

Exploring Cognitive Bias Influence on Investment Decisions in Indonesia: The Mediating Role of FOMO

Johney Budiman^{1*}, Teddy Ong², Wisnu Yuwono³

^{1,2,3}Universitas Internasional Batam, Indonesia

¹johney.budiman@uib.ac.id, ²2141307.teddy@uib.edu, ³wisnu@uib.ac.id

*Corresponding Author

Abstract

This study investigates the impact of cognitive biases on investment decisions in Indonesia, emphasizing the mediating role of fear of missing out (FOMO). Addressing a research gap, it extends prior studies by incorporating overconfidence and risk perception alongside commonly examined biases such as loss aversion and herding. A quantitative approach was employed through a survey of retail investors, and data were analyzed using partial least squares-structural equation modeling (PLS-SEM) via SmartPLS. The findings reveal that herding exerts a significant influence on investment decisions, whereas loss aversion, overconfidence, and risk perception show no direct effect. Notably, FOMO mediates the relationship between loss aversion and investment decisions, though herding remains the most dominant factor. These results suggest that while Indonesian investors demonstrate rational tendencies, susceptibility to social dynamics and behavioral triggers persists. The study contributes to behavioral finance literature and offers practical insights for mitigating bias-driven investment risks.

Keywords: Cognitive Bias, Fear of Missing Out (FOMO), Investment Decision.

Investigasi Pengaruh Bias Kognitif terhadap Keputusan Investasi di Indonesia: Peran Mediasi FOMO

Abstrak

Penelitian ini mengkaji pengaruh bias kognitif terhadap keputusan investasi di Indonesia dengan *fear of missing out* (FOMO) sebagai mediator. Studi ini melengkapi penelitian sebelumnya dengan menambahkan *overconfidence* dan persepsi risiko, selain bias umum seperti *loss aversion* dan *herding*. Metode kuantitatif digunakan melalui survei pada investor ritel, dan data dianalisis menggunakan *partial least squares-structural equation modeling* (PLS-SEM) dengan SmartPLS. Hasil penelitian menunjukkan perilaku herding berpengaruh signifikan terhadap keputusan investasi, sedangkan *loss aversion*, *overconfidence*, dan persepsi risiko tidak berpengaruh langsung. Namun, FOMO memediasi hubungan *loss aversion* dan keputusan investasi, meskipun *herding* tetap menjadi faktor dominan. Temuan ini mengindikasikan bahwa investor Indonesia cenderung rasional, tetapi tetap rentan terhadap dinamika sosial dan pemicu perilaku. Penelitian ini memberikan kontribusi pada literatur perilaku keuangan dan menawarkan implikasi praktis untuk meminimalkan risiko investasi akibat bias.

Kata Kunci: Bias Kognitif, Takut Ketinggalan (FOMO), Keputusan Investasi

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INTRODUCTION

Conventional financial theory is often based on the assumption that market participants behave rationally. Markowitz (1991) posits that every rational individual prefers lower risk

to higher risk given the same level of return. Rational investors seek to maximize their utility by relying on market information. They demonstrate rational behavior by purchasing assets at low prices and selling them at high prices (Ahmad & Shah, 2022). However, in practice, investors often display irrational behavior in the market, such as over-trading, buying stocks purchased by friends, making decisions based on past performance, and holding on to losing stocks (Shah et al., 2018). Therefore, this topic consistently attracts researchers' attention. Numerous previous studies have assessed the significant influence of behavioral biases, namely loss aversion, herding behavior, overconfidence, and risk perception, on investor decisions (Bihari et al., 2023; Budiman et al., 2025; Dhakal & Lamsal, 2023; Gupta & Shrivastava, 2022; Hossain & Siddiqua, 2022; Mahmood et al., 2023; Wibowo et al., 2023).

