Eduvest – Journal of Universal Studies
Volume 4 Number 06, June, 2024
p- ISSN 2775-3735- e-ISSN 2775-3727

THE INFLUENCE OF OVERCONFIDENCE AND RISK PERCEPTION ON INVESTMENT DECISIONS: THE MODERATING EFFECT OF FINANCIAL LITERACY ON INDIVIDUAL MILLENNIAL GENERATION INVESTORS

Adlina Nadhila[1], Roy Sembel[2], Melinda Malau[3]
[1,2] IPMI International Business School, Indonesia
[3] Universitas Kristen Indonesia, Indonesia
Email: adlina.nadhila@ipmi.ac.id, roy.sembel@ipmi.ac.id, melinda.malau@uki.ac.id

ABSTRACT

Investment has evolved from a mere societal desire to a necessity, driven by the quest for higher returns in a shorter time frame. The millennial generation, being the largest population in its productive years, holds a significant role in investment activities. However, many millennials face challenges in achieving their expected investment results, possibly due to factors such as inadequate financial literacy, deficient risk management, and overconfidence in their investment decisions. This study aims to scrutinize the impact of financial literacy, risk perception, and overconfidence on investment decisions among millennials in Jakarta, offering insights to both investors and practitioners. By testing financial literacy as a moderator in the relationship between risk perception, overconfidence, and investment decisions, the research fills a literature gap. Through a quantitative survey of 200 millennial investors in Jakarta and PLS-SEM analysis, the study reveals that overconfidence and risk perception positively influence investment decisions. Additionally, financial literacy moderates the effect of overconfidence but not risk perception on investment decisions. The findings provide valuable guidance for investors, emphasizing the crucial role of financial literacy in mitigating irrational behavior during decision-making, thereby influencing investment choices.

KEYWORDS *Overconfidence, Perceived Risk, Investment Decision, Financial Literacy*

How to cite:	Nadhila, A et al (2024). The Influence of Overconfidence and Risk Perception on Investment Decisions: The Moderating Effect of Financial Literacy on Individual Millennial Generation Investors. *Journal Eduvest. 4* (6): 5280-5299
E-ISSN:	2775-3727
Published by:	https://greenpublisher.id/

INTRODUCTION

Investment has transformed from a mere desire to a societal necessity, propelled by technological advancements and improved access to information. This shift is driven by the pursuit of higher gains in shorter periods, diverting attention from conventional savings. Investment, defined as the process of acquiring assets with the aim of earning income or appreciation, is a vital contributor to a nation's economic growth, with investors playing a pivotal role in shaping market dynamics. The millennial generation, constituting a significant portion of the population, is particularly engaged in investment activities due to their familiarity with technology and its integration into economic activities (Wijaya et al., 2023).

Investment choices encompass various products, each offering different rates of returns, categorized into real and financial assets. The capital market, a crucial element in a country's economic framework, facilitates business funding and public investment in financial instruments. The surge in individual investors in recent years, particularly among millennials, is evident in the growth of Single Investor Identification (SID) numbers, indicating increased participation in the capital market (Indonesia Central Securities Depository, 2023).

Investment decisions, vital policies in capital investment alternatives, are influenced by rational thinking, yet psychological factors like overconfidence and risk perception can sway them. Overconfidence, characterized by excessive confidence in one's abilities and knowledge, can impact investment decisions, either positively or negatively, as suggested by various research findings (Pradikasari & Isbanah, 2018; Rahman & Gan, 2020). Risk perception, evaluating the tolerance for risk associated with investment products, also plays a crucial role in shaping investment decisions (Astuti et al., 2018).

The importance of financial literacy emerges as a key factor in making informed investment decisions, particularly for the millennial generation facing the complexity of financial products and services. While psychological conditions like overconfidence, and risk perception influence investment decisions, financial literacy is considered a moderating factor that helps mitigate potential pitfalls. The intersection of these variables in the context of millennial investors in Jakarta becomes the focus of this research, aiming to provide new insights into their decision-making processes.

Research Gap

While existing studies have examined the influence of overconfidence and risk perception on investment decisions, this study fills the research gap by incorporating the moderating effect of financial literacy specifically within the context of individual millennial generation investors in Jakarta. Previous research has addressed the psychological aspects of investment decision-making, but the nuanced role of financial literacy in moderating these influences, particularly among the millennial demographic, remains underexplored. This study aims to contribute valuable insights into the interplay of overconfidence, risk perception, and financial literacy, providing a more comprehensive understanding of the factors shaping investment decisions in this specific population.

