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Analysis of the Influence of Financial Literacy and Financial Behavior Bias on Investment Decision Making with Risk Perception as a Mediating Variable

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ABSTRACT

This study analyzes the effect of financial literacy and financial behavioral biases on investment decision making with risk perception as a mediating variable. Data were obtained from 122 respondents, namely employees of the BPSDM unit of the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration. The research method uses a quantitative approach with data collection through questionnaires. The results showed that financial literacy and financial behavior bias have a significant positive influence on investment decision making. In addition, risk perception was found to mediate the relationship between financial literacy and investment decision making, as well as between financial behavioral biases and investment decision making. This study provides theoretical and practical implications in understanding the dynamics of investment decision making, especially in government organizations. However, this study has limitations on the generalizability of the results and the cross-sectional approach, so further research with a broader scope is needed.

Keywords: *financial literacy, financial behavior bias, risk perception, investment decision making, government employees.*

1. Introduction

The Financial Services Authority (OJK) undertook a renewed initiative through the National Survey on Financial Literacy and Inclusion (SNLIK), aiming to evaluate the forthcoming metrics of the Financial Literacy and Inclusion Index. SNLIK 2022 results show that the financial literacy index level of Indonesia is 49.68%, the financial inclusi index reaches 85,10%, and the gap index is recorded at 35.42%. The SNLIK results for 2024 show that the financial literacy index of the Indonesian people is 65.43%, the financial inclusion index reaches 75.02%, and the gap index is recorded at 9.59%. According to Hartono (2024) it was emphasized that this aspect serves as a critical pillar for OJK and its stakeholders in devising policies, crafting strategies, and designing financial products and services that align with the diverse needs and capacities of consumers, ultimately aiming to enhance societal welfare.

According to Mitchell, (2023) one of the pivotal drivers behind this phenomenon is financial literacy, which is conceptualized as the capacity to evaluate economic information and make well-informed decisions accordingly. This area has garnered significant attention in global financial research, highlighting that inadequate financial knowledge correlates with less-than-optimal financial choices, particularly in investment activities. Van Rooij et al. (2021) underscore that individuals with elevated financial literacy levels are more likely to engage actively in stock market participation and maintain diversified investment portfolios. Nevertheless, findings suggest that the majority of Indonesians possess limited financial knowledge. However, financial literacy alone does not fully explain investment decision-making behavioral biases in financial practices also play a crucial role in shaping such decisions. According to Kahneman and Tversky (2019). Nobel laureates in Economics, in their prospect theory explain how cognitive biases can lead to deviations from rationality in financial decision-making. Phenomena such as overconfidence, herd behavior, and loss aversion often result in inefficient investment decisions. According to Hirshleifer (2020) shows that these behavioral biases not only affect individual investors, but can also impact overall market dynamics, creating market anomalies and even speculative bubbles. In the Indonesian context, understanding these behavioral biases becomes increasingly important as an increasing number of new investors enter the market.

Furthermore, the relationship between financial insights and behavioral tendencies affecting how investment decision are made, which is a complex process consisting of many factors. According to Ackert and Deaves (2022) in their study underline the importance of a multidisciplinary approach in understanding investment behavior. They found that in addition to traditional factors such as return and risk, psychological and social aspects also play a key role in investment decision making. Meanwhile, According to Gennaioli et al. (2018) shows that investors' trust in fund managers is often based more on non-financial factors such as personality and reputation, rather than historical performance. These findings emphasize the importance of comprehensive investor education in Indonesia, covering not only the technical aspects of investing but also an understanding of the psychological factors that can influence decisions.

In addition to financial literacy and behavioral biases, an investor's risk profile is also a crucial element in financial planning and investment. According to Dohmen et al. (2019) in their longitudinal study found that individuals' risk preferences tend to be stable over time, but can be influenced by life experiences and macroeconomic conditions. They also identified gender and age differences in risk preferences, with men and younger individuals tending to have higher risk tolerance. According to Bucciol and Miniaci (2023) explored how risk profile interacts with financial literacy in influencing portfolio asset allocation. They found that investors with high financial literacy are better able to adjust their portfolio according to their risk profile, while investors with low literacy tend to have suboptimal asset allocation. These findings have important implications for Indonesia, given the diverse profiles of investors in an emerging market.