According to data from KSEI in September 2023 (Indonesia Central Securities Depository, 2023), over the last four years, there has been a remarkable surge in the number of investors. From December 2020 to September 2023, investor numbers increased by 203.03%. The Mutual Fund market experienced a growth of 246.22%, the Stock and other securities market expanded by 196.66%, and the SBN market grew by 108.51%. The pandemic period saw the most significant growth, with a 92.99% raise in the number of capital market investors. Notably, 56.89% of Indonesian capital market investors are under 30 years old, representing Generation Y and Generation Z. These younger, tech-savvy generations have benefited from advancements in information technology, which have streamlined the processes for buying and selling stocks, making it more convenient to monitor and execute transactions. This technological facilitation has played a crucial role in boosting stock investments among Generation Z (Wibowo et al., 2023). One characteristic of Generation Z is FOMO (Fear of Missing Out), which is the desire to be at the same level as others. These leads individuals born in this generation to make every effort to follow trends, even if they do not fully understand them (Gupta & Shrivastava, 2022).

The rapid flow of information, especially on social media, makes it easy for investors to be influenced by market news and various speculative trends. Consequently, they are more prone to triggering FOMO behavior. According to Gupta and Shrivastava (2022) FOMO reflects the fear of missing out on opportunities, and it is closely related to biases such as herding behavior and loss aversion. In many cases, FOMO amplifies the effects of these biases, leading to decisions that are not based on rational analysis. Instead, investors often make impulsive choices driven by emotional pressure, social comparisons, and the fear of being left behind, rather than carefully weighing the pros and cons or evaluating long-term consequences. This can result in suboptimal outcomes, as the urgency to act overrides critical thinking and measured decision-making.

An individual's financial condition is one of the factors that can influence investment decisions. In this regard, investors tend to focus more on potential losses. This is known as loss aversion. Investors are inclined to sell winning stocks out of fear that their prices might drop in the future (Barberis & Thaler, 2003). Additionally, a significant number of investors tend to mimic the actions of their peers to avoid missing out. These investors place greater trust in widely available public information rather than private insights. Their decisions are often swayed by popular trends instead of being grounded in logical analysis (Dhungana et al., 2022). This herd mentality can lead to overconfidence, with investors underestimating the potential risks involved. Cognitive biases further exacerbate this issue, causing investors

to make illogical choices that can negatively impact their investment outcomes (Ahmad & Shah, 2022).

Previous studies (Bihari et al., 2023; Budiman, Yodiputra, et al., 2025; Dhakal & Lamsal, 2023; Gupta & Shrivastava, 2022; Mahmood et al., 2023) have highlighted the connection between cognitive biases and investors' decision-making processes. This research explores how loss aversion, herding behavior, overconfidence, and risk perception affect investment choices, with the fear of missing out (FOMO) acting as a mediating factor. Given the limited research on the role of FOMO in the relationship between cognitive biases and investment decisions, the results of this study can provide valuable insights for both investors and scholars.

Literature Review and Hypotheses

Gupta and Shrivastava (2022) examined how cognitive biases affect the investment choices of stock investors in India. Specifically, the study focused on herding behavior and loss aversion as the cognitive biases under investigation. Additionally, the researchers considered the fear of missing out (FOMO) as a mediating factor in the relationship between these biases and investment decisions.

Cognitive Bias

Cognitive bias can often influence an individual's behavior in thinking or when they are about to act. According to Bihari et al. (2023), cognitive biases are mental patterns or tendencies that can lead individuals to make irrational or incorrect decisions, particularly in the context of investment. These biases influence judgment and decision-making, causing people to deviate from rationality. Cognitive biases commonly influence the ability to make good decisions, particularly in uncertain, complex markets like stocks investment or commercial real estate, where investor rely on deliberative, rule-governed, and analytic methods to assess decision quality (Kinatta et al., 2022). Dhakal and Lamsal (2023) argue that cognitive biases are patterns of thinking that cause people to make mistakes in judgment. These mistakes happen because the brain tries to simplify complex decisions. As a result, people might feel too confident in their abilities or make decisions based on emotions rather than facts, leading to choices that are not fully rational or logical.

