uchil (2019) discovered that awareness of elements can have a long-term impact on investor viewpoint which may impact financial performance. As a result, the market may significantly impact on investor sentiment, creating emotional changes and influencing decision-making.

Financial Literacy

Financial literacy is the comprehension of various facets of finance, such as income, money, and investment (Baker et al., 2019). Narang and Trivedi (2021) mentioned that financial literacy is essential for investors to comprehend and be aware of many financial factors such as investment techniques, managing investments, purchasing and participating in investment products. Meanwhile, while both financial literacy and investing experience had significant positive effects on cryptocurrency ownership, in fact the investment experience had a higher influence on cryptocurrency investment behaviour than financial literacy (Zhao & Zhang, 2021). Moreover, according to Baihaqqy et al (2020), there is a correlation between financial literacy and making financial decisions. Factors of financial literacy can help an investor determine which investments to make and how to analyse investment stages to maximise future earnings.

Investors' Experience – Mediator

Assessing investors' personal investment experiences is extremely essential because it will impact their future stock market participation. For example, investors are afraid to invest extensively in the Pakistani Stock Exchange (PSX) at the moment, but they want to continue investing (Sohail et al., 2020). Moreover, utilizing experience in decision-making, on the other hand, may entail three risks: ignoring tiny variations between the focus point decision and the experience basis, establishing potentially contradicting reference points, and creating decision-making rigidity and inertia (Galavotti et al., 2021). As a result of extensive knowledge paired with past experiences, investors develop confident and competence in their decision, resulting in similar investment patterns. An investor making a substantial investment might cause difficulties and poor decisions. Furthermore, psychological, and emotional elements such as overconfidence, anxiety, and greed play a significant impact on investment decisions (P.H & Uchil, 2019).

Methodology
The proposed conceptual framework for retail investors' decision-making in Malaysia is based on the Prospect and Heuristic theory and a study of previous literature. The previous literature was reviewed using systematic search methodologies. This technique was built on three sequential phases thorough and systematic searching which are identification, screening, and eligibility. This method can be accurately stated in the review and to the degree that all database searches are reliable. The first phase is identification, which is the act of looking for synonyms, similar terms, and variants on the core keywords of the study. From 2017 to 2021, all databases were searched independently or by integrating advanced searching techniques such as the Boolean operator, phrase searching, deletion, wild card, and field code functions into a whole searching phrase based on the main and enhanced keywords: ("RETAIL INVESTOR*" OR "INDIVIDUAL INVESTOR*") AND ("PSYCHOLOGICAL BIAS*" OR "BEHAVIORAL BIAS*" OR "ANCHORING*" OR "HERDING*" OR "RISK PERCEPTION*" OR "EMOTIONAL*" OR "FINANCIAL LITERACY*" OR "INVESTORS' EXPERIENCE*").

The primary databases for searching related papers and documents to be reviewed were Scopus and Web of Science. Supporting databases were obtained from a total of six (6) sources, including Google Scholar, Research Gate, Mendeley, and university libraries. The identification process in the primary and secondary databases yielded a total of articles. Because 205 articles did not match the inclusion criteria, they were eliminated from the screening phase, leaving 97 articles for eligibility. The third procedure is eligibility, which involves manually reviewing the retrieved articles to ensure that all remaining articles (after the screening process) match the criteria. This approach selected just 58 articles for review and rejected the remaining 39 articles with duplicated records across databases. This process is important because researchers or decision-makers should explore the available evidence in the least biased way possible or, better yet, search systematically for all available evidence for a specific topic (including the counter-evidence to one cherry-picked paper). Researchers can only be confident that their conclusions and decisions are substantial proof (Gusenbauer & Haddaway, 2021).

The Proposed Conceptual Framework
This research aims to propose a conceptual framework based on Prospect and Heuristic Theory as well as prior works of literature. The Prospect and Heuristic theories guided the study's conceptual framework development. The prospect theory gives insight into how investors react to decision-making under risk and uncertainty (Kahneman & Tversky, 1979).

Furthermore, in Heuristic Theory (Tversky & Kahneman, 1974) a simple efficient rule of thumb striving to describe how people make choices, draw conclusions, and construct solutions, generally when dealing with complex situations or insufficient knowledge, such as anchoring, is being used. In general, the Heuristic Theory and Prospect Theory focus on the measurement of cognitive biases in the decision-making process of investors. This study will seek to connect these two ideas to comprehend the psychological biases of anchoring and risk perception that influences retail investors' decision-making. Furthermore, based on the specific context demonstrated by the previous study, the suggested conceptual framework could include three new factors: herding, emotional, and financial literacy. According to several researchers, herding (Goyal et al., 2021), emotional (Akinkoye & Bankole, 2020), and financial literacy (Baihaqqy et al., 2020) have significant impact on retail investors' decision making.

