

The Challenge of Behavioral Bias in Investment Decisions of PT Mirae Asset Sekuritas Users in Malang City

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Abstract

Cognitive biases such as loss aversion and herding bias often influence investment decision-making, particularly among retail investors amidst macroeconomic uncertainty due to heated geopolitics, leading to Fear of Missing Out (FOMO) events, which reinforce these behavioral biases when making investment decisions. This study aims to investigate how loss aversion and herding bias influence investment decisions through FOMO, which serves as an intervening variable among investors using the services of PT Mirae Asset Sekuritas in Malang City, with a population of 8,634 investors. The researchers employed an exploratory quantitative design, using a survey method to collect data via an online questionnaire distributed to 100 respondents selected through purposive sampling. Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that the direct influence of loss aversion and herding bias has a positive but insignificant effect on investment decisions. Conversely, loss aversion and herding bias have a positive and significant direct influence on FOMO. However, FOMO does not significantly influence investment decisions and is unable to mediate the indirect relationship between loss aversion and herding bias and investment decisions. These findings indicate that although investors experience psychological pressure in the form of FOMO due to behavioral bias, their investment decisions are ultimately based more on rational considerations and self-analysis, supported by financial literacy and access to education from brokers. These results highlight the importance of strengthening financial literacy based on behavioral finance and the need to monitor investment content on digital platforms to mitigate the impact of psychological bias.

Keywords: Loss Aversion, Herding Bias, Fear of Missing Out (FOMO), Investment Decisions, Behavioral Finance.

Abstrak

Bias kognitif seperti *loss aversion* dan *herding bias* sering memengaruhi pengambilan keputusan investasi, khususnya di kalangan investor ritel di tengah ketidakpastian makroekonomi akibat geopolitik yang memanas, yang menyebabkan peristiwa *Fear of Missing Out* (FOMO) memperkuat bias perilaku tersebut ketika mengambil keputusan investasi. Studi ini bertujuan untuk menyelidiki bagaimana *loss aversion* dan *herding bias* memengaruhi keputusan investasi melalui FOMO, yang berfungsi sebagai variabel intervening di antara investor yang menggunakan jasa PT Mirae Asset Sekuritas di Kota Malang, dengan populasi 8.634 investor. Peneliti menggunakan desain penelitian kuantitatif eksploratif dengan metode survei untuk mengumpulkan data melalui kuesioner *online* yang didistribusikan kepada 100 responden yang dipilih menggunakan teknik *purposive sampling*. Analisis data dilakukan menggunakan metode *Partial Least Squares-Structural Equation Modeling* (PLS-SEM). Hasil pengaruh *loss aversion* dan *herding bias* menunjukkan pengaruh positif tetapi tidak signifikan terhadap keputusan investasi. Sebaliknya, *loss aversion* dan *herding bias* memiliki pengaruh langsung yang positif dan signifikan terhadap FOMO. Namun, FOMO tidak secara signifikan memengaruhi keputusan investasi dan tidak mampu memediasi hubungan tidak langsung antara *loss aversion* dan *herding bias* dengan keputusan investasi. Temuan ini menunjukkan bahwa meskipun investor mengalami tekanan psikologis dalam bentuk FOMO karena bias perilaku, keputusan investasi mereka pada akhirnya lebih didasarkan pada pertimbangan rasional dan analisis pribadi, yang didukung oleh literasi keuangan dan akses terhadap pendidikan dari pialang. Selain itu penting memperkuat literasi keuangan berdasarkan keuangan perilaku dan perlunya memantau konten investasi di platform digital untuk mengurangi dampak bias psikologis.

Kata kunci: Loss Aversion, Herding Bias, Fear of Missing Out (FOMO), Keputusan Investasi, Behavioral Finance.

1. Introduction

Investment decisions are crucial for determining future financial outcomes, closely related to personal financial management. (Gupta & Shrivastava, 2022). The concept of the time value of money requires everyone to make investment decisions. The time value of money indicates that money today has greater value than money in the future because its value decreases over time. Continuous inflation erodes the future value of money, reducing its purchasing power. (Vyasana, 2024). Therefore, to maintain the current value of money, an individual must invest their money in investment instruments that can store value to keep pace with inflation. Besides serving as asset protection against inflation, investments also play a role in meeting investors' future financial needs (Alfarisi et al., 2024). The success of an investment is determined by the accuracy of investment decisions. According to Muda & Nasser Hasibuan (2017) when someone receives a certain amount of money in the future, they need to calculate its present value by applying a specific discount rate.

One investment instrument that has significantly outpaced inflation is Bitcoin. Within a decade, Bitcoin became the asset with the highest return, with a 26,931.1% increase (Table 1), surpassing the returns of the S&P 500, gold, crude oil, and government bonds (Reginald, 2024). In addition to Bitcoin's rise, in 2025, the Indonesian financial market was also enlivened by the initial public offering (IPO) trend, with high investor interest. Many stock prices soared after their IPOs on the Indonesia Stock Exchange. The share price of PT Indokripto Koin Semesta (COIN) rose 144% after three days of listing on the IDX, the share price of PT Pancaran Samudera Transpirt (PSAT) rose 143% after five days of listing on the IDX, and the share price of PT Chandra Daya Investasi (CDIA) rose 110.5% after three days of listing on the IDX (Table 2).

The significant price increase has led people to flock to invest in Bitcoin assets due to the fear of missing out (FOMO), even though most of them don't understand cryptocurrencies and blockchain technology. This is similar to the euphoria surrounding stock IPOs; most investors are influenced by psychological biases such as FOMO and herding bias when purchasing stocks. They fear missing out on profit opportunities even though they haven't fully considered the fundamental analysis of the stocks they purchase. According to Wang et al. (2023) FOMO is the anxious behavior of missing out on something that others will experience. FOMO causes serious problems because investment decisions become irrational. It's not uncommon for FOMO to cause speculative bubbles in financial markets (Gupta & Shrivastava, 2022). FOMO causes investors to constantly strive to align social and economic conditions with those of their peers. People who only care about the outside world because of FOMO and events they deem important will lose their identity, meaning they are obsessed with gaining validation from others (Sulhan & Putri, 2023).

Table 1: Bitcoin, S&P 500, Gold, and Bond Returns Over the Past Decade

Return Period	Bitcoin	S&P500	Gold	Crude Oil	5-Year Treasuries	10-Year Treasuries
YTD	129,0%	28,3%	32,2%	-0,13%	5,3%	8,2%
1 year	153,1%	33,1%	34,8%	-3,8%	-2,5%	-0,4%
3 year	79,0%	34,1%	53,1%	6,1%	267,8%	218,0%
5 year	1.283,6%	96,7%	84,6%	25,3%	169,5%1	149,9%
10 year	26.931,1%	193,3%1	125,8%	4,3%	157,1%	86,8%

Source: Data processed by Coingecko, 2024

Decision-making in investment activities is closely related to risk considerations. Prospect theory is the basis for these risk considerations. Prospect theory states that investment decisions made by investors depend on the risk outlook (Kahneman & Tversky, 2013). Research by Rahmawati & Raharja (2024) found that loss aversion significantly influences investment decisions. Investors fear

losing money, so they tend to hold onto losing investments in the hope that prices will recover and immediately sell assets when they first make a profit. Investors experience FOMO when they see other investors making a profit, thus being reluctant to experience losses. Research by Pratiknjo et al. (2024) found that herding bias influences investment decisions. When investors prioritize preventing losses over seeking profits, they tend to compare the investment results of others and assume that investment decisions that align with the majority will be profitable, thus triggering the urgency of FOMO. Furthermore, research by Kumar et al. (2024) found that investment decisions and FOMO are influenced by loss aversion and herding bias, where investors tend to prioritize preventing losses over seeking profits. When investors see that the majority of other investors make the right decisions, resulting in high returns, they are motivated to invest for fear of missing out (FOMO). Therefore, investment decision-making activities are also influenced by the FOMO factor, so that many investment decisions simply follow the behavior of others (Kang et al., 2019). This behavior drives the alignment of socio-economic activities so as not to miss out on profit opportunities that others will get. Investors who experience FOMO have confidence that when their investments are the same as others, they have the potential to achieve maximum profits and can avoid losses (Puaschunder, 2018).