In the Indonesian context, understanding the interactions between financial literacy, behavioral biases, investment decision-making, and risk profile is becoming increasingly important as public participation in financial markets increases. According to Sari and Yudistira (2022) shows that despite improvements in financial literacy among Indonesian investors, there is still a significant gap between knowledge and practice. They found that many investors, especially new ones, are still prone to behavioral biases and often make investment decisions that are not in line with their risk profile. According to Prabowo and Kusumawati (2023) underscore the importance of investor education programs that focus not only on improving financial literacy, but also on understanding behavioral biases and effective risk management.

Given the complexity and interconnection between these factors, further research is needed to understand the dynamics of investment decision making in Indonesia, especially among government employees who have a strategic role in economic development. The purpose of this study is to investigate how financial literacy, financial behavioral biases, risk profile, and investment decision-making among employees of the BPSDM unit at the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration correlate with each other. A better understanding of these factors is expected to provide valuable insights for the development of more effective policies and education programs, which in turn can encourage more responsible and sustainable participation in Indonesia's financial markets.

Based on the background of the above statement and the existence of research gaps, the authors may be interested in conducting research with the title "Analysis of the Influence of Financial Literacy and Financial Behavior Bias on Investment Decision Making with Risk Perception as a Mediating Variable."

2. Literature Review

2.1 Theory of Financial Behavior

The Theory of Planned Behavior (TPB), which is utilized to predict and comprehend human behavior, and the Trans Theoretical Model of Behavior Change (TTM), which is used to assist individualsin doing so to help transform negative behavior into positive ones (Prochaska et al., 1992)

2.2 Financial Literacy

Financial literacy is defined as the comprehension and mastery of core economic and financial concepts and principles, coupled with the capability to practically apply this understanding in the effective management of financial resources (Thapa and Nepal, 2015).

According to Lusardi and Mitchell (2014), financial literacy is characterized as an individual's capacity to grasp fundamental financial concepts, such as the principle of diversification,

inflation and interest rates and use this understanding to make wise and informed financial choices.
According to Huston, SJ (2010) financial literacy is described as the competency to proficiently apply financial knowledge and skills in managing monetary resources.
According to Remund, D.L. (2010) Financial literacy refers to the depth of an individual's comprehension of fundamental financial concepts and their capacity to apply this understanding effectively to manage their own finances by planning, budgeting, and utilizing credit wisely.
In this study, several indicators were found that were significantly influenced by financial literacy with the following applications:

a. Emergency fund planning
b. Planning money in and money out
c. Manage debt
d. Education fund planning

(FPSB, 2013)

2.3 Investment Decision Making

The process of choosing an investment from a variety of different options is known as investment decision making. Past investment performance and expected future projections generally influence the investment decision (Subash, 2012).
Investment decision making focuses on the process of selecting and allocating resources into various investment options to achieve desired financial goals. This decision includes an analysis of risk, return, and other external factors that may affect investment results (Brigham, E. F., 2017).
According to Welly (2015) An investor is a person who makes investment. Investors are divided into two categories: individual investors (individual or retail investors) and institutional who make investments, while institutional investors consist of insurance, deviation, pension funds, and investment companies. The amount of current opinion and its relationship to future opinion are two ways can be used to assess this financial well being.
Investment decision-making is the process by which investors, both individuals and institutions, select assets or projects to invest in based on an evaluation of risk, returns, and short-term and long-term investment goals. (Gitman, L.J et al., 2015).
Investment decision-making is a process in which investors assess various investment alternatives by considering portfolio diversification, financial goals, as well as economic and market factors to make optimal decisions regarding data placement. (Bodie, Z et al., 2018).
In this study, several indicators were found that were significantly influenced by financial literacy with the following applications:

a. Investment objectives
b. Understanding of investment growth
c. Estimate the return on investment
d. Adequacy of investment funds

(Putra et al, 2026)

2.4 Risk Perception

Risk perception is the rational or irrational beliefs held by individuals, groups or communities about the likelihood of a risk accorring or about the extent, scope and timing of its impact. According to Kharta et al., (2014) In this study, several indicators were found that were significantly influenced by financial literacy with the following applications:

a. Knowledge of investment risks
b. Assess the safety and risks involved in investing
c. Attitude towards investment risk

2.5 Hypotheses Development

2.5.1 Financial literacy and investment decision making

According to Hung, A. A et al., (2009) Financial Literacy is explained as the understanding of fundamental economic and financial concepts and the capacity to apply this knowledge and skills to manage finances efficiently and achieve financial well being throughout life. According to Huston, (2009) states that financial literacy can be explained through two aspects of understanding, namely individual financial knowledge and application of personal financial applications. In another study looking at financial literacy and its influence on investment decisions, a survey of Generation Z in Jakarta in 2021 found that financial literacy has a positive impact on investment decisions. People who have good financial knowledge will usually not face financial problems. The reason financial literacy influences investment choices is because individuals with high financial literacy generally have a better understanding of the financial concepts and risks associated with investment products, which can then be applied to make investment decisions. Thus, the first hypothesis that can be developed is as follows:
H1 : Financial Literacy has a Positive and Significant Effect on Investment Decision Making

