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# The effect of behavioral factors on investment decision towards stock market between Indonesia, Japan, and Thailand

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## Abstract

**Purpose** – This research consists of Behavioral Finance where it is focused on cognitive bias factors influence on Investment Decision with using the scope of research in three countries which are Indonesia, Thailand, and Japan.

**Design/methodology/approach** – the method of research is categorized as quantitative research where it uses a questionnaire with 232 respondents. Then, the data is processed and analyzed using software SmartPLS 3.0.

**Findings** – The findings reveal that overconfidence and availability bias have a significant positive effect on investment decisions, while herding behavior has a negative effect and anchoring bias shows no significant influence.

**Research limitations/implications** – This research is limited by its relatively small sample size of 232 respondents across three culturally and economically diverse countries, which may affect the generalizability of the findings.

**Practical implications** – The strong influence of overconfidence and availability bias highlights the need for improved investor education focused on risk awareness and critical analysis, especially in the digital era. Also, to prevent irrational behavior driven by herding, financial institutions and regulators should enhance collective financial literacy and promote transparent, data-driven decision-making.

**Originality/value** – This result provides reasonable insight into why there is a difference in results between each country supported with the data and results from the previous research that have been done before.

***Keywords:*** Overconfidence behavior, herding behavior, Availability bias, Anchoring bias, and Investment Decision

## Introduction

Emerging market is the result of relaxation in capital movements, decrease in cost of information, improvement in technology, and expansion of multinational companies which also impact international investment (Mensi et al., 2017). When talking about investment, it is important for investors where they aim to maximize returns while lowering risk at the same time (Rahman & Gan, 2020). Investors will make a portfolio to diversify their investment while lowering the risk at the same time. Portfolio itself is an account that shows the list of investments we have made or owned. According to the research Mensi et al. (2017), the result shows that diversifying portfolio internationally yield a lower variance and higher rate of returns compared to diversifying portfolio purely at national level. It is also caused by there being no guarantee that a country will sustain forever where the economic crisis even happened in a country with economic prosperity which is Argentina

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in 2001 – 2002 (Hiskey et al., 2011). With this evidence, it encourages investors mindset to invest abroad with the purpose not only to reduce the risk of their investment or maximize profit but also to protect their wealth from the country's bad economy possibilities. Because of emerging markets, the economic situation in one country will impact other countries too which can be learn from the global financial crisis 2008 – 2009 or economic downturns (Hiskey et al., 2011).

In these emerging markets itself especially in Asia continents where it includes investors from many countries, all indices will have a connected pattern one to another. This condition is also the same with the America and Europe continents before, but the situation might be different after the global economy starts to shift. Before, the global transaction always used and valued in dollar but after the trade war in 2018 and followed by the latest war between Russia and Ukraine, many countries start to leave the dollarization and using their own currency for their transaction especially big countries with huge population such as China, Russia, and Brazil followed by ASEAN countries and other countries which totaled 23 countries. Furthermore, some developing countries in Asia continents are in transitions into developed countries which also one of the potentials for Asian market. It is also supported by the recent increase of Asian countries with the gross GDP rates rank first or second worldwide which is higher than US (Chang & Lin, 2023). Even the analysis from 6 major Asian stock market which are India, Hong Kong, South Korea, Japan, Singapore, and Taiwan shows how the currency market have been evolved which valued with average more than $7.5 trillion per day in April 2022 (Chang & Lin, 2023). From these results of money turnover will show how big the number of investors in the Asian market which the combination of their behavior on making investment decision is interesting to be analyzed.

From the data of index of several stocks market in Asia, the data shows the performance of the index before the COVID-19 outbreak and the recent year which from several countries in Asia continents, most of the Index performance are still in the positive sides mostly countries in Asia which also part of G20 and have the big impact in the world economy nowadays such as China, Japan, South Korea, Singapore, and Indonesia. G20 members have contributed for over 80% of world GDP, 75% of global trade, and 60% of global population (Kumar et al., 2023). From this data, members of G20 from Asia continents itself has the biggest population in the world such as China and Indonesia which can be means the increasement of investors are contributed from the country with highest population.

The choice of Indonesia, Thailand, and Japan as the objects of study in this research is based on the differences in economic features and levels of capital market maturity, which represent the diverse market structures in Asia. Japan is chosen as a representation of a developed country with a well-established stock market and a long-tested financial infrastructure (Yoshino et al., 2017), making it a benchmark for stability and rational investor decision-making. Meanwhile, Indonesia and Thailand represent emerging countries in the ASEAN region with strong stock index performance in recent years, suggesting increased retail investor participation and rapid capital market growth (Kiryanto et al., 2022; Suttipun & Yordudom, 2022). These two countries share similar socio-cultural features and economic structures undergoing a transition toward developed country status, yet they still show differences in investor behavior due to varying levels of financial literacy and exposure to investment information (Buana, 2020; Moenjak et al., 2020). By analyzing these three countries, this study provides a more holistic perspective on how cognitive biases influence investment decisions across different levels of financial market development in Asia. The other reason is because based on the development of economics of countries in Asia continent, Countries such as Japan, South Korea, China, and Singapore are the countries with strong economic where according to the data above, Japan has the highest value compared to other countries which performance is 10,31%. Japan and Indonesia and Thailand where according to several countries in Southeast Asia especially in ASEAN, most countries are in the transitions from the developing countries into the developed countries. From several countries involved in ASEAN, Thailand has the second highest performance which is 5,59% while Indonesia is the highest one which performance is 8,68%. Thus, research will be focused on Indonesia compared to the country with the same economic level with the highest performance of Index in ASEAN and developed country with the highest index performance in Asia.

