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The Influence of Herding Bias, Mental Accounting, and Loss Aversion on Investment Decision Making in Users Bibit Application

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Abstract

This study aims to determine the effect of Herding Bias, Mental Accounting, and Loss Aversion on investment decisions in users Bibit application. The population in this study are investors in active users of the Bibit application. The data source in this study is primary data obtained from distributing questionnaires through social media. The sampling technique used purposive sampling technique, so that 160 respondents were obtained. Technical data analysis using descriptive analysis and SEM-PLS which consists of the outer model (reliability test and validity test) and inner model (R-Square test and t statistical test) with the SmartPLS 3 program. The results showed that Herding Bias, Mental Accounting, and Loss Aversion affect Investment Decision Making.

Keywords: Herding Bias, Mental Accounting, Loss Aversion, Investment Decision Making

1. Introduction

The development of the digital world affects many sectors of the economy, especially the financial system in the field of payments. This sector is known for its high dynamics, innovation, and speed. After the pandemic, the use of digital technology has become more widespread among customers and businesses, leading to a large increase in the use of non-cash payment methods. This increase is mainly due to the growing demand for convenience, especially among consumers (Ramayanti et al., 2023). The ease of access to information and online transactions encourages people to invest. Investing can be done in various real assets in the form of land, buildings, machinery, factories, and gold as well as financial assets in the form of stocks, bonds, mutual funds, and etc. Mutual funds are an attractive investment option for investors who want to diversify their portfolio, and do not have much time and expertise to analyze the market. This is shown from the data obtained by (*KSEI*, 2023), explaining the increase in the number of mutual fund investors registered in the Single Investor Identification (SID) every year. In 2020, there were 3,175,429 mutual fund investors. This number increased sharply to 6,840,234 in 2021 and further increased to 9,604,269 in 2022. By May 2023, the number of fund investments was 10,345,237.

Market uncertainty and asset price fluctuations can trigger emotional reactions from investors, including new investors in mutual funds, which result in investment decision making. One example of the phenomenon of market uncertainty affecting investment decisions as quoted in CNBC, is the increase in the JCI opens up attractive investment opportunities for investors. However, investors must remain vigilant and not get carried away by following the trend without doing thorough research. On the other hand, a sharp decline in the JCI can lead to panic selling behavior among investors, thus increasing the risk of loss. Thus, awareness of market uncertainty and the ability to be rational and conduct careful analysis are key in facing the challenges and potential opportunities that exist in the financial markets.

An investment decision is a choice made by individuals or institutions to place their funds into various assets to achieve set financial targets. According to (Upadana & Herawati, 2020) investment decisions are an important step with great consequences. Investment decisions can be seen from non-financial performance aspects that can help investors make more informed decisions that can increase their chances of achieving their long-term investment goals (Zamzami & Novita, 2021). Each investment choice will bring different results, and individuals making these decisions will behave rationally or irrationally, depending on the information they get. Investment decisions should be based on a solid understanding of relevant financial information and the financial goals that have been set. This allows individuals to optimize investment returns carefully and rationally.

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The tendency of irrational investors is manifested in the form of behavioral biases. These biases can be of various kinds such as Herding Bias, Mental Accounting, and Loss Aversion. Herding Bias is the behavior of investors' desire to follow the decisions or actions of other investors regardless of their knowledge or experts without carefully considering their analysis. This is in line with research (Tang & Asandimitra, 2023) and (Rona & Sinarwati, 2021) that Herding Bias has a positive and significant effect on investment decision making. However, the findings (Setiawan et al., 2018) show that even though there is no influence on investment decision making. Mental Accounting is a method used by individuals to manage personal finances by dividing and grouping funds into different categories according to their respective priorities and needs. This is in line with research (Santi et al., 2019) and (Husadha et al., 2022) showing Mental Accounting has a significant influence on investment decision making, while research conducted (Tang & Asandimitra, 2023) and (Sukamulja & Senoputri, 2019) found different findings showing mental accounting has no influence on investment decisions. Loss Aversion explains why individuals are more afraid of losing something than getting something of equal value. Research (Rahman & Dewi, 2023) and (Sukamulja & Senoputri, 2019) show that Loss Aversion affects investment decisions. Meanwhile (Pradhana, 2018), actually shows that loss aversion does not influence investment decisions.

The growth in the number of online mutual fund users is driven by various factors, such as guaranteed fund safety, ease of use of the platform, relatively small initial capital, and trust in investment management by trusted managers. This phenomenon is in line with the increasing financial awareness, especially among the millennial generation. One online mutual fund app that has emerged as a top choice is Bibit. Bibit application is a recognized investment platform, with an official permit as a mutual fund distribution agent by the Financial Services Authority (OJK), so all investment activities carried out through Bibit comply with supervision and regulations (Pradana, 2023). Based on the Katadata Insight Center (KIC) survey results, the Bibit app is the best choice for investors to invest in mutual funds. In this survey, 71.9% of respondents stated that they use Bibit as an investment platform (Pahlevi, 2022) Based on data on the significant number of reviews in the Google Play Store and App Store applications, where as of February 1, 2024, Bibit has collected 239,000 reviews in the Google Play Store and 54,000 reviews in the App Store, a much larger number than other similar applications. This makes Bibit the object of research. After seeing the information and phenomena that have been described, researchers are interested in researching the effect of Herding Bias, Mental Accounting, and Loss Aversion on Investment Decisions on users of the Bibit application.