Loss Aversion and Investment Decision

Research by Hossain and Siddiqua (2022) demonstrate that loss aversion greatly impacts investors' decision-making, prompting them to avoid potential losses. Kinatta et al. (2022) also suggests that investors influenced by loss aversion tend to prefer minimizing risks when investing. Investors are more attracted to low-risk investments because they are aware of uncertain economic conditions (Yuwono & Elmadiani, 2021). This highlights that loss aversion plays a crucial role in shaping investment decisions, aligning with findings by Gupta and Shrivastava (2022), as well as Shamas and Asian (2019). Based on the research findings, the following hypothesis can be formulated:

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

Herding Behavior and Investment Decision

According to Dhungana et al. (2022), investors often mimic the investment choices of their peers. These investors prefer to follow others because such decisions are considered more accurate than decisions made independently. Investors tend to rely more on information and decisions made by acquaintances, friends, and social media rather than analyzing the aspects influencing the investment themselves (Dhakal & Lamsal, 2023). The findings of studies by Budiman et al. (2024), Budiman and Patricia (2021), and Mahmood et al. (2023), underscores the significant impact that herding behavior can have on investment choices. On the other hand, studies by Khan (2020), Kinatta et al. (2022), and Wibowo et al. (2023) highlight that herding behavior may also have bad influence toward investment decisions. This suggests that when investors base their decisions on the actions of others, it can sometimes lead to poorer investment outcomes. Based on the research findings, the following hypothesis can be formulated:

H₂: Herding behavior has a significant effect on investment decisions.

Overconfidence and Investment Decision

Research by Dhakal and Lamsal (2023) discovered that overconfidence significantly boosts the quality of investment decisions. Overconfident investors tend to improve the quality of their investment decisions. These individuals tend to have high confidence in the information they possess about investments (Silwal & Bajracharya, 2021). Investors feel confident about their decisions and consider them to be correct (Raheja & Dhiman, 2019). Similar findings were also found by Adil et al. (2022), Bihari et al. (2023), Budiman et al. (2024), Budiman and Patricia (2021), Kinatta et al. (2022), and Mohanty et al. (2023). On the other hand, the study by Wibowo et al. (2023) found that overconfidence has a bad influence on investment decisions. If investors have high confidence, they become more irrational in making investment decisions. Similar findings were also reported by Ahmad dan Shah (2022) dan Shah et al. (2018). Based on the research findings, the following hypothesis can be formulated:

H₃: Overconfidence has a significant effect on investment decisions.

Risk Perception and Investment Decision

Risk perception, defined as an individual's assessment of the likelihood and impact of potential risks, is shaped by the information available about pertinent factors and their interrelations (Ahmed et al., 2022). Research by Wibowo et al. (2023) indicates that risk perception significantly impacts investment choices. Investors with heightened risk perception are inclined to make more rational investment decisions. Those who view investment risks as opportunities are more inclined to choose high-risk options. This is also supported by studies by Bairagi and Chakraborty (2018); and Chaitanya and Nordin (2021). However, the study by Sukamulja et al. (2019) discovered contrary results, showing that high-risk perception has a notable negative effect on investment decisions. Investors with high-risk perception tend to be more cautious when making decisions, which leads to fewer investment decisions and eventually results in losses. Based on the research findings, the following hypothesis can be formulated:

H₄: Risk perception has a significant effect on investment decisions.

The Mediating Role of Fear of Missing Out (FOMO)

Fear of missing out (FOMO) is a mental condition where individuals feel they are missing out on opportunities and trends followed by others (Ng, 2021). FOMO is related to decision-making, especially investment decisions. So, investors tend to be more impulsive in making decisions. This can result in suboptimal investment strategies, as decisions driven by FOMO often lack thorough analysis and consideration of long-term consequences (Güngör et al., 2022). The study by Gupta and Shrivastava (2022) reveals that herding behavior and loss aversion significantly impact investment choices when FOMO is a mediating factor. Individuals influenced by FOMO are more likely to amplify cognitive biases, making investors more impulsive when making decisions (Collins, 2017). Based on the research findings, the following hypotheses can be formulated:

H₅: Loss aversion has a significant influence on investment decision when mediated by fear of missing out (FOMO).

H₆: Herding behavior has a significant influence on investment decision when mediated by fear of missing out (FOMO).