Despite the increasing interest in behavioral finance studies, especially in cognitive biases, there is still a few comparative studies across countries in Asia that capture the influence of cultural and market maturity differences on investment decisions. Most prior research usually focuses on single-country analyses, which limits the generalizability of findings across economic contexts. This gap is important, as behavioral patterns in developed markets may significantly differ from those in emerging markets due to factors such as financial literacy, access to information, and socio-cultural values. So this study fills that gap by analyzing and comparing three countries (Japan, Indonesia, and Thailand) that represent diverse levels of economic development and financial market maturity. By doing so, the research contributes to the enrichment of behavioral finance literature in a cross-country context and provides deeper insights into how cognitive biases manifest differently depending on the market environment and investor profile.

Although research on behavioral biases in investment decision-making continues to grow, still gaps need to be discussed across three key domains. Empirically, most previous studies have been conducted in developed countries or are limited to a single research location, thus failing to capture the context of investors in emerging markets such as Indonesia, Thailand, and other Asian countries with distinct social, cultural, and financial literacy features. The research subjects are often limited to the formal financial sector, without extending to the increasingly active cross-country retail investor population. In the conceptual domain, the relationships among behavioral bias ideas such as overconfidence, herding, availability, and anchoring are still often examined in isolation. These four biases potentially interact and influence each other simultaneously within investment decision-making, yet they are rarely mapped within a comprehensive theoretical framework based on behavioral finance theories such as Prospect Theory or the Heuristics Framework. Methodologically, the approaches used are often partial and limited to testing a single model without considering cross-country robustness checks, and they underutilize structural analyses such as PLS-SEM, which allows for testing complex models with non-normal data. So this study fills these gaps through a cross-country analysis using a structural approach that integrates empirical testing, theoretical reinforcement, and more comprehensive methodological validity.

This research knows whether cognitive bias impacts investment decision making in the stocks markets. Several benefits from this research are: (1) this research can show the clear picture of the cognitive bias impact on the investment decision that have been made in the stock market, (2) this research can help the understanding of the emerging market correspond to the present stock market in Asia continent through the research from Indonesia and Thailand as a developing country with the highest performance compared to other developing countries and Japan as one of the developed countries with the highest performance, (3) this research can show how the increase in number of investors will impact the market situation which directly affect the cognitive bias, (4) this research can help investors mostly individual investors to understand the cognitive bias and overcome these behaviors to make investment decisions.

## Literature Review

### Behavioral Finance

Behavioral finance, often called BeFi, emerged as a response to the limitations of traditional finance theories that assume investor rationality. A foundational element in this field is Prospect Theory, introduced by Kahneman and Tversky (1979), which explains how individuals decide under conditions of risk and uncertainty. Unlike traditional utility theory, which assumes investors evaluate outcomes in terms of final wealth, Prospect Theory posits that people evaluate outcomes relative to a reference point and weigh losses more heavily than equivalent gains, this is known as loss aversion.

Loss aversion, although often highlighted in behavioral finance, is not a theory but a key part derived from Prospect Theory. It reflects the tendency of individuals to prefer avoiding losses rather than acquiring equivalent gains. For example, the pain of losing $100 is often perceived to be stronger than the pleasure of gaining $100. This asymmetry in perception can lead investors to hold onto losing stocks too long (the disposition effect) or avoid potentially profitable risks due to fear of losses. Despite its central role, the phenomenon of loss aversion is often mentioned

superficially in research and requires deeper theoretical grounding when explaining irrational investment behavior. People also evaluate outcomes only based on final wealth levels, Prospect Theory asserts that individuals evaluate outcomes relative to a reference point (typically the status quo) and exhibit an asymmetric value function. People usually experience losses more intensely than equivalent gains, a phenomenon known as loss aversion. However, clarify that loss aversion is not a standalone theory; rather, it is a psychological outcome derived from the principles of Prospect Theory (Bennett et al., 2023). It is an emotional bias or affective reaction where individuals are more sensitive to potential losses than to potential gains. While Prospect Theory highlights this behavior, it does not always capture how emotional intensity, fear, and stress directly affect investment decisions in real-world settings. This gap often leads to oversimplified interpretations of loss aversion, treating it as a universal tendency without accounting for individual differences or contextual factors.

In the broader framework of behavioral finance, biases are typically categorized into cognitive biases and affective (emotional) biases. Cognitive biases result from systematic errors in thinking, often caused by faulty reasoning or mental shortcuts (heuristics) (Athota et al., 2023). Examples include overconfidence, anchoring, and availability bias. These biases influence how individuals process information, estimate probabilities, and make predictions. But affective biases arise from emotional responses such as fear, regret, or excitement, which can override logical reasoning. Loss aversion fits into this category, as it is driven more by the emotional discomfort of losing than by a miscalculation of probabilities.