1.1 Objectives

This research aims to:

1. Analyze the effect of Herding Bias on investment decision making of User Bibit Application.
2. Analyze the effect of Mental Accounting on investment decision making of User Bibit Application.
3. Analyze the effect of Loss Aversion on investment decision making of User Bibit Application.

2. Literature Review

2.1 Behavioral finance

Behavioral finance is a theory used to understand how emotional factors influence investors to reason and make decisions (Tang & Asandimitra, 2023). In addition, behavioral finance is also considered a combination of individual elements, market phenomena, and psychological concepts to examine investor behavior in making investment decisions (Rahman & Dewi, 2023). Based on the previous explanation, it can be concluded that behavioral finance theory is a theory that examines how emotional factors affect investor reasoning and decision making.

2.2 Prospect Theory

According to (Tang & Asandimitra, 2023) prospect theory is a concept that asserts that individuals consider the value, experience framework, psychological calculation process, opportunities, and certainty effects that are influenced by mental conditions such as fear of regret, risk perception, fear of loss, and mental sorting in determining investment decisions. Then (Sukamulja & Senoputri, 2019), elaborated that prospect theory reflects the idea that humans do not always act rationally due to the interference of emotions, happiness, individual characteristics, and other psychological aspects. Overall, behavioral finance and prospect theory look the same because of their focus on the psychological and emotional aspects of investors in making investment decisions. However, they are different, as behavioral finance studies how emotional factors influence investors' reasoning and decision-making. In comparison, prospect theory emphasizes the role of psychological and emotional aspects in investment decision-making, by looking at the tendency

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of individuals to interpret or accept information differently depending on whether the information is related to profit opportunities or possible losses.

2.3 Investment Decisions

According to research (Tang & Asandimitra, 2023), investment decisions are the allocation of funds by financial managers into various types of investments to generate future profits. Investment decisions can also be explained as a strategic policy for investors in managing funds or capital to provide profitability in the future (Rona & Sinarwati, 2021). Therefore, investment decisions can be concluded as the process of allocating funds or capital by individuals, companies, or financial managers into various investment instruments to obtain future profits and is classified as a long-term financial planning strategy.

2.4 Herding Bias

Herding refers to the tendency of individuals to imitate or follow the actions of others rather than considering their own beliefs or information (Baddeley, 2010). This often occurs when investors ignore accurate information and follow what other investors are doing (Rona & Sinarwati, 2021). Investors often assume that other investors have better expertise in making investment decisions, so the steps of other investors who are considered more competent tend to be followed.

2.5 Mental Accounting

Mental accounting refers to a person's behavior or way of thinking in classifying and treating money based on where it comes from and a person's behavior in dividing their money into certain accounts based on its purpose (Santi et al., 2019). According to (Supriadi et al., 2022), mental accounting reflects a person's behavior in calculating costs and benefits in every decision making. The goal is to maximize profits and minimize risks. Someone with high mental accounting will have the courage to make decisions, on the other hand, someone with low mental accounting is less brave in making decisions.

2.6 Loss Aversion

Loss aversion is a person's tendency to prefer avoiding losses rather than gaining profits (Pradhana, 2018). When investors experience losses, they may hesitate to reinvest. On the other hand, if investors only focus on maintaining existing assets without reinvesting, they will make investment decisions less frequently (Putri & Juwita, 2022). Investors who have loss aversion bias tend to choose safe and low-risk investments.

2.7 Hypothesis of Research

Herding Bias to Investment Decisions

Research carried out by (Tang & Asandimitra, 2023), as well as (Rona & Sinarwati, 2021) found that there is a positive and significant relationship between biased herding and investment decision making. The more investors invest in a product, the greater the potential for investment decisions in that product. Therefore, the first hypothesis in this study can be formulated as follows.

H1: Herding bias influences investment decision making

Mental Accounting to Investment Decisions

Mental accounting refers to the practice of separating funds into different allocations to be used in financial decisions, to make larger and more brave investment decisions. Based on research (Santi et al., 2019) and (Husadha et al., 2022), it was found that mental accounting has a positive and significant influence on investment decision-making. This means that the higher mental value of accounting will lead to a greater tendency to increase investment decisions. Therefore, the second hypothesis in this study can be formulated as follows.

H2: Mental accounting influences investment decisions

Loss Aversion to Investment Decisions

Based on the results of research (Rahman & Dewi, 2023) and (Sukamulja & Senoputri, 2019) it was found that loss aversion has a significant positive influence on investment decisions. This means that the higher the loss aversion will

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lead to increased investment decisions. Loss aversion is a determination of fear and sensitivity to loss rather than profit. Where such things can affect investment decisions by encouraging investors to avoid the risk of loss. Therefore, the third hypothesis can be formulated as follows.