Essentially, there are several types of biases that influence investment decision-making behavior, such as herding, loss aversion, and overconfidence (Kumar et al., 2024). When faced with herding bias, investors are more likely to trust information widely disseminated on social media or trending public news, rather than using personal information or analysis to make investment decisions that are more likely to generate profits (Gupta & Shrivastava, 2022). The high volatility in the crypto and stock markets causes many investors to be more concerned with the risk of loss than the level of profit, a phenomenon referred to in prospect theory as loss aversion (Barberis & Thaler, 2003). Investors who have complete confidence in their investment decision-making process will achieve higher returns than the standard market returns typically received by investors (Shah et al., 2018).

Table 2: Percentage Change in Share Prices of 8 Issuers that IPOed on the IDX

IPO Stock Ticker	Price Increase after IPO (Closing Price July 11, 2025)
COIN	144%
PSAT	143%
CDIA	110,5%
BLOG	56%
CHEK	54,69%
MERI	8,8%
ASPR	-8,87%
PMUI	-27,22%

Source: Data processed by Katadata from Stockbit, 2025

According to prospect theory, loss aversion is an investor's behavior that tends to avoid losses rather than maximize profits (Kahneman & Tversky, 1979). Loss aversion is an irrational behavior that influences investment decision-making. An investor with loss aversion tends to hold onto losing investments and quickly sell profitable investments (Dar & Hakeem, 2015). This makes it difficult to grow an investment portfolio. Research by Badri & Putri (2021), Gupta & Shrivastava (2022), Kumar et al. (2024), dan Rahmawati & Raharja (2024) concluded that loss aversion positively and significantly influences investment decisions. Research by Gufron & Wibowo (2024), Jowey et al. (2024), dan Pratiknjo et al. (2024) concluded that loss aversion does not significantly influence investment decisions. Even though the variables are the same, the results differ due to differences in the subjects and the respondents' risk-adjustment characteristics. The study found that loss aversion positively impacted investment decision-making when respondents demonstrated a low risk tolerance (risk aversion), driven by factors such as knowledge of risk management, investment experience, and being married. Conversely, the study found no effect of loss aversion on investment decisions when respondents were predominantly young, who tend to have a high risk tolerance (risk takers).

Besides loss aversion, there's also herding bias, which can influence investment decisions. According to Nofsinger & Sias (1999), herding bias is the act of following a currently popular trend in investment decisions, due to limited information. Research by Gyawali & Neupane (2021), Phung & Nur (2024), dan Theressa & Armansyah (2022) demonstrates that herding bias has a significant positive effect on investment decisions. Research by Rahmawati & Raharja (2024) and Jowey et al. (2024) revealed no significant positive effect between herding bias and investment decisions. These studies examined the same variables but produced different conclusions because respondent characteristics influenced the results. The study found that herding bias had a significant positive effect on investment decision-making when respondents came from diverse backgrounds due to their varying levels of financial literacy. Meanwhile, the study found that herding bias did not have a significant positive effect on investment decision-making when respondents had high financial literacy, which applies to investors studying the capital market and residing in DKI Jakarta because they prefer to analyze their investment decisions independently.

Besides the relationship between loss aversion and herding bias, FOMO also directly influences investment decisions. FOMO is a feeling of anxiety experienced by individuals when they feel left behind by what will be experienced or felt by the majority of others (Przybylski et al., 2013). This significantly influences investment decisions, motivating investors to invest without careful consideration due to fear of missing out on potential profits (Kahneman & Tversky, 1979). These impulsive actions are often influenced by emotional factors, without prioritizing rational thinking when making decisions. Phung & Nur (2024) research found that FOMO results on investment decisions had a positive and significant effect on all students, not limited to economics faculty students only, where apart from economics faculty students tend to have relatively low financial literacy because they do not receive investment courses, while Aprilliawati & Indriastuti (2025) research FOMO on investment decisions did not have a significant positive effect because the respondents were economics faculty students who tended to have relatively higher financial literacy because they received formal learning through investment courses, so that the FOMO tendency did not significantly influence their investment decisions.

FOMO was placed as an intervening variable due to its significant influence on investment decisions. Furthermore, there is a significant influence of herding bias and loss aversion on FOMO. Investors with high levels of loss aversion and herding bias tend to act impulsively due to FOMO. They focus on potential losses, which triggers emotional pressure to act immediately, while the tendency to follow the group (herding bias) strengthens the urgency by considering the majority's choice as the correct decision. Research by Gupta & Shrivastava (2022) found that FOMO can be placed as an intervening variable in the relationship between herding bias and loss aversion in investment decisions, while the analysis of Pratiknjo et al. (2024) findings showed that FOMO was unable to mediate the relationship between herding bias and loss aversion in investment decisions. Gupta & Shrivastava (2022) study targeted retail investors in the Indian stock market, who tend to be more loss-averse and follow group behavior in investment decisions when faced with FOMO. Meanwhile, Pratiknjo et al. (2024) study, which included investors on the Indonesia Stock Exchange (IDX) for at least the past year, characterized by 66% of respondents coming from professions with adequate financial literacy, making them more critical in responding to trends and less reliant on FOMO when making investment decisions.

This inconsistency suggests that the influence of loss aversion, herding bias, and FOMO on investment decisions can vary depending on investor characteristics (age, experience, occupation, and financial literacy). Furthermore, most previous research has focused on retail investors in general, students, and within the context of the Indian capital market. Research specifically focusing on stock investors using the broker PT. Mirae Asset Sekuritas, one of the largest securities companies in Indonesia, is still rare. Furthermore, PT. Mirae Asset Sekuritas Indonesia has a diverse clientele, ranging from retail investors, students, and even institutions. The behavioral patterns of stock investors using the broker PT. Mirae Asset Sekuritas Indonesia in Malang City are predominantly short-term investment activities, resulting in frequent entry and exit from the Indonesian stock market.

This has the potential to encourage loss aversion, herding bias, and FOMO behavior among PT. Mirae Asset Sekuritas stock investors when making investment decisions. Therefore, this context is unique and requires further investigation to address the research gap in previous research.