The combination of cognitive and emotional biases leads to various observable behaviors in financial markets. For example, overconfidence (a cognitive bias) can cause excessive trading, while loss aversion an affective bias can result in holding losing stocks too long to avoid realizing a loss, known as the disposition effect. These behaviors are not adequately explained by traditional financial theories, but are better understood through the lens of behavioral finance, which incorporates both rational and psychological dimensions of decision-making (Bihari et al., 2022).

**Investment Decision**

Investment decision is an asset as funds which it will be invested by the individual investors or firms (Dumohar et al., 2022). Investors expect that the money they use to make investment decision will be resulting in the expected return while they also expecting to maximize returns and reduce the risk (Rahman & Gan, 2020). The idea of investment decision is sacrificing the money in the present to seek the better returns which several criteria needs to be fulfilled in making the investment decision such as liquidity, inflation, financial report evaluation, and so on (Rahman & Gan, 2020).

Investment decision-making is influenced not only by rational factors such as fundamental and technical analysis but also by psychological biases, as explained in Behavioral Finance Theory. In a cross-country context, investor behavior is shaped by cultural influences, market structures, and levels of financial literacy, which vary across nations. Cross-cultural studies have shown that shared cultural values such as individualism vs. collectivism or uncertainty avoidance can shape investors' tendencies in responding to risk and market information (Bennett et al., 2023). In addition, international literature highlights market cointegration, where price movements in one country can influence investor behavior in another, particularly within economically integrated regions such as Southeast and East Asia (Chang & Lin, 2023). Within this framework, investors in emerging markets like Indonesia and Thailand may show different behaviors compared to investors in developed countries like Japan, even within the same regional bloc. So understanding investment decisions from a cross-national perspective is essential to identify whether certain behavioral biases are universal or context-dependent, and to explore how market integration and cultural similarities jointly shape global investor decision-making patterns.

**Overconfidence Bias**

Overconfidence is the example of cognitive bias where it is the behavior of people to overestimate their own skills, cognitive abilities, and precision of information for achieving his/her goals by

underestimating the future uncertainties (Jain et al., 2019). According to the research from Metawa et al. (2019), most investors usually overestimate chances of success and underestimate chances of failure risk. People believe that they are better than ordinary even most confident that they are superior to their actual performance (Dumohar et al., 2022). As for to this behavior, it also related to gender where the research from Jain et al., (2019) shows that men have more confident than women which lead them to take part in more excessive trading that caused in fewer returns. This excessive trading is also influenced by the investment skills and their past performance (Maditinos et al., 2007). In the risk-taking scenario, overconfidence is important to survive and dominate the market while the pessimistic can lead to the small chance to survive in the market (Metawa et al., 2019). However, overconfidence needs to back up with accurate information which it will be useless if the decision only made with the confidence without proper reason behind it (Metawa et al., 2019). This accurate information is mostly obtained from the insider people from the company itself or even government, which usually this information will be provided before it is published to the public where they can act first before the market reacts.

Within the framework of international behavioral finance theory, overconfidence behavior is defined as the tendency of investors to overestimate their ability to interpret information and predict market movements, leading to excessive trading and underestimation of risks (Jain et al., 2019). This behavior often results in irrational investment decisions such as excessive trading and under-diversified portfolios. In a cross-country context, the level of overconfidence may be influenced by cultural features, educational systems, and financial literacy. For example, in countries with individualistic cultures and high self-confidence levels like Indonesia, investors are more likely to rely on personal intuition and private information, but in countries like Japan which are more collectivist and conservative investors are usually more cautious and rational in their investment decisions (Buana, 2020; Yoshino et al., 2017). Regional market cointegration allows sentiments and patterns of overconfidence behavior to spread across countries, especially under volatile or uncertain market conditions. Considering the cultural, market structure, and financial literacy differences among countries, it becomes important to examine whether the impact of overconfidence behavior on investment decisions is universal or context-dependent. Based on these previous results, the hypothesis for this research addressed as below:
H1: Overconfidence behavior improves investment decisions of investors in the stock markets

**Herding Behavior**

Herding behavior is the behavior of investors, mostly individual or small investors, to follow the action of larger group or big players without thinking whether or not their actions are rational. This behavior usually makes investors to not making decision independently and depending on other people by seeking advice from expert such as brokers, friends, or expert (Jain et al., 2019). The existence of herding behavior will affect the price of investment instrument to deviate from its fundamental value (Rahman & Gan, 2020). With the advancement of technology, internet has taken a major role in the spread of information and easy access for trading where the investor can react faster in line with sentiment spreading over internet which according to Dumohar et al. (2022), one of the causes of speculative bubbles on the stock market is caused by the herding behavior. From the research conducted by Hiskey et al. (2011) shows that the herding behavior are usually happened in the small stocks, it is also because the small stocks are sensitive to the changes where the investment are usually short-term trading (Metawa et al., 2019). It is also according to the basic knowledge that small stocks are basically as the size of equity of the company which means the equity is considered low where usually big investors or some company can easily move the stock's price.