2.5.2 Financial Behavior Bias and Investment Decision Making

According to Bodie et al. (2018), Behavioral finance explains that decision-making tends to be influenced by irrational attitudes in each individual that can influence in acting and making decisions in investments. As for bias in financial behavior, according to Bikhchandani & Sharma, (2000) explained that investors who have herding behavior tend to deliberately follow the investment decisions of other investors. Investors tend to lead behaviors to mask their sense of uncertainty and keep their performance from falling below the market average. According to Bikhchandani and Sharma (2001) stated that grazing behavior has a significant positive effect on

investment decision-making. Meanwhile, overconfidence behavior also according to Adiputra et al., (2020) explained that overconfidence is a way of looking at situations, where it can be believed that the ability is more than the actual result. A high level of confidence makes investors more courageous in making investment decisions, while a low level of overfididende makes investors more cautious in making investment decisions, according to Budiarto and Susanti (2017). Addinpujoartanto & Darmawan (2020, Dewi & Pertiwi (2021) and Sihotang & Pertiwi 14 (2021) revealed that overconfidence can be found with positive and significant results that explain that the higher the desire for awareness in making investment decisions. Thus, the second hypothesis can be developed as follows:
H2: Financial Behavior Bias has a positive and significant influence on Investment Decision Making.

2.5.3 Financial literacy and risk perception

Individuals with higher financial literacy demonstrate a good understanding of risk and tend to have more control over investment behavior. Understanding concepts such as diversification and risk play a role in assessing investment decisions that reduce subjective risk (Lusardi & Mitchell, 2020). Financial literacy has a significant impact on an individual's ability to manage risk effectively, especially on investment decisions. This study explains that how individuals who understand the concepts of diversification, volatility, and inflation risk are able to adopt more risk-averse strategies without losing optimal return potential (Baker, Kumar & Pattnaik, 2021). This suggests that a good understanding of financial concepts makes it possible to have a more accurate view of the risks involved in various financial instruments, so as to make more rational decisions. Thus, the hypotheses that can be developed are as follows,
H3 : Financial Literacy has a positive and significant effect on risk Perception.

2.5.4 Financial Behavioral Biases and Risk perception

Overconfidence and herding can reduce investors' risk perception of investments that actually have high risk potential, which in turn affects investment decisions. Investors with overconfidence bias tend to assess investment risks as lower than they actually are, thus are more confident to make investment decisions that may not match their risk profile, while herding bias encourages investors to follow market decisions irrationally, which may affect risk perception and increase impulsive decision-making in investment (Bashar Yaser et al, 2023). Research using a survey of investors in the national stock market found that biases such as anchoring and disposition effects also have a significant effect on risk perception. Anchoring bias causes investors to focus too much on early information, thus weakening rational risk evaluation. Meanwhile, the disposition effect makes investors more likely to hold losing assets, ignoring the risks that are actually higher than profitable assets (Suresh G, 2021). This research shows that financial bias behavior can have a direct effect on risk perception which then has an impact on investment decision-making patterns. Thus, the hypotheses that can be developed are as follows, H4: Financial Behavioural Bias has a positive and significant effect on the risk perception.

2.5.5 Risk perception and investment decision making

Risk perception can serve as a link between heuristic biases and investment decisions. Risk perception increases investors' awareness of potential risks, leading to more cautious and strategic decision-making. Other studies confirm that more risk-aware investors tend to make more rational decisions, even in the presence of behavioral biases (Singla et al. 2023). Thus, the hypotheses that can be developed are as follows,
H5 : Risk perception has a positive and significant influence on Investment Decision Making

2.5.6 Risk perception as a mediator of financial literacy variable and investment decision making

This research shows that financial literacy can help investors understand risk more rationally in making investment decisions. With good financial literacy, investors are better able to understand risk and choose an appropriate portfolio. This study also found that risk perception increases along with the decision to invest in riskier assets (Anis Sukha & Soegiharto, 2023). Thus, the hypotheses that can be developed are as follows,
H6 : Risk perception mediates the relationship between financial literacy and investment decision-making.