This research presents a novel theoretical extension, namely the integration of behavioral bias with signaling theory, which is rarely studied in explaining investment decisions. Recent research conducted by Ambarwati & Yoga (2025) examined behavioral bias, in the form of overconfidence and risk perception, in the investment decision-making of Generation Z in Indonesia. The study used signaling theory to understand how they interpret market signals and make financial decisions. Signaling theory explains how information in financial markets acts as a signal that influences investor decision-making. Information available from various sources, such as company financial reports, social media opinions, and market trends, is often relied upon by investors in making investment decisions (Abideen et al., 2023). Therefore, the interpretation of market signals also supports the influence of investor behavioral bias in making investment decisions (Ambarwati & Yoga, 2025). Previous research generally emphasizes psychological factors such as herding bias, loss aversion, and FOMO based on prospect theory and behavioral finance, such as research by Gupta & Shrivastava (2022) and Kumar et al. (2024) who researched behavioral bias towards investment decisions in India using prospect theory as a foundation. Rahmawati & Raharja (2024) research also used prospect theory as a foundation in examining behavioral bias towards investment decisions in Generation Z capital market study groups in Semarang. Research by Jowey et al. (2024) on young investors in DKI Jakarta, Pratiknjo et al. (2024) on investors throughout Indonesia, and Phung & Nur (2024) on students at UPN East Java used behavioral finance theory as a foundation in examining behavioral bias towards investment decisions. Furthermore, the selection of 2025 was also a reason, supported by the phenomenon of a significant increase in Bitcoin assets and the trend of initial public offerings (IPOs) on the Indonesia Stock Exchange. The purpose of this research was to analyze the impact of behavioral bias, in the form of loss aversion and herding bias, on investment decisions using FOMO as a mediating variable.

2. Literature Review

2.1 Decision-Making Theory

The process of considering and selecting an option is called decision-making. Various calculations and available possibilities are considered before making a decision. Decision-makers will go through several phases before making a decision, such as identifying the main issue, generating various possibilities, and finally deciding on the best course of action. According to G.R. Terry, decision-making functions as a process that chooses among several options based on certain criteria. James A.F. Stoner defines decision-making as the process by which people choose among various options to solve their problems (Nitanto et al., 2024).

2.2 Prospect Theory

According to Kahneman & Tversky (1979), Prospect theory integrates psychology and economics to examine economic decision-making behavior in risky situations. Kahneman & Tversky (2013) also explain that in prospect theory, investor decisions are influenced by their perception of risk. This approach suggests that people make different choices based on their assessment of a situation as a potential gain or a potential loss, resulting in stronger loss-avoidance behavior than equivalent gain. This theory asserts that economic decisions are not always completely rational but are influenced by how people assess alternatives within their reference context, with a greater emphasis on change than absolute conditions under uncertainty (Rahmawati & Raharja, 2024).

2.3 Behavioral Finance Theory

Yuningsih (2020) explains that psychological and emotional states can influence investor behavior. According to Badri & Putri (2021), behavioral finance is a financial theory about the behavior of each individual who ignores various factors when making decisions. This behavior is caused by various

factors, especially emotional feelings, which are more dominant in influencing someone to act irrationally. Behavioral finance research specifically focuses on the study of how people make financial decisions, leading to market inefficiencies because their decision-making process is influenced by their psychological biases (Sabilla & Pertiwi, 2021). When faced with behavioral finance, investors fail to consider potential risks and return levels when making investment decisions. This behavior is driven by psychological factors, causing investors to miss opportunities to achieve expected returns. Furthermore, this attitude often causes market panic, leading to chaos or market bubbles (Alquraan et al., 2016).

2.4 Signaling Theory

According to Spence (1973), signaling is a form of information that informs investment decisions. Signaling theory divides two parties: the party giving the signal, namely company management, and the party receiving the signal, namely investors. Company management is responsible for providing signals in the form of relevant information, such as financial reports, dividend announcements, and regularly published financial ratio indicators. Investors then adapt these signals to make investment decisions. When a company demonstrates good performance, this investment is perceived by investors as good news, indicating the company has good growth prospects. This is expected to increase share prices and benefit shareholders. Conversely, investors will interpret it as bad news when signals indicate a company has poor growth prospects (Spence, 1973).

2.5 Time Value of Money

According to Sudana (2015), the concept of the time value of money shows the different values of receiving the same amount of money at different times. People who receive the same amount of money today will find it worth more than when they receive it in the future because they can invest their money now to increase its value over time. Financial decision-making requires everyone to consider the time value of money because this concept influences investment choices and spending for long-term commitments. Investment cash outflows for long-term investments occur over a certain period of time. Cash returns from investments are only received after more than one period because companies receive cash in stages. The time difference between the investment of cash received and the investment made causes the time value of money on that cash. Companies must consider the time value of money when they make decisions regarding long-term investments (Sudana, 2015).

2.6 Investment Decision

According to Baihaqqi & Prajawati (2023), Investment is an activity involving fund management by placing money now to obtain profits or income streams in the future. Investment decisions determine the success of an investment in achieving maximum returns. Another definition suggests that investment decisions are a series of processes aimed at distributing assets, to obtain income in the future (Nagaeva, 2024). Furthermore, citing Harjito & Martono (2013) in their book entitled "Financial Management," investment is defined as the process by which a company invests its money in certain assets to receive payments in the future.

2.7 Loss Aversion

The definition of loss aversion is described by Dar & Hakeem (2015) this phenomenon occurs when investors are more anxious about the possibility of loss than the satisfaction felt from investment profits obtained. This definition is supported and further explained by Aren et al. (2021) loss aversion refers to the psychological impact where losses are perceived as more significant compared to gains of equal value. Investors tend to sell stocks whose value has increased from their initial investment because they fear that the price will fall again, thereby risking potential losses. In addition, investors continue to hold on to investments that have experienced losses for a long period of time in the hope that their value will recover (Pompian, 2006). Many investors tend to sell their investment instruments when they have experienced profits rather than waiting to achieve maximum returns, arguing to avoid

losses when the price drops. Furthermore, when faced with investment losses, investors tend to wait for the price to return to the Break-Even Point (BEP) price to avoid losses.

2.8 Herding Bias

Herding bias refers to the tendency of investors to imitate or follow the investment decisions of others (Mamidala et al., 2023). In other words, herd behavior is the tendency of investors to make investment decisions based on the choices of friends, colleagues, or family, rather than analyzing them based on personal knowledge (Caparrelli et al., 2004). This behavior arises from the influence of social information, where investors tend to imitate the decisions of others to align with their environment (Banerji et al., 2020). The influence of others who have previously achieved maximum profits from investment activities leads to herding bias among investors. In other words, herding bias is the investment activity of following what most other people invest in without conducting independent analysis. This behavior is often carried out due to trust in an influencer who has a strong influence over the public. This is compounded by the influencer's track record of achieving maximum profits.

2.9 Fear of Missing Out (FOMO)

Fear of Missing Out (FOMO) creates a feeling that makes people fear missing out on experiences because they see others enjoying times they currently cannot experience (Wang et al., 2023). This fear leads to feelings of anxiety, excessive worry, or a strong desire to constantly follow the activities of friends and others (Dinh & Lee, 2022). FOMO occurs when someone sees or learns about the actions of others and feels as if they are missing out on valuable opportunities (Abel et al., 2016). FOMO is a sensation that arises from a person's emotional desire to imitate the behavior of others when something is or will become popular in society. This tendency causes someone to follow popular developments, stemming from conscious or unconscious anxiety and fear of being left behind. People who experience FOMO often become nervous if they don't follow popular trends. This occurs because they avoid feeling excluded or left behind if they don't follow trends.

2.10 The Effect of Loss Aversion on Investment Decisions

According to Kahneman & Tversky (1979) In prospect theory, people exhibit loss aversion because they prefer to avoid losses rather than value potential gains. When considering the potential gains and losses of an investment, investors are typically more concerned with the possibility of losing their initial investment than with the expected gains (Banerji et al., 2020). Investor behavior presents two major problems, arising from their tendency to sell profitable assets too quickly, while holding on to losing assets for an excessively long period (Pompian, 2006). Previous research by Gupta & Shrivastava (2022), Kumar et al. (2024), Rahmawati & Raharja (2024), and Badri & Putri (2021) found that loss aversion has a significant positive effect on investment decisions. Therefore, the hypothesis in this study is supported.