METHOD

This research explores how loss aversion, herding behavior, overconfidence, and risk perception impact investment decisions, with fear of missing out (FOMO) acting as a mediating factor. The research focuses on retail investors actively participating in the Indonesian stock market. The choice of this population is driven by the rapid increase in the number of retail investors observed between 2020 and 2023 (Indonesia Central Securities Depository, 2023). This surge reflects a structural shift in the Indonesian capital market, where retail investors now dominate trading volume and significantly influence market dynamics (Djajadi, 2023). Their growing presence, supported by digital platforms and regulatory reforms, makes them a key focus for market development strategies (Rodgers, 2024). The sampling technique adopted in this study, determining the sample size using the Krejcie and Morgan formula, resulted in 384 respondents. The questionnaire was distributed to respondents through social media platforms and was developed using Google Forms to ensure ease of access. Each questionnaire distributed contains 27 statements to be filled out by respondents.

Validity testing techniques employed include Loading Factor, Average Variance Extracted (AVE), and the Fornell-Lacker Criterion. According to Wibowo et al. (2023), the Loading Factor of each indicator from each variable should exceed 0.70, the AVE should be above 0.50, and for the Fornell-Lacker Criterion, the correlation value between the construct and the factor estimating it should be greater than the correlation with other factors. Reliability was assessed using Cronbach's Alpha and Composite Reliability, both of which should surpass 0.70 for acceptable reliability (Wibowo et al., 2023). The sampling technique utilized is snowball sampling, a non-probability sampling method.

Table 1. *Operational Definition*

Variable	Operational Definition	Reference
Loss Aversion	Your prior loss experience highly affects your risk-taking ability	Gupta & Shrivastava, (2022)
	You usually have the tendency to avoid selling shares that have attained a lower value	
	You usually sell shares that have attained higher values	
Herding Behavior	You prefer to invest in stocks in which your peers and relatives have invested	Gupta & Shrivastava, (2022)
	You analyze the company's customer preference before you invest in their stocks	
	You follow the market movements while buying or selling stocks	
	Other investors' recommendation of investment affects your stock purchases	
Overconfidence	When I make a plan, I'm sure it will work	Kiran et al., (2017)
	My predictions on stocks are always right	
	I can identify stocks that will perform well in the future	
	My investment performance is much better than other investors	
	My investment skills are much better than other investors	
	My investment experience is more than other investors	
Risk Perception	I know more about investing than other investors	Areiqat et al., (2019)
	I generally do not have a fear of capitalizing on stocks with a certain gain	
	I am careful about stocks that show unexpected fluctuations in price or transaction	
	I generally have concerns about investing in stocks with a historical adverse performance in trading	
FOMO	I don't consider the idea of trading in the stock market attractive	Gupta & Shrivastava, (2022)
	It bothers you when you do not hear news about your investments	
	You get anxious when you don't know what the companies, you're investing in are planning	
	You would like to be immediately updated about the trends in stocks you've invested in	
	You get worries when you are not able to check in on your portfolio	
Investment Decision	It bothers you if you miss out on investment opportunities	Gupta & Shrivastava, (2022)
	You feel satisfied with your investment decisions in stock market	
	Your recent stock investment has met your rate of return expectation	
	Your investment has lower risk compared to the market in general	
	Your normal rate of return is higher than the average rate of return of the stock market	

Data analysis employs multivariate analysis using partial least squares-structural equation modeling (PLS-SEM) technique, analyzed with *SmartPLS* software version 3.2. The PLS-SEM analysis involved testing for validity and reliability using factor loading,

AVE, discriminant validity, composite reliability, and Cronbach's alpha, alongside hypothesis testing with direct and indirect effects.