2.5.7 Risk perception as a mediates of financial behavior biases and investment decision making

Behavioral biases such as overconfidence and herding bias, affect risk perception which then impacts investment decisions. Investors who feel confident with knowledge tend to undervalue, which affects the decision to invest in high-risk assets. Risk perception acts as a mediating factor that determines the level of investment in risky assets (Wendy, 2024). Thus, the hypotheses that can be developed are as follows,
H7: Risk Perception mediates the relationship between financial behavioral bias and investment decision-making.

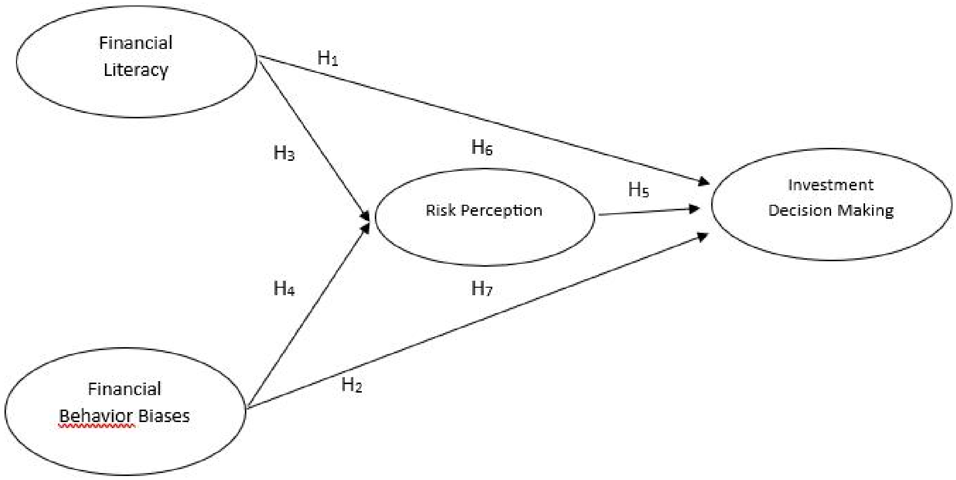

Figure 1. Research Framework

3. Research Methodology

This study employs a quantitative research design to investigate the relationships among financial literacy, financial behavior biases, risk perception, and investment decision-making among employees of the BPSDM unit at the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration. The research framework utilizes a hypothesis-driven approach, emphasizing field data collection and statistical analysis to explore these variables.

4. Results

4.1 Characteristics of Respondents

In this study, based on the results of research given to 122 respondents through questionnaires distributed and the following characteristics have been obtained.

Table Characteristics of Respondents based on gender

Gender	Total	Percentage
Female	80	66%
Male	42	34%
Total	122	100%

Based on gender characteristics, it can be seen that there were 42 male respondents and 80 respondents female. According to this data, it can be analyzed that dominated by female.

Table Respondents Characteristics Based on Age

Age	Total	Percentage

18 - 24 years	13	11%
25 - 34 years	50	41%
35 - 44 years	36	30%
45 - 54 years	9	7%
> 55 years	14	11%
Total	122	100%

Based on age characteristics, it can been that respondents aged 18-24 years are 13 respondents 10%, respondents aged 25-34 years are 50 respondents 41%, respondents aged 35-44 years are 36 respondents 30%, respondents aged 45-54 years are 9 respondets 7%, respondents aged >55 years are 14 respondents 11%. Based on this data, it can be analyzed that the Villages of Ministry are aged 25-34 years, which is the age of adults.

Respondents Characteristics based on Division.

Divisi	Total	Persentage
P3MD	17	14%
PPASN	19	16%
PPJF	21	17%
PPSDM	54	44%
SEKRETARIAT	11	9%
Total	122	100%

Based on Division characteristics, it can been that respondents division P3MD are 17 respondents 14%, respondents division PPASN are 19 respondents 16%, respondents division PPJF are 21 respondents 18%, respondents division PPSDM are 54 respondents 44%, respondents division SEKRETARIAT are 11 respondents 9%. Based on this data, it can be analyzed that the Villages of Ministry are Division PPSDM.

Respondents Characteristics based on Revenue.