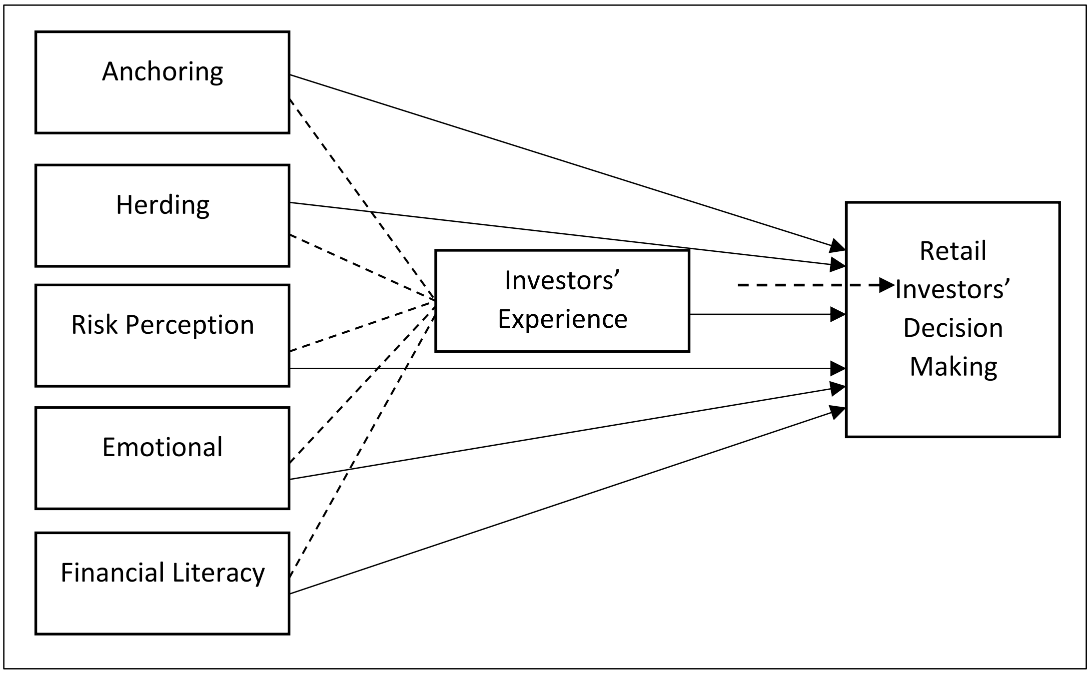

Figure 1 Proposed Conceptual Framework

Conclusion

In conclusion, this study identifies anchoring, herding, risk perception, emotional, financial literacy, and investors' experience (mediator) as psychological biases influencing retail investors' decision-making in Malaysia. As a result, these findings suggest a conceptual framework, as shown in Figure 1, to serve as the study's objective and drive it forward. This research has the potential to contribute theoretically to the current literature at multiple levels. Based on a thorough review of the literature, anchoring, and risk perceptions from the Heuristics and Prospect Theory will be studied and integrated into the framework. As a result, it broadens these theories by incorporating other independent factors from empirical investigations, such as herding, emotional, and financial literacy. In a nutshell, the research started at an appropriate time in promoting the psychological factors and behavioural biases that influence retail investors' decision-making in Malaysia's investment industry. As a result, developing this model contributes to the field of knowledge in behavioural finance while also assisting investors, financial advisors, regulators, and politicians. Furthermore, this conceptual framework increases understanding of psychological biases and investors' experiences with investment decision-making, an area with low empirical data research, particularly in the Malaysian environment. There are further opportunities to investigate the factors that influence the behavioural biases of male and female investors in Malaysia. The study anticipates that the proposed framework will inspire researchers to continue researching this information by giving a clear image for future research. Furthermore, the trends of participation of Malaysian retail investors in year 2020 upon this investment market provide great prospect for the researcher to explore the causes of psychological biases towards their investment decision-making in order to provide better understanding about their perceptions and mindsets. As summary, this study is essential in assuring the optimal investment decisions in a portfolio with given degree of risk tolerance. The significant impact of psychological biases on investor behaviour whereby cognitive limitations and emotional influence were associated in ensuring decision maker to react rationally.

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