H1. Loss aversion has a significant positive effect on investment decisions.

2.11 The Influence of Herding Bias on Investment Decisions

Herding is also consistent with Kahneman & Tversky (1979) prospect theory, which suggests that investor decisions can be influenced by psychological considerations. Previous research suggests that investors act this way to appear more connected to those around them (Banerji et al., 2020). Investors tend to feel secure when following the investment activities of others, believing they can minimize losses and maximize profits. This can lead to errors and unintentional decisions, often based on the behavior of other investors rather than on fundamental research. Research by Gupta & Shrivastava (2022), Kumar et al. (2024), Pratiknjo et al. (2024), Phung & Nur (2024), Gyawali & Neupane (2021), and Theressa & Armansyah (2022) found that herding bias has a significant positive effect on investment decisions. Therefore, the research hypothesis is supported.

H2. Herding Bias has a significant positive effect on investment decisions.

2.12 The Influence of Fear of Missing Out on Investment Decisions

Based on other people's experiences, humans tend to want to stay connected with their surroundings and fear being left behind Przybylski et al. (2013). Likewise, in investment activities, FOMO influences investor decisions even when faced with limited information. In line with Kahneman & Tversky (1979) Prospect theory, FOMO causes irrational behavior where investors feel pressured to achieve large profits quickly without prior consideration. This results in hasty investment decisions without seeking information first due to fear of missing out. Research by Gupta & Shrivastava (2022), Kumar et al. (2024), Jowey et al. (2024), Rahmawati & Raharja (2024), Phung & Nur (2024), and Sanjaya et al. (2025) shows that FOMO has a significant positive effect on investment decisions. Therefore, the hypothesis in this study is supported.

H3. Fear of Missing Out has a significant positive effect on investment decisions.

2.13 The Influence of Loss Aversion on Fear of Missing Out

Kahneman & Tversky (1979) Prospect Theory emphasizes that people evaluate benefits and losses individually, with the key idea being loss aversion, which emphasizes that perceived losses outweigh equivalent gains. FOMO reflects investors' concerns about comparing their investment situation with others in terms of profit or loss (Browne et al., 2018). Research by Penelitian Gupta & Shrivastava (2022), Kumar et al. (2024), Jowey et al. (2024), Rahmawati & Raharja (2024), and Pratiknjo et al. (2024) found that loss aversion had a significant positive effect on FOMO. Therefore, the research hypothesis is supported.

H4. Loss aversion has a significant positive effect on Fear of Missing Out.

2.14 The Influence of Herding Bias on Fear of Missing Out

Herding is the practice of people following the investment choices of others without conducting their own research, especially in situations of uncertainty. According to Kahneman & Tversky (2013) In prospect theory, to reduce the fear of potential losses, investors are said to engage in herding, which is irrational behavior. Herding by following others can amplify anxiety and FOMO in investment decisions. Research by Gupta & Shrivastava (2022), Kumar et al. (2024), Jowey et al. (2024), and Pratiknjo et al. (2024) found that herding bias has a significant positive effect on FOMO. Therefore, the research hypothesis is supported.

H5. Herding Bias has a significant positive effect on Fear of Missing Out.

2.15 The Influence of Loss Aversion on Investment Decisions Through the Mediation of Fear of Missing Out

Loss aversion bias in prospect theory highlights that investors are more likely to suffer losses than gains (Kahneman & Tversky, 1979). Investors choose to sell assets whose value has risen too quickly and hesitate to let go of assets whose value has decreased, hoping that their value will soon rise again. This behavior can increase portfolio risk and result in less-than-ideal investment decisions (Pompian, 2006). FOMO is a major factor in financial decision-making because investors experience anxiety and feelings of being left behind when witnessing others make large profits (Browne et al., 2018). Research by Gupta & Shrivastava (2022), Kumar et al. (2024), and Rahmawati & Raharja (2024) found that loss aversion has a significant positive effect on investment decisions mediated by FOMO. Therefore, the hypothesis in this study is supported.

H6. Loss aversion has a significant positive effect on investment decisions mediated by Fear of Missing Out.

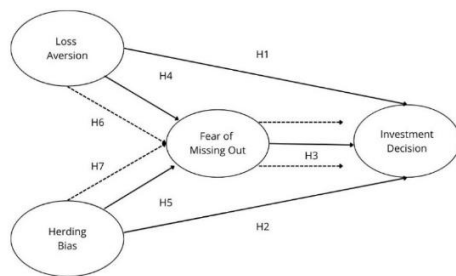
2.16 The Influence of Herding Bias on Investment Decisions Through the Mediation of Fear of Missing Out

People who imitate the investment decisions of others are often biased and exhibit irrational thinking (Lin et al., 2013). Prospect theory emphasizes how psychological variables can influence investment

decisions, causing investors to rely on trends and majority opinion without conducting a thorough investigation (Nofsinger & Sias, 1999). FOMO causes investors to rush into investing due to the fear of missing opportunities. Research by Gupta & Shrivastava (2022), Kumar et al. (2024), Jowey et al. (2024), and Phung & Nur (2024) found that herding bias has a significant positive effect on investment decisions mediated by FOMO. Therefore, the hypothesis in this study is supported.

H7. Herding Bias has a significant positive effect on investment decisions mediated by Fear of Missing Out.

Figure 1: Conceptual Framework



Source: Author (2025)

3. Research Methodology

This research falls into the quantitative research field because it uses an explanatory research approach to examine the causal relationship between herding bias, loss aversion, and FOMO as independent variables and their impact on investment decisions made by stock market investors using brokerage services from PT. Mirae Asset Sekuritas Indonesia in Malang, with a population of 8,634 investors. The study population consisted of all clients of Mirae Asset Securities' Malang branch office who were actively engaged in stock investment or short-term stock trading. Furthermore, the criteria applied were stock investors with 1-3 years of experience who frequently fall into the FOMO behavioral bias or are classified as novice investors. The sample consisted of individuals who met these criteria, selected using a purposive sampling technique with a 10% significance level and the Solvin Formula. To generalize the research findings, a representative sample of the population must be drawn using the Slovin formula, which eliminates the need for numerical tables for sample calculations (Tunru et al., 2022). The Slovin formula is as follows:

$$n = \frac{N}{1 + Ne^2}$$

Information:

n = Sample size/number of respondents

N = Population size

e = Research allowance percentage

$$n = \frac{8634}{1 + 8634(0,1)^2}$$

$$n = 98,85 \sim 99$$

This study used 100 stock investor participants who used the brokerage services of PT. Mirae Asset Sekuritas Indonesia. The researchers used a questionnaire with a Likert scale to collect data, then distributed the questionnaire to respondents via an online Google form. The methods used were descriptive analysis and inferential analysis. According to Sugiyono (2023), descriptive analysis functions as a method that presents data through existing conditions without attempting to draw

general conclusions about the population as a whole. Meanwhile, inferential analysis is used to test theories and determine causal relationships between the variables studied. The Partial Least Squares-Structural Equation Modeling (PLS-SEM) data analysis method was used with the assistance of SmartPLS 4.0 software.