Revenue	Total	Percentage
< 4.000.000	8	7%
4.000.000 - 6.000.000	38	31%
6.000.000 - 9.000.000	46	38%
10.000.000 - 15.000.000	19	16%
> 15.000.000	11	9%
Total	122	100%

Based on Revenue characteristics, it can been that respondents revenue <4.000.000 are 8 respondents 6%, respondents revenue 4.000.000 – 6.000.000 are 38 respondents 32%, respondents revenue 6.000.000 – 9.000.000 are 46 respondents 38%, respondents revenue 10.000.000 – 15.000.000 are 19 respondents 15%, respondents revenue >15.000.000 are 11 respondents 9%. Based on this data, it can be analyzed that the Villages of Ministry are Revenue 6.000.000 – 9.000.000.

4.2 Hypotheses Results

4.2.1 Hypotheses Testing Results

Table 2. Hyphoteses Results

Hypothesis	Hypothesis	Result
H1	The Financial Literacy has a positive effect and significant on Investment Decision Making.	Accepted
H2	The Financial Behavior Bias has a positive effect and significant on Investment Decision Making.	Accepted
H3	The Financial Literacy has a positive effect and significant on Risk Perception.	Accepted
H4	The Financial Literacy has a positive effect and significant on Risk Perception.	Accepted
H5	The Risk Perception has a positive effect and significant on Investment Decision Making.	Accepted
H6	The Effect of Risk perception have mediates the relationship between financial literacy and investment decision making positively.	Accepted
H7	The Effect of Risk perception have mediates the relationship between financial Behavior Bias and investment decision making positively.	Rejected

5. Discussion

5.1 The Effect of Financial literacy on investment decision making

The analysis shows that financial literacy has a direct influence on investment decision making. This is indicated the calculated t 12,208 > t table (1,6574) and the sig. is 0,000 < 0,05. So Financial Literacy has a positive effect on Investment Decision Making.

In essence, financial literacy exhibits a positive and significant correlation with investment decision-making, as also highlighted in the research by Mitchell (2014). This study underscores that employees' foundational knowledge of financial literacy influences their investment choices. Individuals with advanced financial literacy are better equipped to comprehend investment risks and opportunities, enabling them to make more informed and rational decisions. Furthermore, evidence demonstrates that financial literacy significantly enhances the quality of investment decisions by empowering individuals with the ability to manage assets effectively, minimize risks, and adopt a strategic approach. These findings are consistent with prior research, such as the study by Shaheen et al. (2022), which confirms the role of financial literacy in elevating the quality of investment decisions. Similarly, Baveja and Verma (2024) emphasize that higher financial literacy levels not only foster greater engagement in financial markets but also bolster confidence in making strategic and well-informed decisions.

However, this study is consistent with research conducted by Fong et al. (2021) states that individuals who have high financial literacy tend to make better financial decisions, including in understanding investment risks and choosing instruments that suit financial goals.

5.2 The Effect of Financial Behavior Bias on investment decision making

The analysis results show that the calculated t 14,019 > t table (1.6574) and the sig. is 0,000 < 0,05. So Financial Behavior Bias has a positive effect on Investment Decision Making.

Behavioral biases in finance have a positive and significant impact on investment decisions, as a number of recent studies have shown. For example, Sattar et al. (2020) have shown that biases such as overconfidence, anchoring and availability significantly influence investors' decision-making processes and encourage them to act based on certain perceptions arising from experience or available information. Similarly, Kumar and Goyal (2023) have shown that behavioral biases can increase the courage of investors to make investment decisions, even if these decisions are sometimes not completely rational. Other research by Kashyap (2021) shows that implementing investment strategies that take behavioral biases into account can lead to better outcomes compared to overall market performance. These findings underscore the importance of understanding the role of behavioral biases in guiding effective investment decisions.

5.3 The Effect of Financial Literacy on Risk Perception

The analysis shows that the calculated t -2,377 < t table (1,6574) and the sig. is 0,019 < 0,05. So financial literacy has a negative effect on risk perception.

The findings of this study reveal that financial literacy exerts a positive and significant impact on risk perception, a conclusion supported by several prior investigations. Research conducted by Lestari et al. (2022) highlights the pivotal role of financial literacy in shaping an individual's perception of risk, which subsequently affects their investment decision-making process. Wendy (2024) also emphasized that higher levels of financial literacy increase an individual's ability to better understand risk, leading to a more rational perception of risk. Similar findings were reported by Khan (2016) who stated that financial literacy not only increases an individual's knowledge of risk but also contributes to more effective risk management in financial decision making.

5.4 The Effect of Financial Behavior Bias on Risk Perception

The analysis shows that the calculated t 7,259 > t table (1.6574) and the sig. is 0,000 < 0,05. So financial behavior can have a positive effect on risk perception.