Several previous studies have confirmed that behavioral factors, such as cognitive and emotional biases, play a significant role in investment decision-making. However, researchers argue that cross-country contexts have not been explored, particularly in understanding how cultural features, financial literacy levels, and market maturity affect these behavioral biases (Ahmad & Wu, 2024; Athota et al., 2023; Bennett et al., 2023). Most existing research usually focuses on single-country cases or specific investor groups, resulting in conclusions that are often partial and lack generalizability. Many studies discuss biases in isolation without considering the interaction

between different biases or how environmental factors such as economic crises or technological adoption act as moderators or catalysts in shaping investment behavior. So conducting comparative studies across countries with different economic structures becomes essential to broaden the generalizability of findings and provide more contextualized insights.

Herding behavior has long been one of the central themes in behavioral finance, yet recent research indicates this phenomenon is not fully understood when emerging and newly developed markets. Chen et al. (2023) revealed that the stock market in Thailand is highly sensitive to liquidity and external pressure, but there is still not enough evidence to determine whether this is driven by herding or by the dominance of foreign investors. Meanwhile, Gupta and Shrivastava (2022) noted that in emerging markets, herding is often associated with fear of missing out (FOMO) and group emotions, though it does not always lead to irrational decisions it largely depends on investor features. Metawa et al. (2019) also found that herding impacts institutional and individual investors differently, but their study was limited to a single market. Thus, the research gap lies in the lack of cross-country evidence on the dynamics of herding behavior and how differences in market structure and investor composition influence the tendency to follow the majority without rational assessment.

Herding behavior is one of the phenomena in behavioral finance theory where investors usually follow the majority's decisions without independent analysis, often triggered by social pressure or market uncertainty (Jain et al., 2019). In a cross-country context, this behavior may be influenced by collectivist cultures such as those in Japan and Thailand, where social norms and group caution dominate over individual decision-making. In countries like Indonesia, herding may also emerge due to low financial literacy and the dominance of media-driven information. Regional market cointegration and interlinkages between stock exchanges allow movements in one country to trigger herd reactions in others, particularly during global shocks. Therefore, examine the influence of herding behavior on investment decisions within diverse cultural and market contexts. Based on these previous results, the hypothesis for this research addressed as below:
H2: Herding behavior has a negative affects on investment decisions of investors in the stock markets.

**Availability Bias**

Availability bias is the behavior of people to rely on knowledge rather than examining other alternatives (Jain et al., 2019). This situation happens when individual investors deciding based on the existing data which provide simple results easily where people that this bias usually failed to change and diversify their portfolio investment because they only making investment decision based on uncertainty rather than analyzing (Dumohar et al., 2022).

Availability bias is one of the most common cognitive biases in investment decision-making, where investors usually rely more on easily recalled or recently acquired information rather than conducting thorough rational analysis. Although this phenomenon has been widely studied, researchers argue that most research remains limited to individual-level parts and does not adequately capture broader macro or cross-country contexts. According to Ahmad and Wu (2024), investors affected by availability bias are often influenced by peer opinions or social media, particularly in markets that are not yet informationally efficient. However, there is still a lack of studies that examine how this bias manifests across different market conditions, such as between developed and developing countries.

In addition, Athota et al. (2023) highlight that the causes of availability bias stem from information access and from limitations in digital literacy and dependency on specific digital platforms. In this context, factors such as the speed of information dissemination, the credibility of information sources, and investors' experience levels are important variables that have not been extensively explored in prior research. Meanwhile, Bennett et al. (2023) emphasize that in digital financial systems such as decentralized finance (DeFi), availability bias can become even more dangerous, as decisions are made in real-time based on unverified information flows. Thus, the research gap lies in the lack of understanding of how availability bias operates in modern digital financial environments and how financial literacy and information culture influence the strength of this bias across countries. Cross-country studies that compare how investors respond to the types of information are essential to enrich the literature and provide an empirical foundation for

designing bias mitigation strategies in global financial markets. People with this bias usually only invest in the local market or stocks that have been evaluated by the experts. Based on these previous results, the hypothesis for this research addressed as below:
H3: Availability bias improves investment decision of investors in the stock markets.

### Anchoring Bias

Anchoring Bias is one of example of cognitive bias where it is the behavior of people which believing that information that come to their mind first will become their anchor point to do things (Dumohar et al., 2022). Investors that suffer from this behavior usually fix the price for deciding whether to buy or sell the shares. Thus, it will lead to the situation where they may buy shares at a high price or sell shares at a low price. Investors with this behavior usually have set the target price which if their target price is not reached, they will make no investment decision which will make them lose an investment opportunity (Jain et al., 2019).

Anchoring bias is a cognitive bias where investors rely too heavily on initial information (anchors), such as historical stock prices, when making investment decisions (Jain et al., 2019). In international behavioral finance theory, this bias occurs when investors set a fixed price reference and struggle to adjust to new information. In countries with conservative cultures and high uncertainty avoidance like Japan, investors usually maintain familiar price benchmarks to reduce ambiguity. Meanwhile, in emerging markets such as Indonesia and Thailand, limited access to information and lower financial literacy may reinforce anchoring effects, as investors often rely on simple references such as earlier peak prices. Regional market integration lets perceptions of fair value spread across borders. So this study examines the influence of anchoring bias within diverse cultural and market contexts. Based on these previous results, the hypothesis for this research addressed as below:
H4: Anchoring bias has negative affects on investment decision of investors in the stock markets.