Problem Definition

Investment decisions in the capital market involve selecting from various options with the expectation of future returns. Despite efforts for rationality, emotions can gradually influence investor decisions. Investors are expected to make logical decisions aligned with their expectations, yet inherent human traits and emotions can lead to irrational behaviors.

The Financial Services Authority has intervened in organizations suspected of unauthorized business activities, emphasizing the need for investors to consider multiple factors to avoid potential losses. Equity sales professionals recognize the significance of factors such as overconfidence, risk perception, and financial literacy in influencing financial decisions.

Research Objectives

1. To evaluate and analyze the effect of overconfidence on investment decisions on individual millennial generation investors in Jakarta
2. To evaluate and analyze the effect of risk perception on investment decisions of individual millennial generation investors in Jakarta.
3. To evaluate and analyze the effect of financial literacy moderating overconfidence on investment decisions of individual millennial generation investors in Jakarta.
4. To evaluate and analyze the effect of financial literacy moderating risk perception on investment decisions of individual millennial generation investors in Jakarta.

Research Benefits

Theoretical Benefits

The theoretical benefits of this study are manifold, significantly enriching the existing knowledge on investment decision-making, specifically among individual millennial generation investors in Jakarta. Firstly, the study delves into the intricate interplay of overconfidence, risk perception, and financial literacy, offering a nuanced comprehension of the psychological factors influencing investment decisions. Unlike prior research that explored these factors in isolation, this study provides a comprehensive view of their interactions, enhancing theoretical clarity on the intricate decision-making processes of millennial investors. Secondly, the introduction of financial literacy as a moderating variable adds a novel dimension to the literature, shedding light on its influence on the relationship between overconfidence, risk perception, and investment decisions among millennials. This understanding is vital for designing targeted interventions and educational programs. Lastly, the study's focus on individual millennial investors in Jakarta fills a specific gap in the literature related to the regional context, providing localized perspectives that contribute theoretical insights applicable to similar urban settings.

Practical Benefits

The study's findings offer a practical guide to enhancing financial decision-making, empowering investors to make informed choices and potentially minimizing investment risks, provide actionable steps for investors to strengthen their financial literacy and navigate investment decisions more effectively. Financial educators and policymakers can leverage these insights to design targeted interventions and educational programs, addressing specific areas where millennials may face challenges in decision-making. This, in turn, contributes to a more financially savvy millennial population. Financial institutions and investment advisors can also benefit practically by tailoring their services and communication strategies based on the nuanced understanding of psychological factors influencing investment decisions, designing more effective products and advisory services that resonate with the millennial demographic. These insights offer direct contributions to strategic decision-making and operational practices, enhancing the overall effectiveness and success of organizations like investment firms, financial advisors, and entities catering to the financial needs of the millennial generation in Jakarta. Investment firms and financial advisors stand to gain by tailoring their services to align with the specific characteristics and decision-making processes of millennial investors. Understanding nuances in overconfidence, risk perception, and the moderating role of financial literacy enables the development of targeted communication strategies, personalized investment products, and client engagement initiatives, fostering client satisfaction and trust. Moreover, the study's insights extend to risk management practices, allowing firms to implement robust strategies by comprehending the influence of psychological factors on investment decisions. This includes designing diversified portfolios and providing clearer risk assessments, contributing to the overall stability and resilience of investment firms, talent management and training, allowing organizations to develop targeted programs for advisors, ensuring they are well-equipped to address the unique needs of millennial clients, thereby enhancing overall competency and effectiveness within the advisory team.

Policy Benefits

The policy benefits derived from this study are crucial for policymakers, regulatory bodies, and institutions shaping the financial landscape and promoting economic well-being in Jakarta. The findings offer valuable insights that can significantly impact the development and refinement of policies aimed at creating a conducive environment for individual millennial investors. Policymakers can utilize the study's insights to design targeted financial literacy programs tailored to the needs of millennials, fostering a more informed and empowered investor base. The study's guidance on formulating regulations and guidelines promotes responsible investment practices, encouraging transparency, disclosure, and ethical conduct within the financial industry, enhancing investor protection and fostering confidence in financial markets. Policymakers can further leverage the insights to enhance risk management practices at individual and systemic levels, implementing measures that promote a balanced risk-return profile and developing guidelines for financial institutions to conduct thorough risk assessments and provide clearer risk communication to clients.