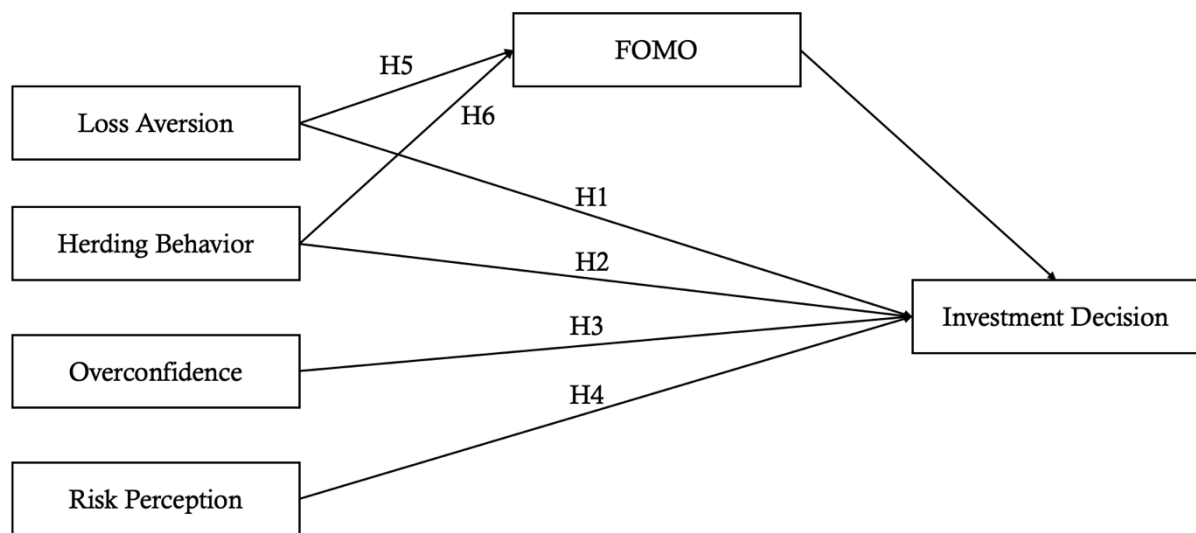


Figure 1. Research Model

FINDING AND DISCUSSION

Respondent Demographic Data

A total of 400 questionnaires were distributed, out of which 391 were completed and returned. Analyzing the age demographics, a significant portion of respondents, 45.8%, are aged between 23 and 28 years. This is closely followed by those under the age of 22, who make up 43.2% of the respondents. This indicates a younger demographic, suggesting that the respondents are likely early in their careers and potentially in the early stages of financial independence, which may influence their investment choices and risk tolerance. Regarding the highest level of education attained, most respondents who completed the questionnaire are graduates of Senior High School (SMA), accounting for 59.6%, followed by diploma or bachelor's degree holders, comprising 23.8%. This implies that many may have limited formal education related to technical or specialized fields, possibly affecting their understanding of more complex financial or investment concepts. Moving on to employment status, the majority are employed in the private sector, accounting for 55.2%, which might indicate stable incomes and regular financial commitments. Followed by respondents who are entrepreneurs, comprising 36.1%, they could have more variable incomes and possibly more risk-tolerant investment behaviors. In terms of gender, 83.9% respondents are male, while the remaining 16.1% are female. This investment participation is male dominated in this context, reflecting broader societal or cultural trends related to financial engagement. Regarding investment experience, most participants, 59.3%, have less than one year of experience. Meanwhile, 31.5% have been invested for one to two years. It shows that most participants are relatively inexperienced investors. This novice group may be more susceptible to market volatility and potentially less familiar with diversified or long-term investment strategies.

Validity and Reliability Tests

Table 2. *Convergent Validity Testing Results*

Variables	Item	Convergent Validity	
		Factor Loading	AVE
Loss Aversion (LA)	3	0.867 – 0.907	0.791
Herding Behavior (HB)	4	0.756 – 0.886	0.714
Overconfidence (OVC)	7	0.793 – 0.899	0.711
Risk Perception (RP)	4	0.837 – 0.906	0.784
Fear of Missing Out (FOMO)	5	0.788 – 0.896	0.719
Investment Decision (ID)	4	0.824 – 0.867	0.719

Table 2. shows that the results of the Loading Factor and Average Validity Extracted (AVE) tests are above 0.70, which means that the data obtained is valid and can be processed.