This research concludes that financial behavioral bias exerts a positive and significant influence on risk perception, aligning with the findings of Khan et al. (2023), which shows that factors significantly influence investors' risk perception. A similar point was also made by Suherman et al. (2023), who emphasize that behavioral biases make a significant contribution to the risk perception of individual investors. Furthermore, a study by Ahmed et al. (2024) confirmed that financial behavior is positively related to risk perception, with financial literacy acting as a mediator in this context.

5.5 The Effect of Risk Perception on Investment Decision Making

The analysis shows that the calculated t 3.416 < t table (1.6574) and the sig. is 0,001 < 0,05. So risk perception has a positive effect on investment decision making.

In other words, risk perception demonstrates a noteworthy and positive impact on investment decision-making. This aligns with the findings of Yuliani (2024), who identified a distinct positive association between risk perception and the process of making investment decisions. In addition, research by Alecea Angelika et al. (2024) also supports this finding, with risk perception shown to exerting a substantial influence on investment decisions, these findings underscore the pivotal role that individual risk perception holds in shaping and directing investment choices.

5.6 The Effect of Risk perception mediates the relationship between financial literacy and investment decision making.

The analysis shows that the calculated t -2,222 > t table (1,6574) and the sig. is 0,028 < 0,05. So Risk Perception as a mediator have a negative effect of Financial Literacy on Investmen Decision Making.

A number of prior studies have demonstrated that risk perception may serve as a mediating variable in the relationship between financial literacy and investment decision-making. Lusardi and Mitchell (2014) assert that a robust understanding of financial concepts can shape an individual's risk perception when making investment choices, subsequently influencing the decisions made. This notion is further supported by Grable and Joo's (2004) research, which identifies risk perception as a mediator between financial literacy and investment decisions, suggesting that individuals with higher financial literacy are likely to have a more precise assessment of risks, which has an impact on more rational decision making. Research by Xue and Zheng (2020) further suggests that risk perception serves as a mediator that strengthens the relationship between financial knowledge and investment decisions, especially in the context of more volatile markets.

5. 7. The Effect of Risk perception mediates the relationship between financial behavior bias and investment decision making.

The analysis shows that the calculated t 0.765 < t table (1,6574) and the sig. is 0,446 > 0,05. So Risk Perception as a mediator have a positive not effect of Financial behavior bias on Investmen Decision Making.

The findings of this study reveal that while risk perception is positively correlated with investment decisions, it does not exhibit a significant influence on financial behavior bias in the decision-making process. This suggests that individuals with heightened risk awareness tend to adopt a more prudent approach in making investment choices. These results align with the research conducted by Abhinandan (2022), which shows that financial behavioral biases are more influenced by intrinsic factors, such as emotions and the level of financial literacy, than risk perception directly.

6. Conclusion

Based on the results of research conducted by research with the title Analysis of the Influence of Financial Literacy and Financial Behavior Bias on Investment Decision Making with Risk Perception as a Mediating Variable, the following conclusions can be drawn:

1) Financial Literacy variable has a positive and significant influence on the investment decisions making, By having an understanding of the basics of adequate financial literacy, individuals are more confident and directed in choosing investments that suit their needs, which in turn can improve the quality of investment decision making.
2) The Financial Behavior Bias variable has a positive and significant influence on Investment Decision Making, this influence factor is positive when the bias, in a positive and beneficial context so that it can help investors take advantage of profitable investment opportunities or reduce uncertainty.
3) Financial Literacy has a positive and significant influence on Risk Perception, Financial literacy includes an individual's understanding of basic financial concepts, such as risk management, investment and diversification. As such, financial literacy helps individuals manage risk more confidently and wisely.
4) Financial Behavior Bias has a positive and significant effect on Risk Perception, These biases can reinforce how one perceives risk, either by overestimating or underestimating it, depending on experiences and preconceived beliefs. This relationship is significant as the bias affects how individuals interpret potential gains and losses, which in turn affects their overall perception of risk.

5) Risk Perception has a positive and significant effect on Investment Decision Making, Risk perception reflects the extent to which it realizes and assesses the risks associated with investment decisions. This is because it can identify risks more clearly, manage expectations, and make decisions based on rational risk analysis, so as to improve the quality of investment decisions.
6) Risk perception mediates have a positive and significant the relationship between financial literacy and investment decision-making. Risk perception can have a positive and significant influence on financial literacy and investment decision making, because individuals who have a good understanding of financial risk tend to improve their financial literacy through seeking more in-depth information and knowledge, so that they are able to make more informed, rational, and wise investment decisions by carefully considering the potential gains and losses.
7) Risk Perception have not mediates the relationship between financial behavior bias and investment decision making positively. In general, this can happen because risk perception is subjective and influenced by various things, such as financial literacy, investment experience, and individual psychological state. When risk perceptions are not matched by an adequate understanding of risk management or the influence of external factors, individuals are less likely to leverage these perceptions to change their financial or investment behavior. As a result, risk perception is not strong enough to be a direct influence on both variables.