H3: Loss Aversion Affects Investment Decision Making

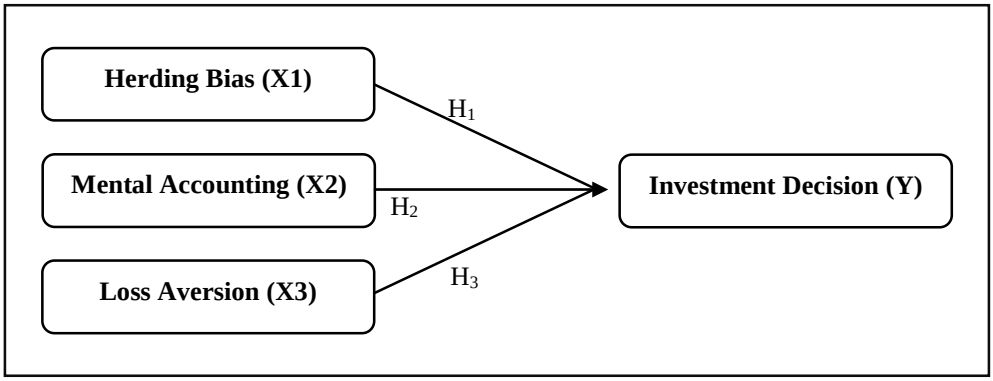

Figure 1 Framework

3. Methods

This research uses a type of quantitative research. The primary data obtained from the questionnaire is the main source of information in this study. The questionnaires are distributed online through various social media. The number of respondents reached 160. This study uses the population of users of the Bibit app to investment. The sample in this study uses purposive sampling techniques with investor criteria of active users of Bibit applications.

3.1 Operational Definition and Variable Measurement

This study discusses three independent variables, namely herding bias, mental accounting, and loss aversion. The dependent variable that is currently the focus of research is investment decisions. The four variables are represented by question indicators. Each indicator is rated using a Likert scale with score ranging from 1-4, namely: (1) Strongly Disagree = STS, (2) Disagree = TS, (3) Agree = S, (4) Strongly Agree = SS. The explanation of operational variables and measurements used in this study. A detailed explanation can be seen in table 1.

Table 1 Variable Operational Definition

Variable	Definition	Indicator	Reference
Herding Bias (X1)	Behavior in which an investor relies on the advice or action of another investor without considering it seriously or based on perceptions that are not always appropriate.	Dependency on decisions against others, interest in popular investment products, and the influence of the social environment in decision making.	(Rona & Sinarwati, 2021)
Mental Accounting (X2)	Individual tend to classify their finances based on subjective criteria, such as sources of income and purpose of use of funds.	Allocate income to multiple accounts, treat monthly income and bonuses differently, and expenditures to be deducted from monthly amounts.	(Santi et al., 2019)
Loss Aversion (X3)	An impulse that makes investors more affected and stressed by potential losses than equivalent potential profits.	Refusing to raise investments when market performance is poor, not losing is more important than making profits and avoiding selling investments whose value is falling, and selling those which are rising.	(Areiqat et al., 2019)

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Variable	Definition	Indicator	Reference
Investment Decision (Y)	Investor action involves investing funds in a particular asset in the hope of gaining future profits. It involves analyzing financial products, considering returns, risks, and timing to maximize profits.	Important aspects are considered in investment decisions, finding accurate data to strengthen investment decisions and analyzing available information to ensure the right decision.	(Christanti & Mahastanti, 2011)

3.2 Data Analysis Technique

The analysis method uses Structural Equation Modeling (SEM) based on Partial Least Square (PLS). SmartPLS 3 software is used for data analysis tools. Technical data analysis uses descriptive and SEM-PLS analysis consisting of outer models (reliability test and validity test) and inner models (R-Square test and t statistical test).

4. Results and Discussion

4.1 Description of Respondents

The highest percentage for Table 2. In each characteristic is 17 - 16 years old for age characteristics, female for gender characteristics, S1 background for education characteristics, and student for profession characteristics, it can be seen that entrepreneurs have an interest in investing, in line with the opinion of (Rachmawati et al., 2021) for entrepreneurs who invest in mutual funds, their business financial statements can be an important source of information in evaluating investment opportunities in the sector. By understanding financial health and operational performance through financial statements, entrepreneurs can make more informed investment decisions to achieve their financial goals. The highest percentage for income characteristics is Rp 1,000,001-Rp3,000,000, 1-3 years for investment experience characteristics, and ≤ Rp 3,000,000 for investment characteristics.

Table 2 Characteristics of the respondent

Criteria	Total	%
Age		
17 - 26 years old	137	85.6%
27 - 32 years old	15	9.4%
38 - 42 years old	2	1.3%
43 - 47 years old	5	3.1%
48 - 52 years old	1	0.6%
Gender		
Female	123	76.9%
Male	37	23.1%
Education		
High School	33	20.6%
Diploma	27	16.9%
S1	95	59.4%
S2	5	3.1%
Profession		
Student	92	57.5%
Private officer	40	25.0%
Public officer	6	3.8%

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Criteria	Total	%
Entrepreneur	10	6.3%
Others	12	7.5%
Income		
≤ Rp 1.000.000	33	20.6%
Rp 1.000.001 - Rp 3.000.000	58	36.3%
Rp 3.000.001 - Rp 5.000.000	40	25.0%
Rp 5.000.001 - Rp 10.000.000	19	11.9%
≥ Rp 10.000.000	10	6.3%
Investment Experience		
< 1 year	58	36.3%
1 - 3 years	81	50.6%
> 3 years	21	13.1%
Investment		
≤ Rp 3.000.000	87	54.4%
Rp 3.000.001 - Rp 8.000.000	37	23.1%
Rp 8.000.001 - Rp 13.000.000	11	6.9%
≥ Rp 13.000.000	25	15.6%

4.2 Description of Variable

Description of Herding Bias Variable

Based on the analysis in Table 3, it is seen that the response of 160 respondents to bias herding yields an average of 2,7604 means investment decision making, investors tend to be influenced by other investor decisions. On indicator HB1 obtained the highest average of 3,1625, indicating that confidence in investment decisions increases as many other investors make the same choice. In contrast, indicatorHB3 has the lowest average at 2,4938, indicating the investor's tendency to choose an investment option without conducting in-depth analysis when the option is trending among fellow investors.