Table 3. *Discriminant Validity Testing Results*

Variables	FOMO	HB	ID	LA	OVC	RP
FOMO	0.848					
HB	0.791	0.845				
ID	0.622	0.661	0.848			
LA	0.674	0.725	0.526	0.889		
OVC	-0.191	-0.209	-0.221	-0.363	0.843	
RP	0.711	0.613	0.437	0.657	-0.074	0.886

Table 3. illustrates that the correlations between each construct and its respective indicators are higher than the correlations with other constructs. This demonstrates the validity of the Fornell-Larcker Criterion test. These findings confirm that the constructs are well-defined and distinct from each other, reinforcing the discriminant validity of the measurement model.

Table 4. *Reliability Testing Results*

Variables	Composite Reliability	Cronbach's Alpha
Loss Aversion (LA)	0.919	0.868
Herding Behavior (HB)	0.908	0.865
Overconfidence (OVC)	0.945	0.938
Risk Perception (RP)	0.936	0.908
Fear of Missing Out (FOMO)	0.927	0.901
Investment Decision (ID)	0.911	0.870

Table 4 presents the outcomes of the reliability analysis, demonstrating that both Composite Reliability and Cronbach's Alpha metrics exceed the 0.70 threshold for each variable. Consequently, these results affirm the dependability of the test. This level of reliability suggests that the variables measured are consistently reliable and can be trusted for further analysis and interpretation.

Hypothesis TestingTable 5. *Direct Effect Testing Results*

Hypothesis	Coefficient	P-Value	Results
Loss Aversion → Investment Decision	0.038	0.566	Unsig.
Herding Behavior → Investment Decision	0.438	0.000	Sig.
Overconfidence → Investment Decision	-0.068	0.102	Unsig.
Risk Perception → Investment Decision	-0.064	0.260	Unsig.

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

According to the findings presented in Table 5, the P-Value exceeds 0.05, suggesting that loss aversion does not significantly influence investment decisions. Most of the participants (59.3%) have less than one year of investment experience, and 31.5% have between one to two years of experience. This lack of experience likely contributes to their diminished sensitivity to loss aversion, as they may not have faced substantial financial setbacks in the past to fully appreciate the risks. They tend to take risks without knowing or paying attention to the potential losses. Moreover, this lack of experience might lead them to overestimate their ability to recover from adverse outcomes. The younger demographic, with 45.8% aged between 23 and 28, also indicates that respondents are at an early stage in their investment journey, where risk-taking might be more prevalent, as they may not yet fully comprehend the long-term consequences of losses. As a results, their investment behavior is more influenced by a willingness to take risks rather than a cautious approach driven by loss aversion. These findings align with the study by Quddoos et al. (2020).

H₂: Herding behavior has a significant effect on investment decisions.

The analysis in Table 5 reveals a P-Value below 0.05 and a coefficient of 0.438, demonstrating that herding behavior significantly impacts investment decisions. A large proportion of respondents (83.9%) are male, which may reflect broader trends in risk-taking and decision-making. Additionally, 55.2% of respondents are employed in the private sector, which typically suggests steady incomes but possibly limited time for independent financial analysis. Thus, following the advice of friends and family might seem more appealing or reliable. Most respondents (59.6%) only completed Senior High School, further supporting the notion that a lack of specialized financial knowledge may drive them to rely on recommendations from their social networks, exacerbating herding behavior. The demographic shows that 45.8% of respondents are between the ages of 23 and 28, suggesting they are from Gen Z and in their early stages of investment journey. Individuals from Gen Z tend to follow recommendations from friends and family. Thus, many investments are made based on recommendations from close friends and family members. This is due to a lack of experience and the belief that recommendations are more profitable and safer compared to personal opinions. These test results are relevant to studies conducted by Budiman et al. (2024), Budiman and Patricia (2021), Dhakal and Lamsal (2023), Dhungana et al. (2022) and Gupta and Shrivastava (2022).

H₃: Overconfidence has a significant effect on investment decisions.