References

Abideen, Z. U. (2023). The mediating role of behavioural biases between financial literacy and market anomalies. International Journal of Finance & Economics, 28(2), 2190-2206.

Addinpujoartanto, N. A., & Darmawan, A. (2020). Pengaruh Overconfidence, Regret Aversion, Loss Aversion dan Herding Bias Terhadap Keputusan Investasi di Pasar Modal. Jurnal Ilmiah Mahasiswa FEB, 8(2).

Adiel, R. (2021). The influence of disposition effect and risk aversion bias on individual investors' decision making in the Indonesian stock market. Journal of Behavioral and Experimental Finance, 30, 100504.

Adiputra, I. G., & Robin, R. (2020). Pengaruh Financial Literacy, Overconfidence, dan Locus Of Control Terhadap Investment Decision. Jurnal Muara Ilmu Ekonomi dan Bisnis, 4(1), 155-165.

Asmara, A., & Trimeiningrum, E. (2020). Pengaruh Literasi Keuangan Terhadap Perilaku Investasi Mahasiswa. Jurnal Ekonomi dan Bisnis, 23(1), 97-116.

Ayundha, E., Wikartika, I., & Suwaidi, R. A. (2023). The Effect of Financial Literacy on Investment Decision Making: The Mediating Role of Financial Behavior and Investment Satisfaction. Journal of Business and Management Review, 4(5), 370-383.

Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. Handbook of the Economics of Finance, 1, 1053-1128.

Bikhchandani, S., & Sharma, S. (2000). Herd behavior in financial markets. IMF Staff papers, 47(3), 279-310.

Bodie, Z., Kane, A., & Marcus, A. J. (2018). Investments (11th ed.). McGraw-Hill Education.

Brigham, E. F., & Ehrhardt, M. C. (2017). Financial management: Theory & practice (15th ed.). Cengage Learning.

Budiarto, A., & Susanti, S. (2017). Pengaruh financial literacy, overconfidence, regret aversion bias, dan risk tolerance terhadap keputusan investasi (Studi pada investor PT. Sucorinvest Central Gani Galeri Investasi BEI Universitas Negeri Surabaya). Jurnal Ilmu Manajemen (JIM), 5(2).

Cordell, D. M. (2001). RiskPACK: How to evaluate risk tolerance. Journal of Financial Planning, 14(6), 36.

Dewi, I. M., & Arlian, R. (2020). Pengaruh literasi keuangan terhadap perilaku keuangan mahasiswa di masa pandemi covid-19. Jurnal Manajemen dan Keuangan, 9(2), 145-157.

Dewi, V. I., & Pertiwi, T. K. (2021). Pengaruh Literasi Keuangan, Efikasi Keuangan, dan Faktor Demografi Terhadap Pengambilan Keputusan Investasi (Studi Kasus Pada Mahasiswa Magister Manajemen Universitas Kristen Maranatha). E-Jurnal Manajemen, 10(4), 381-400.

Fridana, L., & Asandimitra, N. (2020). Pengaruh Financial Literacy, Risk Perception, Behavioral Finance dan Pengalaman Investasi Terhadap Keputusan Investasi Mahasiswa Surabaya. Jurnal Ilmu Manajemen, 8(3), 854-866.

Gitman, L. J., & Zutter, C. J. (2015). Principles of managerial finance (14th ed.). Pearson.

Harahap, S., Thoyib, A., Sumiati, & Djazuli, A. (2022). The impact of financial literacy on retirement planning for middle-sized entrepreneurs in Indonesia: The mediating role of financial risk tolerance and saving behavior. Heliyon, 8(6), e09654.

Hogarth, J. M., & Hilgert, M. A. (2002). Financial knowledge, experience and learning preferences: Preliminary results from a new survey on financial literacy. Consumer Interest Annual, 48(1), 1-7.

Hung, A. A., Parker, A. M., & Yoong, J. K. (2009). Defining and measuring financial literacy. RAND Working Paper Series WR-708.

Huston, S. J. (2010). Measuring financial literacy. Journal of Consumer Affairs, 44(2), 296-316.