Table 3 Respondent Results on Herding Bias

Code	Indicator	Score				Total	Mean
		STS	TS	S	SS		
		1	2	3	4		
HB1	I'd rather believe in investment decisions if a lot of people took the same choice	3	25	75	57	506	**3.1625**
HB2	I tend to change my investment decisions if I see other investors selling the same funds	24	51	50	35	416	**2.6000**
HB3	I tend to choose investments that are popular with other investors without doing an in-depth analysis	28	55	47	30	399	**2.4938**
HB4	When choosing investments, I'm more interested in what's being talked about in the media than looking at the basics of investments	23	59	45	33	408	**2.5500**

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Code	Indicator	Score				Total	Mean
		STS	TS	S	SS		
		1	2	3	4		
HB5	I feel more confident about my investment if friends or family make the same investment	14	36	59	51	467	**2.9188**
HB6	I usually react quickly to changes in other investors decisions and follow their reactions to the market	11	47	59	43	454	**2.8375**
Mean							**2.7604**

Description of Mental Accounting Variable

In the analysis of Table 4, it was found that the response of 160 respondents to Mental Accounting resulted in an average of 3.4018, which means that investors have planned their finances well in making investment decisions. On the MA1 indicator, it was seen that the highest average of 3.6938 indicates that the investors specifically set aside some money for long-term investments. Then the indicator with the MA5 code showed the lowest mean of 3.0438, which describes that when the value of the investment drops, investors prefer to seek additional funds than to use regular savings to fix it.

Table 4 Respondent Results on Mental Accounting

Code	Indicator	Score				Total	Mean
		STS	TS	S	SS		
		1	2	3	4		
MA1	I set aside some money specifically for long-term investments	1	2	42	115	591	**3.6938**
MA2	I have a plan to save a significant amount of money so that it can be used for future investments	1	5	59	95	568	**3.5500**
MA3	I have separate funds for short-term and long-term investments	6	17	60	77	528	**3.3000**
MA4	I take income from a side or a bonus as extra money that I will invest.	3	9	71	77	542	**3.3875**
MA5	When my investment goes down, I tend to look for additional sources of funds to fix it rather than using funds from my routine savings	8	30	69	53	487	**3.0438**
MA6	I have a monthly plan to allocate some money from my salary directly to the investment account	1	9	66	84	553	**3.4563**
MA7	I have a separate emergency fund and will never be used for investment	3	17	56	84	541	**3.3813**
Mean							**3.4018**

Description of Loss Aversion Variable

In Table 5, the analysis of loss aversion showed that the response of 160 respondents resulted in an average of 3,2719. It means respondents tend to make investment decisions, investors tend to avoid losses. Therefore, investors are more

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careful in choosing investment options to avoid the risk of losses that can negatively impact their portfolios. On the LA6 indicator, the highest average of 3.4500 shows that investors are always cautious of sudden changes that could potentially lead to losses. Meanwhile, the lowest mean of 3.1125 on the LA1 indicator indicates an investor's tendency to refrain from increasing investments when market conditions are unfavorable.

Table 5 Respondent Results on Loss Aversion

Code	Indicator	Score				Total	Mean
		STS	TS	S	SS		
		1	2	3	4		
LA1	I tend to refrain from increasing investments when the market is bad	6	30	64	60	498	**3.1125**
LA2	I feel hesitant to increase investment allocation when the market is unstable	1	27	71	61	512	**3.2000**
LA3	I'm more focused on capital protection than looking for greater profits	1	23	73	63	518	**3.2375**
LA4	I'd rather avoid risking not suffering loss than take the opportunity to gain	1	23	63	73	528	**3.3000**
LA5	I tend to refrain from selling downward investments	0	23	72	65	522	**3.2625**
LA6	I've always been careful with sudden changes that can cause a loss	0	6	76	78	552	**3.4500**
LA7	I'm more worried about the fall in the price of the funds that I buy than the information about the rise in the prices of funds	2	26	71	61	511	**3.1938**
LA8	I prefer to avoid investing in funds that have a history of negative performance	1	12	66	81	547	**3.4188**
Mean							**3.2719**

Description of Investment Decision Variable

In table 6, there is an average result of 3.5820 of the responses of 160 respondents to investment decisions, this is because investors tend to choose to invest in funds with considerations of security, capital availability, liquidity, professionalism of investment managers, providing benefits through diversification in various financial sectors. It's in line with the opinion (Wahyuni & Novita, 2021) the components of a risk management framework help investors understand how investment managers manage their risks and portfolios. Although investment manager is reliable, it is still important for investors to keep track of portfolio performance as financial markets can change, and investment strategies need to be adjusted. By monitoring regularly, investors can ensure that their portfolios are consistent with the purpose and risk tolerance, and take action if necessary. The highest average earnings are found on indicators with the KI1 code of 3,700 in the sense that for investors, investing is a very important part of life. On the other hand, the lowest average on the KI3 code indicator of 3,500 describes that investors decide to invest in funds because the capital required is very affordable.