In Table 5, the P-Value exceeds 0.05, indicating that overconfidence does not significantly influence investment decisions. As mentioned, 59.3% of the participants have less than one year of investment experience, which likely reduces their confidence in navigating market complexities. Furthermore, the Covid-19 pandemic's lasting psychological effects, mentioned as a reason for the cautious behavior, could be particularly impactful on younger and less experienced investors. The Covid-19 pandemic had a profound impact on global markets, causing unprecedented volatility and uncertainty. Even as markets begin to recover, the psychological scars remain, making investors more cautious. As a result, many investors prefer to adopt a wait-and-see approach, carefully analyzing market trends before making any significant financial commitments. These test results are relevant to the study conducted by Yuwono and Elmadiani (2021). However, they differ from the findings of Budiman et al. (2024) and Budiman and Patricia (2021) which found a significant impact.

H₄: Risk perception has a significant effect on investment decisions.

The results shown in Table 5 reveal that the P-Value exceeds 0.05, suggesting that risk perception does not significantly impact investment decisions. With the majority of participants being relatively young and inexperienced, they may not yet fully grasp the concept of risk or how to assess it in the context of the financial market. They tend not to understand the potential losses and most respondents have a senior high school education, which might limit their understanding of more complex financial concepts like risk management, leading them to make decisions based more on short-term opportunities rather than risk assessment. Additionally, the influence of cognitive biases and the tendency to follow market trends or advice from unverified sources can further diminish the role of risk perception in their investment choices. These findings align with the research by Ahmed et al. (2022), dan Areiqat et al. (2019).

Table 6. *Indirect Effect Testing Results*

Hypothesis	Coefficient	P-Value	Results
Loss Aversion → FOMO → Investment Decision	0.059	0.035	Sig.
Herding Behavior → FOMO → Investment Decision	0.177	0.009	Sig.

H₅: Loss aversion has a significant impact on investment decisions when mediated by fear of missing out (FOMO).

According to Table 6., the P-Value is less than 0.05, demonstrating that loss aversion significantly impacts investment decisions when mediated by the fear of missing out (FOMO). As previously highlighted, 59.3% of the respondents are new to investing, and this inexperience can heighten their fear of missing out, making them more cautious about potential losses. Additionally, the younger age group, many of whom may be more exposed to social media and digital platforms where investment trends are rapidly shared, can lead to greater susceptibility to FOMO, intensifying their aversion to loss as they try to avoid missing out on profitable opportunities. When investors are influenced by FOMO, they tend

to be afraid of making decisions that carry the risk of loss. This is due to the tendency of investors to seek information and news to avoid missing out on trends, leading to hesitation and fear in making decisions. Furthermore, the anxiety associated with FOMO can cause investors to overreact to market movements and rumors, exacerbating their aversion to potential losses. As a result, they might prefer safer investments or delay making any investment decisions altogether, even if it means missing out on potential gains. This test result is relevant to the study conducted by Gupta and Shrivastava (2022).

H₆: Herding behavior has a significant impact on investment decisions when mediated by fear of missing out (FOMO).

Table 6 shows a P-Value below 0.05, indicating that herding behavior significantly impacts investment decisions when influenced by fear of missing out (FOMO). Essentially, FOMO creates anxiety in investors' minds when making investment decisions. As many respondents (36.1%) are entrepreneurs with variable incomes, they may feel greater pressure to make quick decisions based on trending opportunities. The younger, less experienced demographic is likely more influenced by social networks, where the fear of missing out can drive herding behavior. Given that most respondents are male, the tendency to act quickly based on social validation, particularly through digital channels, is likely a contributing factor to the observed herding behavior. Thus, when influenced by FOMO, investors tend to rely more on the opinions of friends and relatives rather than their own judgment. This need for social validation fosters a herd mentality, leading investors to follow the crowd instead of performing their own detailed analysis. As a result, this collective behavior can magnify market movements, as investors simultaneously buy popular stocks or engage in panic selling, thereby increasing market volatility. This test result is relevant to the study conducted by Gupta and Shrivastava (2022).

This study's findings provide valuable insights into the impact of cognitive biases on investment decision-making, particularly for retail investors. The analysis reveals that herding behavior significantly influences investment decisions in Indonesia, whereas loss aversion, overconfidence, and risk perception do not exhibit notable direct effects. However, when fear of missing out (FOMO) acts as a mediator, loss aversion becomes a significant factor, indicating the powerful role of FOMO in shaping investors' behavior. Herding behavior continues to exert a strong influence, suggesting that many investors rely on the actions of others rather than independent analysis.