Table 3: Operational Definition of Variables

Variable	Definition	Questionnaire
<i>Loss Aversion (X1)</i>	Dar & Hakeem (2015) loss aversion occurs when investors are more anxious about the possibility of loss compared to the satisfaction felt from the investment profits obtained.	a. I feel that previous losses influence my investment risk-taking. b. I tend to avoid selling stocks that have decreased in value. c. I tend to quickly sell stocks that have recently increased in value, even if the price hasn't reached its maximum yet. (Gupta & Shrivastava, 2022)
<i>Herding Bias (X2)</i>	Mamidala et al. (2023) herding bias refers to the tendency of investors to imitate or follow the investment decisions made by others.	a. I prefer to invest in stocks that my friends or relatives also invest in. b. I analyze a company's customer preferences before deciding to invest in its stock. c. I follow the market's majority movements when making decisions to buy or sell stocks. d. Recommendations from other investors influence my stock purchase decisions. (Gupta & Shrivastava, 2022)
FOMO (Z)	Wang et al. (2023) define Fear of Missing Out (FOMO) as the feeling people experience when they see others experiencing things they are currently unable to experience.	a. I feel disturbed when I don't hear news about my investments. b. I feel anxious when I don't know what the plans of the company I invest in are. c. I want to immediately receive the latest information about the trends in the stocks I invest in. d. I feel anxious when I can't check my portfolio. e. I feel disturbed if I miss an investment opportunity. f. I fear being the last to hear news relevant to my portfolio. (Gupta & Shrivastava, 2022)

Invesment Decision (Y)	Nagaeva (2024)	Investment decisions are the process of allocating funds to certain options with the ultimate goal of obtaining profits in the future.	a. I am satisfied with the investment decisions I have made in the stock market. b. My recent stock investment results have met my expected rate of return. c. I assess that my investment has a lower level of risk compared to the stock market in general. d. I feel that my investment returns are higher than the average stock market returns. (Gupta & Shrivastava, 2022)
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Source: Author (2025)

The following are two multiple linear regression analysis equations that use intervening variables.

- Equation for the mediating variable Fear of Missing Out (FOMO):

$$Z = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \varepsilon_M$$

Information:

Z : Fear of Missing Out (FOMO)

X_1 : Loss Aversion

X_2 : Herding Bias

α_0 : Intercept/constants in each equation

α_1 : The coefficient of influence of X_1 on Z (Loss Aversion on FOMO)

α_2 : The coefficient of influence of X_2 on Z (Herding on FOMO)

ε_M : error terms (residuals) in the mediation equation

- Equation for the dependent variable (Investment Decision):

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \varepsilon_Y$$

Information:

Y : Investment Decision

X_1 : Loss Aversion

X_2 : Herding Bias

Z : Fear of Missing Out (FOMO)

β_0 : Intercept/constants in each equation

β_1 : The coefficient of direct influence of X_1 on Y

β_2 : The coefficient of direct influence of X_2 on Y

β_3 : The coefficient of direct influence of X_3 on Y

ε_Y : error terms (residuals) on outcome equality

4. Results and Discussion

4.1 Respondent Characteristics

All respondents were stock investors using the broker PT. Mirae Asset Sekuritas Indonesia, domiciled in Malang City, was selected based on research criteria through questionnaire distribution. Of the 100 respondents, the research team used several demographic factors to study their characteristics, including gender, age, employment status, income level, and investment experience, to compile a general profile of the respondents. The following are the characteristics of the respondents.

Table 4: Results of Respondent Characteristics

	Information	Amount	Percentage
Gender	Male	67	67%
	Female	33	33%
Age	< 20 Year	6	6%
	20-25 Year	64	64%
	26-30 Year	18	18%
	31-40 Year	12	12%
Job	Student	29	29%
	Government Employees	13	13%
	Private Employees	24	24%
	Entrepreneur	34	34%
Income Level	< Rp 3.000.000	38	38%
	Rp 3.000.000 – Rp 5.000.000	39	39%
	Rp 5.000.000 – Rp 10.000.000	19	19%
	> Rp 10.000.000	4	4%
investment experience	< 1 Year	35	35%
	1 – 3 Year	55	55%
	> 3 Year	10	10%

Source: Author (2025)

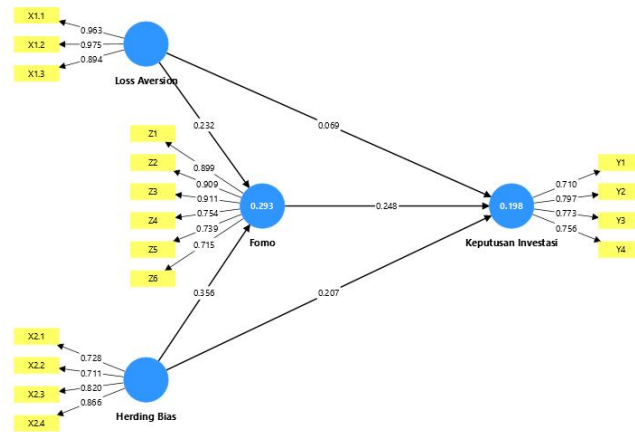
Based on gender characteristics, the majority of respondents were male (67%). This indicates that stock investment or trading activities are dominated by men rather than women, as men tend to be more willing to take risks, as stock assets are known to have high price fluctuations. Examined by age, respondents aged 20-25 years dominated (64%), followed by those aged 26-30 years (18%). The 20-25 age group dominates risky investment and stock trading activities because they have a long time left and tend to be more willing to take risks due to not having many dependents. Furthermore, this age group is a demographic that actively uses social media, thus being exposed to a wealth of information that has the potential to trigger herding behavior or FOMO in investing. In terms of employment, most respondents have self-employed jobs 34%, followed by students 29%, private employees 24%, and Civil Servants 13%, this indicates that respondents who have self-employed jobs and students tend to have free time to conduct stock analysis independently. In terms of income levels, most respondents have vulnerable incomes of IDR 3,000,000 – IDR 5,000,000, as many as 39%, followed by < IDR 3,000,000 as many as 38%, IDR 5,000,000 – IDR 10,000,000 as many as 19%, and incomes > IDR 10,000,000 as many as 4%. In terms of investment experience, some respondents have investment experience of 1-3 years 55%, < 1 year 35%, and > 3 years as many as 10%. In this case, respondents who have less than 1 year of investment experience tend to be susceptible to FOMO behavioral bias.

4.2 Test Outer Model

4.2.1 Convergent Validity Test

Convergent validity indicates how strongly all indicators of a single construct relate to one another while consistently demonstrating the same concept. Convergent validity testing uses loading factor values because an indicator achieves validity when its loading factor value exceeds 0.7.

Figure 2: Outer Model



Source: SmartPLS 4.0 Output Results (2025)

The results of the convergent validity test in Table 5 indicate that all loading factor values have met the required criteria, namely above the 0.7 limit. This value indicates that the data obtained has met the requirements for convergent validity.

Table 5: Convergent Validity Test Results

Variable	Indicator	Outer Loading	Information
Loss Aversion (X1)	X1.1	0.963	Valid
	X1.2	0.975	Valid
	X1.3	0.894	Valid
Herding Bias (X2)	X2.1	0.728	Valid
	X2.2	0.711	Valid
	X2.3	0.820	Valid
	X2.4	0.866	Valid
FOMO (Z)	Z1	0.899	Valid
	Z2	0.909	Valid
	Z3	0.911	Valid
	Z4	0.754	Valid
	Z5	0.739	Valid
	Z6	0.715	Valid
Investment Decision (Y)	Y1	0.710	Valid
	Y2	0.797	Valid
	Y3	0.773	Valid
	Y4	0.756	Valid

Source: SmartPLS 4.0 Output Results (2025)

On the other hand, convergent validity can also be assessed through the results of the Average Variance Extracted (AVE) score. Based on the test results in Table 6, the AVE scores of all variables have met the validity criteria, namely, having a score above 0.5.