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Table 6 Respondent Results on Investment Decision

Code	Indicator	Score				Total	Mean
		STS	TS	S	SS		
		1	2	3	4		
KI1	I see investing as an important aspect of life	0	3	42	115	592	**3.7000**
KI2	I ensure the security of my income in investing	0	3	55	102	579	**3.6188**
KI3	I choose to invest in mutual funds because the capital is very affordable	0	9	62	89	560	**3.5000**
KI4	I chose to invest in mutual fund because it is managed by a professional and experienced investment manager	0	6	59	95	569	**3.5563**
KI5	I chose to invest in mutual fund because it can be liquidated or sold at any time and according to the price of the net asset value that applies at the time of the sale	0	5	58	97	572	**3.5750**
KI6	I chose to invest in a reverse fund because it's considered safe and profitable. The benefits come because the investment funds can be placed in various financial sectors	0	4	70	86	562	**3.5125**
KI7	I choose to invest in mutual funds because it is for future needs	1	8	46	105	575	**3.5938**
KI8	I chose to invest in mutual fund because the process is easy to do anytime and anywhere.	0	5	54	101	576	**3.6000**
Mean							**3.5820**

4.3 Outer Model Testing

Convergent Validity

The convergent validity test can be performed by checking the loading factor value on each indicator of a construct. The criteria used are that the loading factor value must reach 0.7 in confirmatory research and be in the range of 0.6 to 0.7 in exploratory research. In addition, the average variance extracted (AVE) value is above 0.5 (Hamid & Anwar, 2019). From the analysis of Figure 2 using the calculate-PLS SEM algorithm, it shows that several indicators have a loading factor value ≤ 0.6. Therefore, these indicators must be eliminated from the analysis model.

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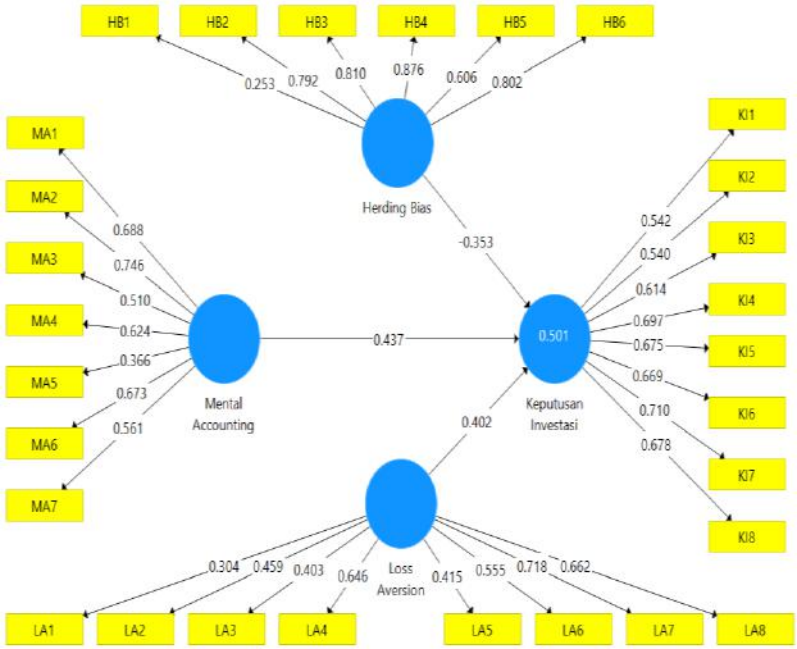

Figure 2 Loading Factor Test Before Indicator Elimination

After eliminating indicators that have a loading factor value below 0.6. In Figure 3, it can be seen that the indicators used to measure valid Herding Bias are HB2, HB3, HB4, HB5, and HB6. To measure Mental Accounting, the valid indicators are MA2 and MA6. As for Loss Aversion, only indicators LA4, LA7, and LA8 are considered valid. To measure Investment Decisions, indicators KI4, KI6, KI7, and KI8 are valid.

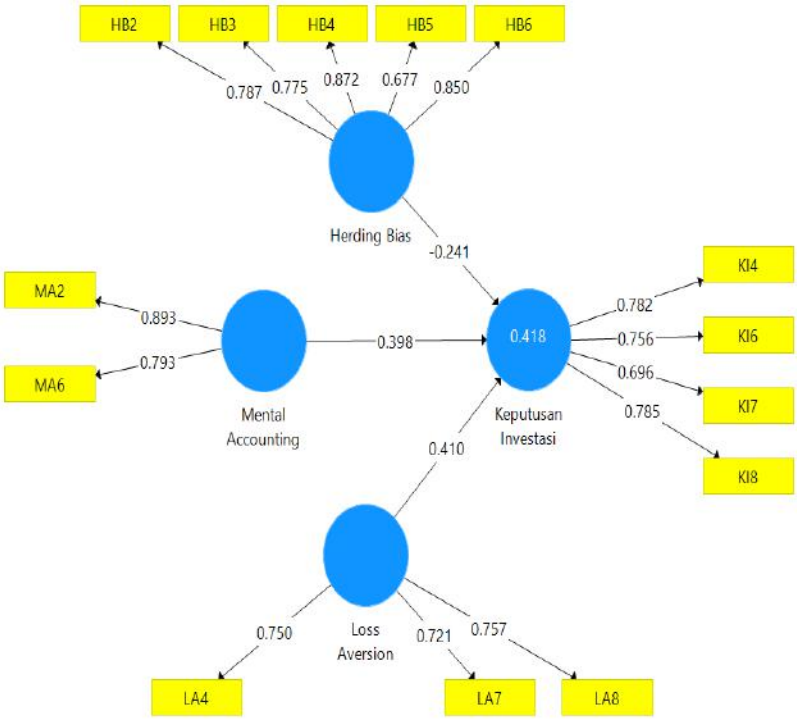

Figure 3 Loading Factor Test After Indicator Elimination

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With the loading factor value that has been confirmed above 0.6, an AVE test should be performed to verify the validity of the indicator. The AVE value in table 7 of each variable also meets the standard set above 0.5, this indicates that the data is valid.