These findings underscore the importance of understanding cognitive biases in the context of investment decision-making. Loss aversion, for instance, may lead investors to prematurely sell winning stocks or hold onto losing stocks for too long. Herding behavior results in mimicking the actions of others without performing sufficient personal analysis. Overconfidence can cause investors to underestimate risks and overestimate potential returns, while risk perception shapes how individuals view the probability and magnitude of risks, influencing their overall investment choices. The study also emphasizes the mediating role of FOMO, which amplifies the effects of loss aversion and herding behavior. Recognizing this interaction is crucial for investors to manage emotional reactions effectively. For instance, FOMO can heighten loss aversion, leading to impulsive decision-making. This finding suggests that investors must adopt strategies to mitigate the influence

of these biases, such as setting predefined rules for buying and selling, diversifying portfolios, and seeking professional financial advice.

Considering these insights, retail investors can refine their decision-making processes by becoming more conscious of the subconscious influences that may lead to poor decisions. By understanding the psychological factors driving their choices, they can avoid common pitfalls, such as being swayed by FOMO or following the crowd without sufficient analysis. Developing a more rational, informed approach to investing can ultimately lead to better investment outcomes, increased financial security, and more successful long-term investment experiences.

The novelty of this research lies in its inclusion of overconfidence and risk perception, expanding the understanding of investment behavior, especially among Generation Z investors. Unlike previous research by Gupta and Shrivastava, (2022), which only focuses on loss aversion and herding behavior, this study captures more nuanced psychological factors that influence decision-making. The findings show that overconfidence does not significantly impact investment decisions, likely due to the post-pandemic caution and market uncertainty, which have made investors more risk averse. This is particularly relevant for young and inexperienced investors, who tend to lack the confidence to act independently in volatile market conditions. Additionally, risk perception is not a strong driver of decisions for these investors, as many lack the knowledge or experience to fully assess potential risks, further highlighting their reliance on external influences like social recommendations.

Another key insight from this research is the central role of Fear of Missing Out (FOMO) in mediating the effects of loss aversion and herding behavior on investment decisions. FOMO amplifies the influence of social and emotional factors, pushing Generation Z investors to follow trends or peer advice rather than making rational, risk-based decisions. This demographic is highly influenced by social media and the fear of missing out on profitable opportunities, leading them to engage in impulsive or speculative investments. By including overconfidence and risk perception, it offers a more comprehensive view of how psychological biases interact, particularly for younger, novice investors whose behaviors are shaped more by social and emotional factors than by traditional risk assessments.

CONCLUSION

This study offers valuable insights into the cognitive biases that affect retail investors' decision-making in Indonesia, highlighting the impact of loss aversion, herding behavior, overconfidence, and risk perception. It emphasizes the significant role of the fear of missing out (FOMO) in intensifying these biases, particularly loss aversion and herding behavior. Investors often fall into patterns such as prematurely selling winning stocks or holding onto losing one's due to loss aversion, and mimicking others' actions rather than conducting their own analysis due to herding behavior. In the Indonesian context, the study finds that herding behavior strongly influences investment decisions, while loss aversion, overconfidence, and risk perception are less impactful. However, when FOMO is introduced as a mediator, loss aversion becomes a significant factor. This suggests the need for strategies such as predefined trading rules, diversification, and professional advice to

help investors mitigate these biases and improve financial outcomes.

There are several limitations and suggestions for future research. First, the mediation effect studied is only on the variables of herding behavior and loss aversion, so it is worth considering selecting other financial behavioral bias variables for mediation by FOMO in future studies. Second, this study has not considered moderation factors, suggesting that future research could include variables such as gender, income, and other demographic or psychological factors to see how they might moderate the relationships between cognitive biases and investment decisions. This could provide a more comprehensive understanding of the influences on investment behavior and help develop more tailored strategies for different investor groups.

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