Novelty

The novelty of this study lies in its multifaceted contributions within the context of investment decision-making among individual millennial generation investors in Jakarta. While prior research has separately explored the influences of overconfidence, risk perception, and financial literacy on investment choices, this study innovatively integrates these elements, shedding light on their collective impact. By examining the nuanced interaction between these factors, the research significantly enhances our understanding of the complexities driving investment decisions among Jakarta's millennial investors. The study uniquely focuses on the moderating effect of financial literacy, a factor often overlooked in similar analyses. This holistic approach represents a novel contribution, aiming to fill the research gap by offering comprehensive insights into the decision-making processes of this specific demographic, thereby advancing the current knowledge base in this field.

Literature Review

Overconfidence

Overconfidence, rooted in cognitive psychology, refers to an individual's belief that their predictions surpass reality. This bias can significantly impact investment decisions, as rational investors aim to maximize profits while minimizing risks (Anggirani, 2017). Lakshmi and Minimol (2016) elaborate that overconfident individuals exhibit excessive confidence in their reasoning and judgment, considering their abilities superior to the average investor. This behavior often arises due to limited information, leading investors to perceive themselves as possessing superior knowledge and skills (Pompian, 2012). Overconfident investors tend to attribute positive results to their perceived skills, while negative outcomes are associated with external factors (Sheikh & Riaz, 2012). Wulandari and Iramani (2014) identify three indicators of overconfidence: assessment of accuracy in investment selection, confidence in one's abilities and knowledge, and confidence in investment selection. This study employs a Likert scale with items adapted from the research of Rahman and Gan (2020) to specifically measure overconfidence (Anggirani, 2017; Pompian, 2012; Rahman & Gan, 2020; Sheikh & Riaz, 2012; Wulandari & Iramani, 2014).

Perceived Risk

Risk, an inherent aspect of financial investments, stems from the volatility of actual and expected outcomes in financial endeavors (Sindhu et al., 2014). Perception, the process of seeking detailed clarification of traceable information, forms the basis for investors' judgments, influenced by their expertise and past experiences. Risk perception, in this context, refers to how investors perceive the risk associated with financial assets based on their interests and experiences. It encompasses rational or irrational beliefs about the probability of a risk event and plays a pivotal role in effective decision-making in risky situations. Every investor has a unique risk tolerance and perception, influencing their investment decisions. The study explores the impact of risk perception on investors' decisions, acknowledging that almost all investments involve financial uncertainty or risk, and there exists a positive relationship between expected returns and risk. Asset allocation, guided by investment objectives, constraints, and risk attitudes, is crucial for effective decision-making. (Pasewark & Riley, 2010)

Financial Literacy

Financial literacy refers to an individual's capacity to comprehend economic information and make informed decisions regarding financial planning, wealth accumulation, and debt management (Lusardi et al., 2014). It encompasses knowledge, skills, and beliefs shaping a person's attitude and behavior, crucial for effective decision-making and financial management. Adequate financial literacy is associated with beneficial outcomes in financial projects and encourages decisions aligned with one's financial knowledge and skills (Huston, 2010). Low financial literacy can hinder participation in financial markets. Financial literacy is considered a key factor influencing financial decisions, and errors made in financial decisions during youth can lead to significant losses. Financial literacy's influence extends to the economy, with higher literacy associated with increased usage of financial products and services, including in investment decisions. In this study, financial literacy is measured using a Likert scale with question items developed by Rooij et al., (2007) (Source: Lusardi and Mitchell, 2014; Huston, 2010; Fernandes et al., 2013; Rooij et al., 2007).

Investment Decision

Investment decisions play a crucial role in behavioral finance, encompassing behaviors related to money and financial management. Investment, committing funds or resources over time for future benefits, involves various assets such as real assets and financial assets (bank accounts, bonds, mutual funds, stocks) (Bodie & Kane, n.d.). In Indonesia, bank account investments are predominant (Ainia & Lutfi, 2019). Investment is a means to expand or maintain prosperity, requiring careful decision-making to avoid wrong investments. Investment decisions are part of financial decisions and involve choosing investment actions. Adequate financial knowledge aids in managing finances and making the right investment decisions. Investment decisions, complex and inconsistent, depend on assumptions and available information (Christanti & Mahastanti, 2011). In this study, investment decisions involve managing financial resources for expected profits, measured using a Likert scale and items from Rahman and Gan (2020) (Source: Xiao, 2008; Perry and Morris, 2005; Assad, 2012; Bodie et al., 2018; Ainia and Lutfi, 2019; Sindhu et al., 2016; Christanti and Mahastanti, 2011).