Table 7 Average Variance Extracted after retesting

Variable	Average Variance Extracted (AVE)
Herding Bias	0.633
Mental Accounting	0.570
Loss Aversion	0.552
Investment Decision	0.713

Discriminant Validity

In the discriminant validity analysis with the cross-loading factor method, the cross-loading value on the targeted construct must be greater than the loading value on the other constructs. In table 8, the result of the loading factor of each structure has a greater value compared to the other construction

Table 8 Results of Cross Loading factor Value

Indicator	Herding Bias	Mental Accounting	Loss Aversion	Investment Decision
HB2	**0.787**	0.006	0.245	-0.068
HB3	**0.775**	-0.123	0.188	-0.091
HB4	**0.872**	-0.112	0.236	-0.128
HB5	**0.677**	-0.068	0.364	-0.077
HB6	**0.850**	-0.054	0.333	-0.148
MA2	-0.128	**0.893**	0.218	0.502
MA6	-0.013	**0.793**	0.214	0.371
LA4	0.290	0.252	**0.750**	0.311
LA7	0.339	0.194	**0.721**	0.251
LA8	0.167	0.134	**0.757**	0.372
KI4	-0.103	0.408	0.322	**0.782**
KI6	-0.149	0.392	0.309	**0.756**
KI7	-0.069	0.411	0.254	**0.696**
KI8	-0.094	0.379	0.401	**0.785**

Reliability Test

In reliability testing, data can be said to be reliable if cronbach's alpha value is above 0.6 and composite reliability is above 0.7. Based on the results of calculations in table 9, all variables have values above 0,6 and 0.7. The lowest value of cronbach's alpha is found on the mental accounting variable of 0.606 and loss aversion of 0,603, whereas the lowest compound reliability value is found at the loss aversion of 0.787. Although these values are lower than other variables, they are still above the required minimum limit.

Table 9 Reliability Test

Variable	Cronbach's alpha	Composite Reliability
Herding Bias	0.856	0.895
Mental Accounting	0.606	0.832
Loss Aversion	0.603	0.787
Investment Decision	0.748	0.841

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R-Square

The r-square analysis in this study aims to measure the extent to which an independent variable affects a dependent variable. The higher the value, the greater the influence of the variable on the dependent. The R-square value of 0.418 or 41.8%, in table 10, describes that half the variation in investment decisions can be explained by the three independent variables herding bias, mental accounting, and loss aversion. The remaining 58.2% are influenced by variables other than the variables studied.

Table 10 R-Square Test

Variable	R-square
Investment Decision	0.418

Analysis Estimate for Path Coefficients

The hypothesis in this study is tested using the Partial Least Square (PLS) method with the Bootstrapping test, with a 95% confidence rate (alpha 5%) and t-statistic using the t-table (1,96). The process involves the hypotheses to be tested, in which if the statistical t-value is greater than the t -table then the hypothetic is accepted, otherwise if the t statistics are less than the T-table then it is rejected.

Tabel 11. Path Coefficients

Hypothesis	Original Sample	T Statistics	P Values
Herding Bias -> Investment Decision	-0.241	2.704	0.007
Mental Accounting -> Investment Decision	0.398	5.796	0.000
Loss Aversion -> Investment Decision	0.410	6.132	0.000

H1: Herding bias influences investment decision making

This result proved the t-statistics value of 2.704 > 1.96 and the p-value of 0.007 < 0.05, means that bias herding influences investment decision making. The sample original value is negative -0.241. This value indicates that the higher the bias, the lower the investment decision-making. Therefore the first hypothesis was accepted.

H2: Mental accounting influences investment decisions

The results showed a t-statistics value of 5.796 > 1.96 and p-value of 0,000 < 0.05, means that mental accounting influences investment decisions. The original sample value was positive 0.398. These values indicate that the higher mental accounting the higher investment decision-making. Therefore the second hypothesis was accepted.

H3: Loss Aversion Affects Investment Decision Making

On the test results t-statistics value of 6.132 > 1.96 and p-value of 0,000 < 0.05, means that loss aversion influences investment decision making. The original sample value is positive 0.410. These values indicate that the higher the loss aversion, the greater the investment decision-making. Thus the third hypothesis was accepted.

5. Discussion

First Hypothesis Testing

The test results of the first hypothesis showed that Bias Herding has a negative influence on investment decision-making by users of the Bibit application. This means that the higher the bias, the lower the investment outcome. The results of this study are in line with the research carried out (Raafifalah, 2021) herd behavior has a negative influence on the investment decision of student investors in Malang City.

Based on variable analysis on herding bias indicators, it has a relationship with investment decision indicators in Figure 3. HB3 and HB4 indicators relate to KI8 indicators, where investors who invest based on trends and media information without doing analysis tend to choose funds that provide ease and flexibility rather than conducting in-depth analysis. Indicators HB5 and HB6 relate to KI6 indicators meaning that investors invest in confidence and change other investors tend to opt for funds that are safer and more profitable because they are considered an option as certain.

The results of a characteristic analysis of the majority of respondents aged 17 to 26 and having completed high school education, show that they are young investors who are new to the world of investment. In line with research (Maulidian et al., 2024) green entrepreneurship offers the potential to gain financial benefits while also contributing

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to environmental conservation efforts, especially the Gen Z, who tends to be more concerned with environmental and social issues. Businesses that adopt sustainable practices have an opportunity to attract the interest of investors who are looking for portfolios that reflect their values. This may make them more vulnerable to bias in investment decision-making, due to lack of knowledge and experience in the field, as well as the likelihood of being affected by trends and information from others.