## Method

This study uses a quantitative approach using a survey method as the primary data collection technique. The instrument includes a closed-ended questionnaire based on a five-point Likert scale, distributed to respondents actively involved in stock investment activities across three countries: Indonesia, Japan, and Thailand. To analyze the relationships between variables, the study uses path analysis, implemented through the Partial Least Squares Structural Equation Modeling (PLS-SEM) method using SmartPLS 3.0 software (Hair et al., 2019; Sarstedt et al., 2021). This technique is chosen for its ability to examine causal relationships between latent variables, including the influence of behavioral biases (overconfidence, herding, availability, and anchoring) on investment decisions. Before structural analysis, validity and reliability tests were conducted on the construct indicators through outer loadings, Average Variance Extracted (AVE), and Cronbach's Alpha values. In addition, convergent and discriminant validity tests were performed to ensure the reliability of the measurement model.

To address potential common method bias, which may affect the validity of the research findings, this study uses Harman's single-factor test, as recommended by Podsakoff et al. (2003). This test involves entering all questionnaire items into an exploratory factor analysis without rotation to examine whether a single factor accounts for most of the total variance. If one factor does not explain over 50% of the total variance, then common method bias is not considered a significant issue. In addition, further methodological considerations refer to Malhotra et al. (2006), who emphasize the importance of careful research design, including psychological separation of independent and dependent variables, using varied scale formats, and neutral instructions to reduce social desirability bias that could exacerbate method bias.

The survey will be as online questionnaire using google form which will be distributed easily using the link to the participants that has been engaged in the stock market which using at least half of the respondent according to the previous research which is around 150 respondents at least. The respondents will be collected from several countries in Asia continent to support the accurate data regarding the target of the research. Data measurement that will measure the results of research

is as numerical scale. The scale point will be ranged from number 1 to 5 with the terms: (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree.

**T**he target population for this research will be targeting investor or people that involved in the stock market which will be focused on the Asia countries (Japan, Thailand, Indonesia). This study defines investor criteria as individuals who are actively involved in stock market activities, either as retail or institutional investors. To ensure the relevance and reliability of the data collected, participants must meet several minimum criteria: (1) they must have experience in buying or selling stocks within the past 12 months; (2) they must have at least a basic understanding of stock market mechanisms; and (3) they must make investment decisions either independently or with minimal reliance on third-party management. These criteria are designed to filter respondents who are familiar with financial instruments and capable of being influenced by behavioral biases such as overconfidence, herding, availability, and anchoring. No restrictions were also placed on demographic variables such as age, gender, or income level, as the goal of the study is to capture diverse investor behaviors across different segments of the population. The questionnaire was administered in both English and the respective native languages (Indonesian, Japanese, and Thai) to ensure clarity and understanding among respondents. Each version was carefully translated and cross-checked to maintain consistency in meaning and measurement across all languages.

The procedure that will be used to collect the data as follow: 1. Organizing the questionnaire to make sure the question is already right, 2. Filtering the target respondents based on several criteria and try to make the balance between the target respondents, 3. Doing the survey by sharing the link of google form to the target respondents, 4. Explaining the purpose of the research including the guidelines to fill the questionnaire, 5. Collecting and checking the results of the respondents, and 6. Analyzing and processing the data for research. After collecting the data, the data will be processed first, which will be processed using two software which are IBM SPSS Statistic 26 and SmartPLS 3.0. The data processing in this research is conducted to test the correlation of 41 questions in the questionnaire. The results from the questionnaire will be extracted to the Microsoft excel spreadsheet before it is processed into the software.

In this research 4 independent variables will be used in this research related to cognitive bias which are overconfidence bias, herding behavior, availability bias, and anchoring bias. While the dependent variable used in this research is investment decision. Table 1 is variables and questions in this research and figure 1 is research framewok.

**Table 1.** Variables and Questions

| No. | Construct | Statement | Source |
|---|---|---|---|
| | | *Dependent Variable (Investment Decision)* | |
| ID1 | Investment Decision | I depend on economic data (GDP, interest rates, inflation rate, exchange rate) when I make my investment decision | (Rahman & Gan, 2020) |
| ID2 | Investment Decision | I depend on industrial data (type of industry, competition level, technology level, regulations) when I make my investment decision | |
| ID3 | Investment Decision | I depend on stock exchange index when I make my investment decision | |
| ID4 | Investment Decision | Trading volume affect my investment decision | |
| ID5 | Investment Decision | I consider brokers opinions when making investment decision | |
| ID6 | Investment Decision | I consider big investors opinions when making the investment decision | |
| ID7 | Investment Decision | I consider friends opinions when making the investment decision | |
| ID8 | Investment Decision | I consider research and mutual fund analysis when making the investment decision | |
| ID9 | Investment Decision | I depend heavily on private information I have when making investment decision | |