Research Framework

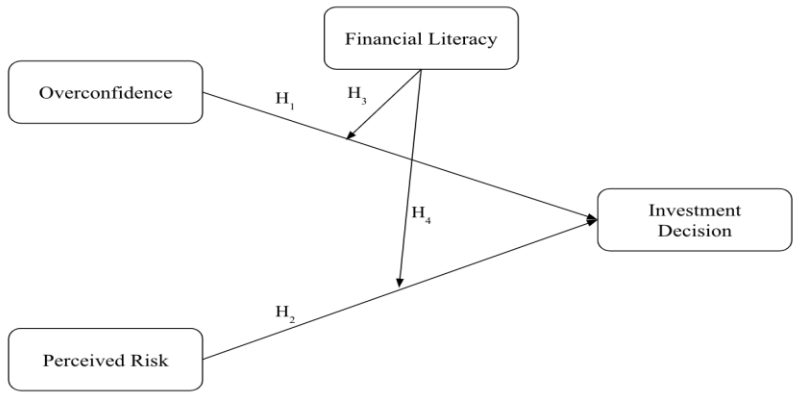

Figure 2.1 Research Framework

Hypotheses Development

Effect of Overconfidence on Investment Decisions

Excessive self-assurance leads individuals to engage in more frequent investment activities, driven by their confidence in their knowledge and abilities as investors (Sembel et al., 2022) This overconfidence subsequently impacts the stock market by increasing trading volumes. Research by Pradikasari and Isbanah (2018) suggests that overconfidence influences investment choices, with respondents trusting in their abilities without adequately considering associated risks. Conversely, findings from Rahman and Gan's (2018) study indicate that overconfidence adversely affects investment decisions, suggesting that higher levels of overconfidence correlate with decreased decision-making accuracy, leading investors to underestimate potential errors. Building upon this comprehension, the following hypothesis can be proposed:

H_1: Overconfidence has a positive influence on the investment decisions of millennial investors in Jakarta

Effect of Risk Perception on Investment Decisions

Perception, shaped by sensory input, information processing, and judgment, significantly influences how individuals interpret risk (Trisnowati et al., 2023). Unlike estimation or rational assessment, risk perception is subjective and impacts decision-making, particularly in uncertain scenarios such as financial investments. People perceive situations as risky when they anticipate potential losses resulting from poor decisions, particularly in financial matters. Hence, risk perception reflects an individual's evaluation of risky circumstances, influenced by personal characteristics and psychological factors (Wulandari and Iramani, 2014). In this context, risk perception is believed to sway investment choices, as suggested by Hoffmann et al. (2015). Individuals with heightened risk perception tend to shy away from high-risk assets, preferring safer options (Hariharan et al., 2000). Conversely, investors with lower risk perception are more inclined to invest in high-risk ventures over low-risk options (Aren and Zengin, 2016), underscoring the pivotal role of low-risk perception in motivating investment decisions. Accordingly, the following hypothesis is proposed:

H$_2$: Risk Perception has a positive influence on the investment decisions of millennial investors in Jakarta

Moderating Effect of Financial Literacy on Overconfidence and Investment Decision

Financial literacy enhances individuals' capacity to make informed financial decisions and manage money effectively (Sembel et al, 2022). A sufficient level of financial literacy positively impacts financial behaviors, particularly in the appropriate allocation of funds (Robb and Woodyard, 2011). Conversely, inadequate financial literacy can result in diminished financial sustainability due to poor decision-making, potentially leading to business failure. In investments, financial behaviors and psychological factors like overconfidence, when not balanced with financial literacy, can contribute to financial downfall. Hence, financial literacy is believed to moderate the influence of investors' behaviors and psychological conditions on investment decisions. This proposition aligns with findings from studies by Sabir et al. (2019), Ahmad and Shah (2020), and Arik and Sri (2021), which highlight the moderating role of financial literacy on the impact of overconfidence on investment decisions. Additionally, research by Adil (2023) and Novianggie (2019) suggests that financial literacy can moderate financial behaviors leading to better financial decisions. Given this perspective, the following hypothesis is posited:

H$_3$: Financial literacy can moderate overconfidence of millennial investors in Jakarta on investment decisions

Moderating Effect of Financial Literacy on Perceived Risk and Investment Decision