Second Hypothesis Testing

The results of the second hypothesis test, it can be concluded that mental accounting has a positive influence on investment decision-making in the user of the bibit application. According to the opinion (Supriadi et al., 2022) individuals with high mental accounting dare to make investment decisions. The results of this research are consistent with the research (Husadha et al., 2022) and (Santi et al., 2019) that mental accounts have a significant influence on investment decision-making.

Based on the variable analysis the mental accounting indicator has a relationship with the investment decision indicator in Figure 3. The MA2 indicator relates to the KI4 and KI7 indicators, it can be concluded that investors who have an intention to save for investment tend to choose the funds because of the investor's confidence in the investment manager's expertise and the long-term goals that they want to. This is due to the perception that the fund provides security and profit through portfolio diversification, as well as the convenience and flexibility it offers.

As a result of the analysis of the respondent's characteristics, investors with more than 3 years of investment experience, which accounted for 13.1% of the total respondents, have income of more than Rs 5,000,000 and investment experience of over 3 years, are likely to have a different mental accounting compared to new investors.

Third Hypothesis Testing

The test results of the third hypothesis show that loss aversion has a positive influence on investment decision-making in bibit application users. This means that investors with a high loss aversion prefer to invest safely and avoid risk or loss. In line with research (Rahman & Dewi, 2023) and (Sukamulja & Senoputri, 2019) found that loss aversion had a significant positive influence on investment decisions.

Based on variable analysis the loss aversion indicator has a relationship with the investment outcome indicator in Figure 3. The LA4 indicator related to KI7 explains that investors who choose to minimize risk tend to invest in cash funds with long-term objectives to meet future needs. The LA7 indicator linked to KI8 describes that an investor who is deeply concerned about falling prices chooses the cash fund because of the ease and flexibility in the investment process, so investors can liquidate investments easily if they need money. The LA8 indicator relates to KI6 where investors that avoid risks strongly prefer to deposit funds because they are considered safe and profitable as a result of the diversification of the financial sector.

The results of the analysis of the characteristics of respondents who have less than 1 year of investment experience, which reached 36.3% of the total respondents, and the amount of money that has been invested ≤ Rp 3,000,000, which reached 54.4% of the total respondents, indicate that these investors are still new to the world of investment. As new investors tend to choose safe investments because they do not have much experience and knowledge about investments, so they prefer to reduce risk by choosing more stable investment instruments.

6. Conclusion

The results of the hypothesis can be seen that respondents on the Bibit application users still tend to be influenced by other investors' investment decisions in their decision making so the investment decisions taken are low or not optimal. In addition, mental accounting is reflected in the ability of respondents to divide their funds effectively, indicating that they already have a measurable allocation strategy to their investment objectives. Then the tendency to avoid losses is also seen in investment decisions, especially when mutual fund market performance is unfavorable.

The research conducted still has some limitations that need to be considered in the distribution of questionnaires or the number of respondents obtained has not reached an adequate level. In addition, this study only uses three independent variables. Other variables that may affect the research results have not been considered.

Based on the limitations that exist in this study, it is hoped that future research can expand the scope of gender and profession of respondents to increase the representation of a wider population. In addition, future research can also develop the variables used, not only limited to herding bias, mental accounting, and loss aversion but also considering other factors that may affect investment decisions.

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References

Areiqat, A. Y., Abu-Rumman, A., Al-Alani, Y. S., & Alhorani, A. (2019). Impact of behavioral finance on stock investment decisions applied study on a sample of investors at Amman Stock Exchange. *Academy of Accounting and Financial Studies Journal*, *23*(2), 1–16.

Baddeley, M. (2010). Herding, social influence and economic decision-making: Socio-psychological and neuroscientific analyses. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *365*(1538), 281–290. https://doi.org/10.1098/rstb.2009.0169

Christanti, N., & Mahastanti, L. A. (2011). Faktor-Faktor Yang Dipertimbangkan Investor Dalam Melakukan Investasi. *Jurnal Manajemen Teori Dan Terapan*, *4*(3), 37–51. https://doi.org/10.20473/jmtt.v4i3.2424

Hamid, R. S., & Anwar, S. M. (2019). *Structural Equation Modelling (SEM) Berbasis Varian: Konsep Dasar dan Aplikasi dengan Program SmartPLS 3.2.8 dalam Riset Bisnis*. PT Inkubator Penulis Indonesia.

Husadha, C., Hidayat, W. W., Fitriani, D., & Rossa, E. (2022). Studi kasus: Mental accounting bias dan confirmation bias terhadap pengambilan keputusan investasi saham pada galeri investasi universitas. *Jurnal Riset Akuntansi Dan Keuangan*, *4*(2), 137–148. https://doi.org/10.36407/akurasi.v4i2.608

KSEI. (2023). https://www.ksei.co.id/files/Statistik_Publik_-_Mei_2023_v2_(1).pdf

Maulidian, Puspitawati, M. D., Novita, Ramayanti, R., Dahlia, L., & Purnengsih, I. (2024). Green Entrepreneurship Incubation Model for Students at Trilogy University Business Incubator: A Literature Review. *E3S Web of Conferences*, *483*, 01017. https://doi.org/10.1051/e3sconf/202448301017