| No. | Construct | Statement | Source |
|---|---|---|---|
| ID10 | Investment Decision | I consider random information when making investment decision | |
| | | *Independent Variable (Overconfidence)* | |
| OB1 | Overconfidence Bias | I am aware of everything in the stock market | Metawa et al. (2019); Jain et al. (2019) |
| OB2 | Overconfidence Bias | I have the needed knowledge and skills to invest in the stock market | |
| OB3 | Overconfidence Bias | I trust my data sources | |
| OB4 | Overconfidence Bias | I have the ability to analyze the new information in the market | |
| OB5 | Overconfidence Bias | I do trade by myself | |
| OB6 | Overconfidence Bias | I keep the best stocks in my portfolio | |
| OB7 | Overconfidence Bias | My opinion comes first when making decision | |
| | | *Independent Variable (Herding)* | |
| HB1 | Herding Behaviour | I make my decisions based on the majority of other investors decisions | Jain et al. (2019); Rahman & Gan (2020) |
| HB2 | Herding Behaviour | I make my decision mainly based on the commercial paper movements | |
| HB3 | Herding Behaviour | Quick movements in the market does not affect my decision | |
| HB4 | Herding Behaviour | News about the company (Newspapers, TV and magazines) affect my investment decision | |
| | | *Independent Variable (Availability)* | |
| AvB1 | Availability Bias | If I heard from a friend about a stock that achieved high returns, I would buy it | Dumohar et al. (2022); Jain et al. (2019) |
| AvB2 | Availability Bias | If I want to invest in the stocks of certain company, I will rely on my co-worker's opinions | |
| AvB3 | Availability Bias | I prefer local stocks over International Stocks | |
| AvB4 | Availability Bias | I Prefer to invest in stocks, evaluated by expert | |
| AvB5 | Availability Bias | My investment decision depends on new information released regarding stock | |
| | | *Independent Variable (Anchoring)* | |
| AnB1 | Anchoring Bias | I compare the current stock prices with their recent year high and low price to justify my stock purchase | Jain et al. (2019); Dumohar et al. (2022) |
| AnB2 | Anchoring Bias | I am likely to sell my stock after the price hits recent year high | |
| AnB3 | Anchoring Bias | I am unlikely to buy a stock if it was more expensive than last year | |
| AnB4 | Anchoring Bias | I see the stock price as high if the price has increased to the current year high | |
| AnB5 | Anchoring Bias | I believe that the position of the year high and low price determined the current stock price movement range | |

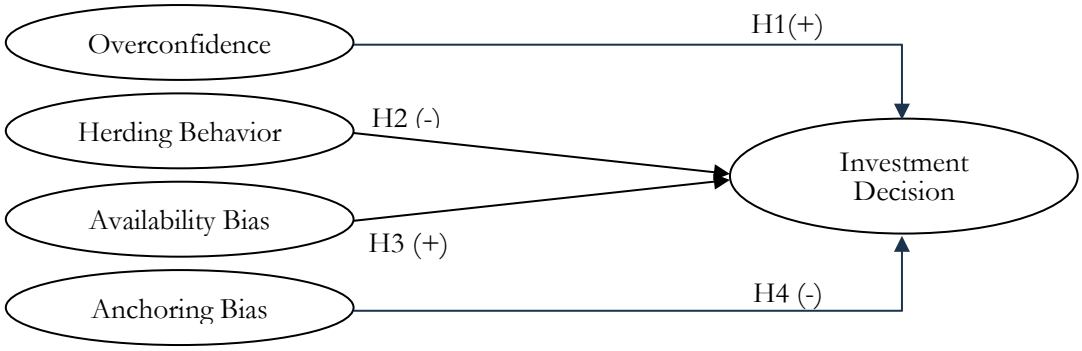


**Figure 1.** Research Framework
Source: (Dumohar et al., 2022; Jain et al., 2019; Metawa et al., 2019)

This study adopts a holistic testing approach by analyzing the overall cross-country data collectively to identify general patterns in the influence of behavioral biases on investment

decisions. However, to ensure the robustness and validity of the findings, country-specific analyses were also conducted as a form of robustness check. This approach lets the researcher observe whether the relationships between variables remain consistent across different economic, cultural, and market structures. By comparing the results from Indonesia, Thailand, and Japan, this study not only offers a comprehensive cross-country perspective but also examines the strength and stability of the model more thoroughly within heterogeneous market contexts.

## Results

In this chapter, it will show the results of the method explained in chapter three where for the sample gathered is 232 respondents which is the combination of three countries.

**Table 2.** Description of data Research

| Number | Nation | Proportion | Percentage |
|---|---|---|---|
| 1 | Indonesia | 77 | 33,2% |
| 2 | Japan | 90 | 38,8% |
| 3 | Thailand | 65 | 28% |
| Number | Amount of Money Invested | Proportion | Percentage |
| 1 | Less than $1,000 | 53 | 22.90% |
| 2 | $1,000-$5,000 | 62 | 26.70% |
| 3 | $5,000-$10,000 | 75 | 32.30% |
| 4 | $10,000-$100,000 | 35 | 15.10% |
| 5 | More than $100,000 | 7 | 3% |
| Number | Routine | Proportion | Percentage |
| 1 | Never add more money to increase equity | 54 | 23,3% |
| 2 | Regularly add the sum of money | 104 | 44,8% |
| 3 | Add a sum of money when there is excess cash | 74 | 31,9% |
| | Total | 232 | 100% |

Table 2 show that the proportion of the respondents are 33.2% of the respondents from Indonesia which have 77 people, 38.8% of the respondents from Japan which have 90 people, and 28% of the respondents from Thailand which have 65 people.