Table 6: Average Variance Extracted (AVE)

Variable	AVE	Information
<i>Loss Aversion (X1)</i>	0.682	Valid
<i>Herding Bias (X2)</i>	0.614	Valid
FOMO (Z)	0.577	Valid
Investment Decision (Y)	0.893	Valid

Source: SmartPLS 4.0 Output Results (2025)

Based on these scores, each variable in the study was declared valid because it met the criteria for discriminant validity testing. Therefore, this data is suitable for use as a basis for decision-making in analyzing the variables Loss Aversion (X1), Herding Bias (X2), FOMO (Z), and Investment Decisions (Y).

4.2.2 Discriminant Validity Test

Discriminant validity testing was conducted by evaluating the cross-loading values. Based on the test results in Table 7, each item has a correlation value with its construct that is higher than its cross-loading value with other constructs, with the value above 0.7.

Table 7: Cross-Loading Value Results

Items	<i>Loss Aversion (X1)</i>	<i>Herding Bias (X2)</i>	FOMO (Z)	Investment Decision (Y)
X1.1	0.963	0.603	0.439	0.279
X1.2	0.975	0.608	0.484	0.315
X1.3	0.894	0.721	0.418	0.333
X2.1	0.886	0.728	0.432	0.339
X2.2	0.412	0.711	0.275	0.167
X2.3	0.315	0.820	0.316	0.228
X2.4	0.436	0.866	0.505	0.381
Y1	0.169	0.298	0.343	0.710
Y2	0.190	0.313	0.362	0.797
Y3	0.346	0.284	0.238	0.773
Y4	0.319	0.254	0.206	0.756
Z1	0.440	0.499	0.899	0.231
Z2	0.442	0.495	0.909	0.233
Z3	0.424	0.478	0.911	0.298
Z4	0.400	0.346	0.754	0.242
Z5	0.282	0.329	0.739	0.353
Z6	0.346	0.370	0.715	0.523

Source: SmartPLS 4.0 Output Results (2025)

Thus, the cross-loading score shows that there are no problems with discriminant validity.

4.2.3 Reliability Test

Based on the test results in Table 8, the Composite Reliability value for all constructs is at a score > 0.70.

Table 8: Reliability Test Results

Variable	Cronbach's Alpha	rho_a	rho_c	Information
Loss Aversion (X1)	0.939	0.943	0.961	Reliable
Herding Bias (X2)	0.795	0.830	0.863	Reliable
FOMO (Z)	0.904	0.909	0.927	Reliable
Keputusan Investasi (Y)	0.758	0.760	0.845	Reliable

Source: SmartPLS 4.0 Output Results (2025)

So it is concluded that all constructs in this research model are considered reliable and meet the reliability criteria.

4.3 Structural Test

The R-square value of 0.198 for the investment decision-making process indicates that loss aversion, herding bias, and FOMO collectively explain 20% of the investment decision-making process. The remaining 80% is driven by factors outside the research model.

Table 9: R-Square Test Results

	R-Square	R-Square Adjusted
Variable Y	0.198	0.173
Variable Z	0.293	0.278

Source: SmartPLS 4.0 Output Results (2025)

On the other hand, the R-Square value of 0.293 indicates that loss aversion and herding bias together only explain 29% of FOMO behavior, while 71% of this behavior is explained by other factors not examined in the study.

Table 10: F-Square Test Results

	Investment Decision	FOMO	Information
Loss Aversion	0.003		Little influence
Loss Aversion		0.041	Little influence
Herding Bias	0.026		Little influence
Herding Bias		0.096	Little influence
FOMO	0.054		Little influence

Source: SmartPLS 4.0 Output Results (2025)

The F-Square test results from table 4.15 show that loss aversion (X1) has a small effect on investment decisions (Y), recorded with an F-Square value of 0.003. The FOMO (Z) test results show that loss aversion (X1) has a small effect recorded with an F-Square value of 0.041. Furthermore, herding bias (X2) shows a small effect on investment decisions (Y) based on an F-Square value of 0.026. FOMO (Z) is generated from herding bias (X2), which shows a small effect with a value of 0.096. FOMO (Z) shows a small effect on investment decisions (Y) based on an F-Square value of 0.054.

Table 11: Hypothesis Test Results

	Original sample (O)	Sample Mean (M)	Standard deviation (STDEV)	T-statistics (Io/STDEVI)	P-value
Loss Aversion -> KI	0.069	0.061	0.167	0.413	0.680
Herding Bias -> KI	0.207	0.214	0.136	1.524	0.128
Fomo -> KI	0.248	0.258	0.158	1.568	0.117
Loss Aversion -> Fomo	0.232	0.214	0.116	1.994	0.046
Herding Bias -> Fomo	0.356	0.384	0.126	2.825	0.005

Source: SmartPLS 4.0 Output Results (2025)

The results of the hypothesis testing from Table 11 show that loss aversion has a positive influence on investment decisions, but is not statistically significant because the T-statistic value reaches 0.413, which is below 1.96, and the P-value is 0.680, which exceeds 0.05. Herding bias has a positive impact on investment decisions but is not significant, due to the results of the T-statistic value of 1.524, which is below 1.96, along with the P-value of 0.128, which exceeds 0.05. Then, FOMO produces positive but insignificant results on investment decisions because the T-statistic value shows 1.568 while the limit of 1.96 remains unexceeded and the P-value results show 0.117 which exceeds 0.05. Meanwhile, loss aversion has a positive and significant effect on FOMO with the T-statistic value reaching 1.994, which is above 1.96, and the P-value of 0.046 below 0.05. Likewise, herding bias on FOMO has a positive and significant effect, with a T-statistic value of 2.825 above 1.96 and a P-value of 0.005 less than 0.05.

Equation 1:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Z + \varepsilon_Y$$

$$Y = 0,069X_1 + 0,207X_2 + 0,248Z$$

Equation 2:

$$Z = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \varepsilon_M$$

$$Z = 0,232X_1 + 0,356X_2$$

The coefficient of 0.232 for loss aversion indicates that the higher the level of loss aversion, the higher the tendency to engage in FOMO behavior, although the effect is relatively small. Similarly, for herding bias, the coefficient of 0.356 indicates that the higher the intensity of herding bias, the higher the FOMO behavior. This can be interpreted as meaning that respondents with both loss aversion and herding bias tend to be easily motivated to engage in FOMO.

Table 12: Mediasi Mediation Test Results

	Original sample (O)	Sample Mean (M)	Standard deviation (STDEV)	T-statistics (Io/STDEVI)	P-value
LA -> FOMO -> KI	0.058	0.057	0.051	1.140	0.254
HB -> FOMO -> KI	0.088	0.107	0.078	1.127	0.260

Source: SmartPLS 4.0 Output Results (2025)

The results of Table 12 show that loss aversion influences investment decisions through FOMO as a mediating variable, producing positive results but not statistically significant because the T-statistics result is 1.140, which fails to reach the threshold of 1.96, and the P-value is at 0.254, which exceeds the 0.05 level. Herding bias shows a positive effect on investment decisions through the mediating

variable FOMO, but this effect remains statistically insignificant because the T-statistic value is 1.127, which fails to reach the threshold of 1.96, and the P-value is at 0.260, which exceeds the 0.05 level. This indicates that the FOMO variable is unable to bridge the indirect relationship between Loss Aversion and Herding Bias on Investment Decisions.