Pahlevi, R. (2022). *Survei KIC: Bibit Jadi Aplikasi Reksa Dana Favorit di Indonesia*. Katadata.Co.Id. https://databoks.katadata.co.id/Datapublish/2022/02/14/Survei-Kic-Bibit-Jadi-Aplikasi-Reksa-Dana-Favorit-Di-Indonesia, 2022

Pradana, M. (2023). *Review Bibit: Kelebihan dan Kekurangan*. Investbro.Id. https://investbro.id/review-bibit/

Pradhana, R. W. (2018). Pengaruh Financial Literacy, Cognitive Bias, dan Emotional Bias Terhadap Keputusan Investasi (Studi Pada Investor Galeri Investasi Universitas Negeri Surabaya). *Jurnal Ilmu Manajemen*, *6*(3), 108–117. https://jurnalmahasiswa.unesa.ac.id/index.php/jim/article/view/23849

Putri, M. A., & Juwita, H. A. J. (2022). Pengaruh Overconfidence, Loss Aversion, dan Herding terhadap Keputusan Investasi Emas Era Tahun Pertama Pandemi Covid-19 (Studi Pada Masyarakat di Daerah Khusus Ibukota Jakarta). *Ekonomi Dan Bisnis*, *19*, 1–15.

Raafifalah, I. B. (2021). Pengaruh Herd Behavior Dan Heuristic (Representativeness, Anchoring, Overconfidence, Dan Availability Bias) Terhadap Investment Decision Investor Mahasiswa Di Kota Malang. *Parsimonia*, *8*(2355–5483), 90–104.

Rachmawati, N. A., Ramayanti, R., & Setiawan, R. (2021). Kesadaran, Tingkat Kesiapan, D A N Umkm, Pelaku Menyusun, Dalam Pajak, Keuangan D A N. *Jurnal Akuntansi Dan Bisnis*, *21*(2), 138–150.

Rahman, F., & Dewi, S. (2023). Pengaruh Overconfidence, Gambler'S Fallacy Dan Loss Aversion Terhadap Keputusan Investasi Di Sumatera Utara. *Jurnal Riset Akuntansi Dan Bisnis*, *23*(1). https://doi.org/10.30596/14510

Ramayanti, R., Rachmawati, N. A., Azhar, Z., & Nik Azman, N. H. (2023). Exploring intention and actual use in digital payments: A systematic review and roadmap for future research. *Computers in Human Behavior Reports*, *13*(August 2023), 100348. https://doi.org/10.1016/j.chbr.2023.100348

Rona, I. W., & Sinarwati, N. K. (2021). Pengaruh Herding Bias dan Overconfidence Bias terhadap Pengambilan Keputusan Investasi. *Studi Akuntansi Dan Keuangan Indonesia*, *4*(2), 104–130. https://doi.org/10.21632/saki.4.2.104-130

Santi, F., Sahara, N. V., & Kamaludin. (2019). the Effect of Mental Accounting on Student'S Investment Decisions: a Study At Investment Gallery (Gi) Feb University of Bengkulu and Syariah Investment Gallery (Gis) Feb Iain Bengkulu. *Journal of Business Economics*, *24*(2), 152–167. https://doi.org/10.35760/eb.2019.v24i2.1907

Setiawan, Y. C., Atahau, A. D. R., & Robiyanto, R. (2018). Cognitive Dissonance Bias, Overconfidence Bias dan Herding Bias dalam Pengambilan Keputusan Investasi Saham. *AFRE (Accounting and Financial Review)*, *1*(1), 17–25. https://doi.org/10.26905/afr.v1i1.1745

Sukamulja, S., & Senoputri, A. Y. N. M. D. P. (2019). Regret Aversion Bias, Mental Accounting, Overconfidence, and Risk Perception in Investment Decision Making on Generation Y Workers in Yogyakarta. *International Journal of Economics and Management Studies*, *6*(7), 102–110. https://doi.org/10.14445/23939125/ijems-v6i7p116

ISBN 978 623 09 00266 *ISSN 2829 8438*

Supriadi, A., Djuniardi, D., & Hamzah, A. (2022). Pengaruh Overconfidence Bias, Mental Accounting Dan Familiarity Bias Terhadap Pengambilan Keputusan Investasi. *Journal of Global Business and Management Review*, *4*(1), 50. https://doi.org/10.37253/jgbmr.v4i1.6777

Tang, I. M. H., & Asandimitra, N. (2023). Pengaruh mental accounting, regret aversion bias, herding bias, loss aversion, risk perception, dan financial literacyterhadap keputusan investasi investor generasi Z. *Jurnal Ilmu Manajemen*, *11*(2), 458–473.

Upadana, I. W. Y. A., & Herawati, N. T. (2020). Pengaruh Literasi Keuangan dan Perilaku Keuangan terhadap Keputusan Investasi Mahasiswa. *Jurnal Ilmiah Akuntansi Dan Humanika*, *10*(2), 126. https://doi.org/10.23887/jiah.v10i2.25574

Wahyuni, R. S., & Novita, N. (2021). COSO ERM Framework as the Basis of Strategic Planning in Islamic Banking. *Jurnal Keuangan Dan Perbankan*, *25*(1), 21–35. https://doi.org/10.26905/jkdp.v25i1.5123

Zamzami, M., & Novita, N. (2021). Apakah Gemba Kaizen Mampu Meningkatkan Kinerja Nonkeuangan Perguruan Tinggi? *Jurnal Akuntansi Multiparadigma*, *12*(1), 207–220. https://doi.org/10.21776/ub.jamal.2021.12.1.12