### Validity Test Result

Using Confirmatory Factor Analysis (CFA) in this study examines the extent to which the developed indicators accurately reflect the latent constructs being measured. CFA was chosen because it provides a more robust and systematic analysis for assessing the convergent and discriminant validity of the research instrument. In CFA, an indicator is considered valid if it has a factor loading above 0.70. Based on Table 3, most indicators from the four constructs Overconfidence, Herding, Availability Bias, and Anchoring Bias have loading values above 0.70 across the three countries (Indonesia, Japan, and Thailand). This indicates that the indicators reflect their respective constructs well and meet the criteria for individual convergent validity.

**Table 3.** Validity Test Results

| Variables | Items | Loading | Cronbach's Alpha | Composite Reliability |
|---|---|---|---|---|
| Investment Decision | ID1 | 0.893 | 0.89 | 0.902 |
| | ID2 | 0.813 | | |
| | ID3 | 0.833 | | |
| | ID4 | 0.883 | | |
| | ID5 | 0.843 | | |
| | ID6 | 0.793 | | |
| | ID7 | 0.843 | | |
| | ID8 | 0.873 | | |
| | ID9 | 0.873 | | |

| Variables | Items | Loading | Cronbach's Alpha | Composite Reliability |
|---|---|---|---|---|
| | ID10 | 0.823 | | |
| Overconfidence Bias | OB1 | 0.773 | 0.7938 | 0.825 |
| | OB2 | 0.783 | | |
| | OB3 | 0.823 | | |
| | OB4 | 0.763 | | |
| | OB5 | 0.813 | | |
| | OB6 | 0.863 | | |
| | OB7 | 0.883 | | |
| Herding Behaviour | HB1 | 0.793 | 0.8038 | 0.8118 |
| | HB2 | 0.803 | | |
| | HB3 | 0.753 | | |
| | HB4 | 0.803 | | |
| Availability Bias | AvB1 | 0.783 | 0.812 | 0.82 |
| | AvB2 | 0.843 | | |
| | AvB3 | 0.853 | | |
| | AvB4 | 0.833 | | |
| | AvB5 | 0.823 | | |
| Anchoring Bias | AnB1 | 0.843 | 0.7938 | 0.796 |
| | AnB2 | 0.873 | | |
| | AnB3 | 0.873 | | |
| | AnB4 | 0.823 | | |
| | AnB5 | 0.793 | | |

**Table 4.** Hypothesis Results

| | | Hypothesis | T-Statistics | P-Value | Status |
|---|---|---|---|---|---|
| H1 | (+) | Overconfidence Bias → Investment Decision | 2.912 | 0,00** | Supported |
| H2 | (-) | Herding Behavior → Investment Decision | 1.907 | 0,06* | Supported |
| H3 | (+) | Availability Bias → Investment Decision | 2,535 | 0,03** | Supported |
| H4 | (-) | Anchoring Bias → Investment Decision | 0,032 | 0,719 | Not Supported |

Table 4 results from hypothesis testing on all samples. Based on Table 4, it can be concluded that three of the four hypotheses tested showed significant results.

## Discussion of Research Result

The results the first hypothesis, confirming that overconfidence bias has a significant positive influence on investment decisions. Investors who exhibit overconfidence usually overestimate their knowledge and abilities, which leads to more active participation, often without adequate risk assessment. This behavior is further reinforced by several factors, including the growing number of retail investors, increasing reliance on personal judgment, widespread use of digital platforms, and limited financial literacy among certain investor segments. These elements collectively amplify the tendency to make investment decisions based on subjective conviction rather than objective analysis, establishing overconfidence as a key behavioral factor in shaping investment activity across various financial environments. This phenomenon is particularly associated with features commonly found in retail investors from emerging markets, who are usually more optimistic, easily influenced by digital information, and heavily reliant on individual judgment. The maturity and development of a country's capital market contribute to the evolution of its financial literacy landscape. Markets with a longer and more stable history often have more educated investors who understand both the risks and opportunities of investing. This is supported by Inghelbrecht and Tedde (2024), who found that higher financial literacy enhances decision-making quality in areas such as retirement planning, wealth management, and error avoidance. So investors with higher financial literacy are more likely to make rational investment decisions. Yoshino et al. (2017) and Soekarno and Pranoto (2020) further support this finding by emphasizing the role of financial education and investor features. Soekarno and Pranoto (2020) revealed that millennials despite

varying levels of financial literacy generally have strong self-confidence and optimism, which drive their participation in the stock market. Even those with only basic financial knowledge are often willing to invest due to high levels of self-belief. This growing trend, particularly among younger investors supported by increased access to financial information and digital platforms, contributes significantly to the prevalence of overconfidence in investment behavior today.

The research findings support the second hypothesis, which states that herding behavior harms investment decisions. Herding behavior refers to the tendency of investors to follow the majority's decisions without conducting independent analysis. This behavior often arises in situations of uncertainty or when investors are influenced by dominant market sentiment. Empirical evidence shows that herding usually leads to irrational investment decisions, especially when driven by speculation or fear of missing out on market trends. Chen et al. (2023) state that emerging markets are generally more reactive to market liquidity and volatility compared to developed countries. However, the impact of this volatility often results in investment behavior driven by herding.