Jones, C. P. (2010). Investments: Principles and concepts (11th ed.). John Wiley & Sons.
Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. Econometrica, 47(2), 263-291.
Kappal, J. M., & Rastogi, S. (2020). Investment behaviour of women entrepreneurs. Qualitative Research in Financial Markets, 12(4), 485-504.
Khan, M. S. (2015). The role of financial literacy in financial decisions. Journal of Research in Business and Management, 3(4), 42-47.
Kourtidis, D., Šević, Ž., & Chatzoglou, P. (2011). Investors' trading activity: A behavioural perspective and empirical results. The Journal of Socio-Economics, 40(5), 548-557.
Lao, P., & Singh, H. (2011). Herding behaviour in the Chinese and Indian stock markets. Journal of Asian Economics, 22(6), 495-506.
Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. Journal of Economic Literature, 52(1), 5-44.
Masson, V., & Wilson, L. (2000). Improving Financial Literacy and Access (IFLA) Project. Journal of Consumer Affairs, 34(2), 236-247.
Metawa, N., Hassan, M. K., Metawa, S., & Safa, M. F. (2019). Impact of behavioral factors on investors' financial decisions: case of the Egyptian stock market. International Journal of Islamic and Middle Eastern Finance and Management, 12(1), 30-55.
Mustafa, S. (2023). The role of financial risk tolerance in mediating the relationship between personality traits and investment decision-making. Journal of Behavioral and Experimental Finance, 37, 100752.
OECD. (2018). OECD/INFE toolkit for measuring financial literacy and financial inclusion. OECD.
Pallant, J. (2020). SPSS survival manual: A step by step guide to data analysis using IBM SPSS (7th ed.). Open University Press.
Priyadharshini, S. H. (2017). Impact of financial literacy on investment decisions. International Journal of Research in Commerce & Management, 8(11), 61-63.
Rahman, M., & Gan, S. S. (2020). Generation Y investment decision: an analysis using behavioural factors. Managerial Finance, 46(8), 1023-1041.
Ramu, M. (2021). The influence of financial literacy and risk tolerance on investment behaviour. International Journal of Research in Commerce, Economics and Management, 11(1), 1-6.
Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. Journal of Consumer Affairs, 44(2), 276-295.
Ricciardi, V., & Simon, H. K. (2000). What is behavioral finance? Business, Education & Technology Journal, 2(2), 1-9.
Roszkowski, M. J., Davey, G., & Grable, J. E. (2005). Insights from psychology and psychometrics on measuring risk tolerance. Journal of Financial Planning, 18(4), 66-77.
Sam, Y. T., Geetha, C., & Mohidin, R. (2022). Financial literacy, financial behavior and retirement planning: a study among working adults in Sabah. International Journal of Economic Policy in Emerging Economies, 15(1), 84-104.
Sharpe, W. F., Alexander, G. J., & Bailey, J. V. (2014). Investments (6th ed.). Pearson.
Shefrin, H. (2000). Beyond greed and fear: Understanding behavioral finance and the psychology of investing. Harvard Business School Press.
Shiller, R. J. (2003). The new financial order: Risk in the 21st century. Princeton University Press.
Sihotang, W. S., & Pertiwi, T. K. (2021). Pengaruh Overconfidence, Risk Tolerance, dan Faktor

Sosiodemografi Terhadap Pengambilan Keputusan Investasi Investor Saham di Kota Batam. Jurnal Akuntansi Keuangan dan Bisnis, 14(1), 131- 140.

Singh, Y., Adil, M., & Haque, S. M. I. (2022). Moderating role of risk tolerance behaviors between personality traits and behavioral biases. Journal of Economics, Finance and Administrative Science, 27(54), 196-213.

Sugiyono. (2018). Metode penelitian kuantitatif, kualitatif, dan R&D. Alfabeta. Sugiyono. (2019). Metode penelitian kuantitatif kualitatif dan R&D. Alfabeta.

Suliyanto. (2018). Metode penelitian bisnis untuk skripsi, tesis, & disertasi. Andi Offset.

Thapa, B. S., & Nepal, S. R. (2015). Financial literacy in Nepal: A survey analysis from college students. NRB Economic Review, 27(1), 49-74.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. Science, 185(4157), 1124-1131.

Welly, Cardinal, Y., & Juwita, R. (2015). Analisis pengaruh literasi keuangan terhadap keputusan investasi di STIE Multi Data Palembang. Jurnal Ilmiah Manajemen Bisnis Dan Terapan, 13(2), 123-136.