4.4 Discussion

4.4.1 The Effect of Loss Aversion on Investment Decisions

From the research data, it can be concluded that loss aversion has a positive effect on investment, but this effect is not significant. This is influenced by the characteristics of the majority of research respondents, namely, investors using PT. Mirae Asset Sekuritas Indonesia in Malang City, who are predominantly young (20–25 years old) and have 1–3 years of investment experience. According to Gufron & Wibowo (2024) and Jowey et al. (2024), young investors tend to have a higher level of risk tolerance (risk takers), so the influence of loss aversion on investment decision-making is less prominent. This group tends to be more willing to take risks and is less driven by the fear of loss. This means they use good risk management and money management in making investment decisions, namely by determining stop-loss and profit-taking areas. According to Kahneman & Tversky (1979) in Prospect Theory, loss aversion describes how people experience greater sensitivity to losses than to equivalent gains. This theory explains that investors with high loss aversion tend to sell profitable assets too quickly, while they hold on to losing assets for a longer period because they expect prices to recover. The results of this study are consistent with previous research, including Pratiknjo et al. (2024) and Jowey et al. (2024), which found that loss aversion did not affect the investment decisions of young investors and those with better-than-average financial literacy. These results indicate that loss aversion does not influence investment decisions, which is particularly relevant for young investors and those with strong financial literacy. Meanwhile, these findings contradict the results of research by Gupta & Shrivastava (2022) and Kumar et al. (2024), which demonstrated a significant effect of loss aversion on retail investors in India. Furthermore, research by Rahmawati & Raharja (2024) and Badri & Putri (2021) found a significant influence between loss aversion and investment decisions among young respondents in Semarang and Lampung.

4.4.2 The Influence of Herding Bias on Investment Decisions

The results of the investigation indicate a positive relationship between herding bias and investment decisions, but it does not have a significant impact. The respondent profile is dominated by young investors (aged 20–25 years, 64%) with 1–3 years of experience (55%), who tend to be more independent in investing. Furthermore, the real implications of the stock investment seminar held by PT. Mirae Asset Sekuritas, which the researcher attended, taught how to screen stocks with potential price increases, thus enabling clients using the Mirae Asset broker to invest or trade independently and not rely on signals provided by PT Mirae Asset Sekuritas Indonesia analysts through various platforms such as WhatsApp channels. Decision-Making Theory suggests that decision-making functions as a systematic process that requires people to identify problems and gather information before evaluating various options and choosing their final course of action (Nitanto et al., 2024). In this context, despite social pressure to follow trends, investors apparently do not immediately ignore the process of self-analysis in making investment decisions. Furthermore, according to Herding Theory, Banerjee (1992) explains that herd-following behavior is often triggered by limited information or the belief that the majority perceives it as safer and more profitable. However, the results of this study indicate that adequate access to information through digital platforms such as Neo Hots Mobile, M-Stock, and the Mirae Asset WhatsApp channel has reduced investors' reliance on herd behavior. Furthermore, Signaling Theory, Spence (1973), plays a role in explaining how investors interpret market information as signals. Although the Mirae Asset platform provides various signals (such as analyst recommendations and market reports), investors in Malang City do not appear to immediately follow them without further consideration, indicating a good level of literacy and prudence. This research finding is consistent with several previous studies, such as those by Rahmawati & Raharja (2024) and Jowey et al. (2024), which found that herding bias does not affect

investment decisions for investors with adequate financial literacy and access to market information. Meanwhile, these results are inconsistent with research by Gupta & Shrivastava (2022), Kumar et al. (2024), and Phung & Nur (2024), which found that herding bias affects retail investors in India and students in East Java. Furthermore, this research is also inconsistent with research by Gyawali & Neupane (2021), Theressa & Armansyah (2022), and Pratiknjo et al. (2024), who found that herding bias positively influenced investment decisions in their studies conducted in Nepal with participants from diverse backgrounds.

4.4.3 The Influence of Fear of Missing Out on Investment Decisions

From the results of the research data processing, it can be concluded that FOMO is positively related to investment decisions, although the relationship is not statistically significant. This result is due to a sufficient level of financial literacy, which is strengthened by access to educational and analytical tools from Mirae Asset such as Neo Hots Mobile and M-Stock, which can encourage investors to make more analytical-based decisions, thereby reducing the role of emotional factors such as FOMO. In addition, Mirae Asset Securities Indonesia's Malang branch office during 2025 held educational seminars for clients and prospective clients 10 times. At these events, the audience was educated about what stocks are, how to screen stocks, risk management, money management, and biases that influence investment decisions so that they could avoid FOMO behavior in the investment decisions of Mirae Asset clients. This supports Behavioral Finance theory, which explains that psychological bias cannot be eliminated; its impact can be mitigated through education, experience, and critical awareness (Pompian, 2006). The results of this study support the study by Aprilliawati & Indriastuti (2025), which showed that FOMO did not significantly influence investment decisions when the respondents were economics students studying formal financial literacy. These results are also supported by Pratiknjo et al. (2024), who stated that FOMO did not significantly influence investment decisions in Indonesia due to age and high education levels. However, the results of this study do not support the studies of Gupta & Shrivastava (2022) and Sanjaya et al. (2025), which found a significant influence of FOMO on investment decisions in India and students majoring in business administration.

4.4.4 The Influence of Loss Aversion on Fear of Missing Out

Based on the data analysis, loss aversion has been shown to have a significant positive relationship with FOMO. These results demonstrate that investors' tendency to avoid losses rather than maximize profits (loss aversion) significantly strengthens the fear of missing out (FOMO) in the context of stock investment among users of PT. Mirae Asset Sekuritas Indonesia in Malang City. This finding can be understood through a combination of two main theoretical frameworks underlying the research: Prospect Theory, Behavioral Finance Theory, and Signaling Theory. Viewed from the perspective of Prospect Theory discovered by Kahneman & Tversky (1979), individuals tend to perceive the impact of losses more strongly than gains of the same magnitude (loss aversion). In investment activities, this tendency not only influences transaction decisions but also creates psychological pressure in the form of concern about relative losses, namely the fear of being left behind by the profits obtained by other investors. This feeling then encourages the emergence of FOMO (Browne et al., 2018). Meanwhile, Behavioral Finance Theory emphasizes that emotional biases such as loss aversion can interfere with rational judgment (Ritter Cordell, 2003). Investors with high loss aversion tend to be more reactive to market signals that could potentially make them feel left behind, resulting in FOMO emerging as an emotional response to the fear of relative loss. This relationship is further clarified through Signaling Theory, proposed by Spence (1973), in the context of modern investment. Investors receive various information signals from various sources, including WhatsApp channels from broker customers such as PT. Mirae Asset Sekuritas Indonesia routinely delivers issuer financial reports, analyst recommendations, and market performance developments. Positive signals, such as an increase in IPO stock prices or short-term trading recommendations received repeatedly, can be perceived as good news, indicating profit opportunities. These results support studies by Gupta & Shrivastava (2022), Kumar et al. (2024), Jowey et al. (2024), Rahmawati & Raharja (2024), and Pratiknjo et al. (2024),

which found a significant effect between loss aversion and FOMO, particularly in retail investors with intensive market information exposure. This finding also supports the research of Ambarwati & Yoga (2025), which integrates behavioral bias with signaling theory to explain how Generation Z interprets market signals in making investment decisions.