Availability bias refers to the tendency of investors to decide based on the information that is most easily recalled or most recently obtained, without evaluating all available alternatives. This bias often arises when investors heavily rely on friends' opinions, media recommendations, or viral information that may not be relevant. The research findings indicate that availability bias has a positive and significant influence on investment decisions. This suggests that investors, despite cultural or market context, are usually influenced by information that is easily accessible and rapidly distributed. In the era of digital technology and social media, availability bias becomes increasingly dominant due to the massive flow of information, which is not always verified. So availability bias is an important factor to consider when analyzing modern investor behavior patterns. The results that investor behavior is also influenced by any information that is easy for them to capture and process in making investment decisions. This information is usually related to opportunities or negative events around the world. This statement is supported by Felimban et al. (2018), who state that geopolitical factors and dividend information can affect investor behavior. Implementing ESG can enhance firm value and market reactions (Suttipun & Yordudom, 2022), and this information is directly linked to investors' access to information, thus influencing their investment decisions. According to Kiryanto et al. (2022), investors respond to any information that affects them in making decisions, as shown by the influence of ISO 9001 adoption. ISO 9001 is an international standard that has been proven to improve the performance of companies that hold the certification compared to those that do not, over a five-year period. So Kiryanto et al. (2022) conclude that investors will decide based on any internal or external information available to them.

Anchoring bias occurs when investors become overly fixated on initial information, such as an earlier peak price, and use it as a primary reference in making investment decisions. This bias can lead investors to hold on to stocks for too long or avoid buying because the price is perceived as "too high" compared to the anchor, even when fundamental conditions have changed. The research findings indicate that anchoring bias does not significantly influence investment decisions in the three countries studied. This suggests that although investors usually establish reference points, evolving market dynamics and easy access to information encourage more adaptive and rational decision-making. These findings also reflect the role of increasing financial literacy and widespread access to digital information, which may reduce the influence of anchoring bias in investment behavior. The results show that investors are not only influenced by a single piece of reference information. In addition, that stock indices in the three countries have continued to grow and even reached all-time highs multiple times is evidence that investors are not trapped by anchoring bias. According to the world's richest investor, Warren Edward Buffett, "the most important quality for an investor is temperament, not intellect," which specifically highlights that human behavior is often the main cause of investment failure. There is evidence that investors do not always act rationally when making investment decisions (Majewski & Majewska, 2022). These irrational decisions are also known as emotional decision-making (Takahashi, 2013), in which emotional and psychological factors such as fear, greed, and overconfidence play a significant role in investment decisions (Metawa et al., 2019).

## Theoretical Implication and Managerial Implication

The findings of this study contribute significantly to the development of Behavioral Finance theory by reinforcing the understanding that investment decisions are influenced by cognitive biases that are contextual and multidimensional. The results confirm that overconfidence bias and availability bias have a significant and positive effect on investment decisions, highlighting that investors often act based on conviction and easily accessible information rather than objective analysis. But the insignificant effect of anchoring bias and the negative effect of herding behavior enrich the literature by showing how market dynamics, financial literacy, and digital maturity can shape or even reduce the role of certain cognitive biases. Thus, this study emphasizes the need for cross-country and cross-cultural approaches in Behavioral Finance research, as well as the importance of considering the interaction between individual behavior, information access, and market structure. From a practical perspective, the results strategic insights for investment managers, market regulators, and financial service providers. First, the strong influence of overconfidence and availability bias suggests that investor education should focus on improving risk awareness and analytical skills, especially in a digital era dominated by instant and often unverified information. Second, the finding that herding behavior has a negative effect indicates the need to enhance collective financial literacy to prevent investors from making impulsive decisions based on social pressure or short-term trends. Third, the weak influence of anchoring bias confirms that with increasing information access and market digitalization, investors are usually more adaptive in adjusting their value perceptions. So market participants should develop more effective strategies in communication, training, and data transparency to reduce behavioral biases and promote rational investment decisions.

## Conclusion and Future Direction

This study explores the influence of four cognitive biases (overconfidence, herding behavior, availability bias, and anchoring bias) on investment decisions across three countries: Indonesia, Japan, and Thailand. The findings confirm that overconfidence and availability bias have a significant positive effect on investment decisions, emphasizing the role of investor psychology, conviction, and rapid information access in shaping modern investment behavior. But herding behavior was found to have a negative effect, suggesting the risks of following market trends without independent analysis. Anchoring bias, however, showed no significant influence, suggesting that with the advancement of financial literacy and information access, investors are becoming more adaptive and rational. These results highlight the contextual and behavioral complexities that must be considered in both academic theory and practical investment strategies. Future research should expand analysis by including more diverse countries and demographic segments to improve generalizability. Longitudinal studies could offer deeper insights into how cognitive biases evolve over time, especially in response to market shocks or regulatory changes. Also, integrating emotional factors such as fear, regret, and greed alongside cognitive biases may provide a more comprehensive understanding of investor behavior. Further exploration of digital influence, including the role of algorithms, social trading platforms, and financial influencers, is also recommended to assess how modern technologies amplify or mitigate behavioral biases in different market environments.

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