4.4.5 The Influence of Herding Bias on Fear of Missing Out

The conclusion of the research results is a positive and significant relationship between herding bias and FOMO. This phenomenon is highly relevant in the context of stock investment, particularly for investors using PT. Mirae Asset Sekuritas Indonesia in Malang City, where market information and investment trends spread rapidly through various digital platforms and Mirae Asset social media, such as issuer performance reports, news of acquisitions and mergers of issuers, and even frequently provided trade signal recommendations. Furthermore, the majority of respondents were young investors (aged 20–25 years, 64%) with 1–3 years of experience (55%) who were active on digital platforms. This group is generally more exposed to social media, investment forums, and group communications, where information and trends spread rapidly. Referring to the Prospect Theory proposed by Kahneman & Tversky (1979) as the basis for this research, investors tend to make decisions in situations full of risk and uncertainty. When they observe the majority of other investors taking a certain action, for example, buying shares in an IPO, this creates a psychological urge to participate to avoid missing out on profit opportunities. This behavioral pattern is further reinforced by Banerjee (1992) Herding Theory, which states that investors often follow group decisions because they believe the collective choice is safer or more informative. Behavioral Finance Theory, proposed by Ritter Cordell (2003), also integrates psychology with finance to explain how emotions and cognitive biases, such as herding and FOMO, are interrelated. In dynamic market dynamics, especially among young and active investors, the urge to emulate the success of others (social comparison) can strengthen herding bias and trigger FOMO as an emotional response. Examined from Decision-Making Theory, during the information search stage, investors exposed to group behavior and a massive flow of information can experience FOMO as a form of cognitive anxiety before reaching a more rational stage of evaluating alternatives (Nitanto et al., 2024). Furthermore, this mechanism can also be explained through the Signaling Theory proposed by Spence (1973) In the modern investment world, investors obtain various information signals from various sources, such as recommendations from financial influencers, WhatsApp groups of investor communities, and market analysis reports provided by brokers like Mirae Asset. These results support research by Gupta & Shrivastava (2022), Kumar et al. (2024), Jowey et al. (2024), and Pratiknjo et al. (2024), which also found a significant effect of herding bias on FOMO, especially in retail investors exposed to intensive market information. However, these findings contradict the research by Rahmawati & Raharja (2024), which stated that herding bias had no significant effect on FOMO among Generation Z in Semarang because they were part of a capital market study group and therefore tended to seek out stocks independently.

4.4.6 The Influence of Loss Aversion on Investment Decisions Through Fear of Missing Out

Based on the data analysis results, it can be concluded that the effect of loss aversion on investment decisions, with FOMO as a mediator, is positive, but not significant. The respondents in this study were mostly investors with 1–3 years of experience (55%) and in the productive age range of 20–25 years (64%). This group generally has broader access to information and education through Mirae Asset platforms such as Neo Hots Mobile, M-Stock, and the Mirae Asset WhatsApp channel, which provides daily information on the Indonesian capital market and even trading recommendation signals. Although they experience loss aversion and FOMO, they tend to have self-control mechanisms or rational, independent judgments that can prevent these biases from directly influencing investment decisions. This means that they only experience FOMO with information shared by Mirae Asset through various platforms, but when making investment decisions, they still consider it independently through re-analyzing verification and setting stop-loss areas as risk tolerance and take-profit areas as profit-taking areas to prevent loss aversion. Decision-Making Theory states that investment decision-

making is a complex, multi-step process, starting from problem recognition, information search, evaluation of various alternatives, and finally making a final decision (Nitanto et al., 2024). In the context of this study, although psychological factors such as loss aversion and FOMO can influence investors' emotional states and mindsets in the early stages of the decision-making process, these influences are not strong enough to significantly influence or change investment decisions made in the final stages. Investors still consider other, more rational and fundamental factors before making their investment choices. The findings of this study are consistent with the results of studies by Pratiknjo et al. (2024) and Jowey et al. (2024), which also stated that FOMO does not function as a significant mediator in the relationship between loss aversion and investment decisions, especially in investors with sufficient experience and financial literacy. However, these results are inconsistent with studies by Gupta & Shrivastava (2022), Kumar et al. (2024), and Rahmawati & Raharja (2024), who found a significant mediating role of FOMO between loss aversion and investment decisions because respondents came from various backgrounds.

4.4.7 The Influence of Herding Bias on Investment Decisions Through Fear of Missing Out

The analysis concluded that there was a positive relationship between herding bias and investment decisions through FOMO, but this relationship was not significant. This finding suggests that most stock investors only experience FOMO regarding news or information presented by the Mirae Asset platform. This means they are interested in following market trends and recommended trade signals provided by analysts, but they still verify and align their investment decisions with their own authenticity when making investment decisions. According to Decision-Making Theory, investment decision-making proceeds through a series of structured stages, starting with problem recognition, gathering and evaluating information, determining various alternatives, and selecting a final course of action (Nitanto et al., 2024). In this study, although the tendency to follow trends (herding bias) can generate social pressure in the form of FOMO, this condition is not strong enough to directly drive investors to make investment decisions. Investors still conduct a more comprehensive evaluation process before actually making a transaction. Herding Theory, proposed by Banerjee (1992), states that investors often imitate the decisions of others due to limited information or because they believe that a shared choice is safer. This pattern can give rise to FOMO, a fear of missing out on opportunities exploited by other investors. Meanwhile, Behavioral Finance Theory asserts that although psychological biases such as herding and FOMO do exist, investment decisions are ultimately heavily influenced by rational considerations, such as fundamental analysis, market understanding, investment experience, and financial literacy. (Ritter Cordell, 2003). The findings of this study support the results of Pratiknjo et al. (2024) A study, which showed that FOMO does not function as a significant mediator in the relationship between herding bias and investment decisions in Indonesia. These results are also reinforced by Rahmawati & Raharja (2024), who found that herding did not affect investment decisions, either directly or through FOMO, among Generation Z in Semarang who were members of a capital market study group. However, this finding differs from the research of Gupta & Shrivastava (2022), Kumar et al. (2024), Jowey et al. (2024), and Phung & Nur (2024) which found a significant mediating role of FOMO between herding bias and investment decisions due to the respondents' diverse backgrounds. This difference further confirms that the psychological dynamics of investment decision-making are highly dependent on regional context, demographic characteristics, and the investor's level of financial maturity.

5. Conclusion

This study found that loss aversion and herding bias had a positive influence on investment decisions, but this influence did not reach statistical significance. The Fear of Missing Out (FOMO) variable showed a positive influence on investment decisions, but this influence did not reach statistical significance. Both loss aversion and herding bias variables showed a positive and statistically significant influence on FOMO. This study determined that higher levels of loss aversion and herding bias in respondents would increase their likelihood of experiencing FOMO. On the other hand, FOMO did not function as a mediator connecting loss aversion and herding bias with their influence

on investment decisions. This implication suggests that the majority of respondents, namely, users of the broker PT. Mirae Asset Sekuritas only experiences FOMO with information about the Indonesian capital market or signals provided by analysts, but for final investment activity decisions, they still re-verify the information obtained and compare it with the results of their personal analysis.

This study provides insight into the influence of behavioral biases, such as loss aversion, herding bias, and fear of missing out, on investment decisions. Suggestions for further research include expanding the scope of research variables by including other behavioral biases, such as mental accounting, anchoring bias, and overconfidence. Furthermore, other variables could be added, such as indicators influencing stock investors using the broker PT Mirae Asset Sekuritas, such as foreign flow, technical analysis, and short-term investments based on news narratives, and expanding the scope. Prospective investors interested in entering the Indonesian capital market are encouraged to continually upgrade their skills, such as learning how to screen stocks with growth potential, enabling them to analyze independently to avoid herding bias and FOMO. Regulators are advised to encourage the development of financial and investment literacy curricula that incorporate behavioral finance perspectives into formal education, starting from high school level, and to monitor the flow of investment information on digital platforms and social media to reduce the spread of misleading content that can trigger speculative behavior. Especially for financial influencers, certification standards and strict oversight of the content presented are needed.

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