As investors evaluate the uncertainties inherent in investment opportunities, their perceptions of risk significantly influence decision-making processes (Sembel et al, 2023). Financial literacy equips individuals with the necessary skills and understanding to assess risks more accurately and make informed investment decisions. Individuals with higher levels of financial literacy are better equipped to navigate perceived risks, allowing them to weigh potential outcomes more effectively (Fedorova et al, 2015). Moreover, financial literacy serves as a critical buffer against impulsive decision-making tendencies driven by exaggerated risk perceptions. Through informed analysis and comprehension of financial principles, individuals can mitigate perceived risks and make investment choices aligned with their financial goals and risk tolerance levels. (Sembel et al, 2022) Consequently, the moderating effect of financial literacy on perceived risk and investment decisions underscores the importance of education and knowledge in fostering prudent financial decision-making behaviors.

H$_4$: Financial literacy can moderate risk perception of millennial investors in Jakarta on investment decisions

RESEARCH METHOD

Research Design

According to Sileyew (2019), the research design functions as the fundamental framework that delineates the methods and strategies to tackle research questions or hypotheses, covering aspects like data collection, analysis, and interpretation aligned with the study's objectives. It is meticulously crafted to ensure the fulfillment of study goals, the credibility of findings, and the incorporation of ethical considerations, with key elements including decisions on sampling techniques, participant selection criteria, and data collection tools. A well-articulated research design plays a crucial role in both internal and external validity, influencing accurate measurement and the generalizability of findings to broader populations. It provides researchers with a systematic guide throughout the research process, ensuring the chosen approach aligns with study goals for meaningful and robust conclusions, ultimately serving as a methodological foundation supporting the research endeavor.

Population

A population is defined as a collection of individuals, objects, events, or things possessing the qualities and characteristics deemed relevant for study in research (Sekaran & Bougie, 2016). The researchers examined the investment decision model within the millennial generation in Jakarta, considering this group as the population for their study.

Sample

A sample comprises individuals from a population who exhibit specific characteristics of interest for study, as outlined by Sekaran and Bougie (2016). The fundamental concept of sampling is that by selecting certain elements from the population, one can make inferences about the entire population. Sampling is motivated by various factors, such as cost reduction, enhanced result accuracy, quicker data collection, and the availability of population elements, as noted by Blumberg et al. (2014). This study employs nonprobability sampling, a method that does not offer equal chances or opportunities for every element in the population to be included, following the approach described by Cooper and Schindler (2014).

Sampling Method

The study employed convenience sampling, a method where information is collected from individuals in the population who willingly provide data, with suitability as a source of information determined by specific criteria, particularly focusing on the millennial generation who are investors (Blumberg et al., 2014). Due to the fluctuating population size, the researchers used the Maximum Likelihood Estimation (MLE) technique, following Hair's (2018) method, recommending a sample size ranging from a minimum of 100 to a maximum of 200 samples. The study ultimately selected 100 respondents based on Widiyanto's (2008) perspective, considering this number as representative and exceeding the minimum sample requirement.

Variables and Measurements

In this study, there are four variables, comprising two independent variables, one moderating variable, and one dependent variable. The independent variables include overconfidence and perceived risks, while financial literacy serves as the moderating variable, and the investment decision acts as the dependent variable. Measurement is conducted using the Likert scale ranging from 1 to 5 (1 indicating strongly disagree, 5 indicating strongly agree), and a total of 23 questionnaires are administered for data collection.

Table 3.1 Operational Variables

Dimension	Code	Items	Scale
Investment Decisions	ID01-05	1. My investment decisions support my investment objectives 2. I prepared myself to face the risk of loss 3. I get my expected return on my investment decision 4. I have risk tolerance towards my investment decisions.	Likert 1-5
Financial Literacy	FL01-10	1. I understand interest rates charged by bank, interest rate, loans charged by financial institutions 2. I understand how to do my personal financial management well 3. I know how to invest my money to buy shares on the stock market 4. I understand about the credit ratings carried out by companies 5. I am somewhat knowledgeable of stock market activities on the IDX 6. I clearly understand the role of brokerage firms in listing on the IDX 7. I always have trust when trading on the IDX 8. I don’t have any trouble paying attention to the information on the stock market	
Overconfidence	O01-07	1. I believe that my expertise and knowledge of the stock market can help outperform the market. 2. I feel I have sufficient ability to manipulate profitable investments. 3. I feel that I am always lucky to invest in the best deals 4. I feel sufficiently experienced in forecasting investments	

Dimension	Code	Items	Scale
		5. I take a short time to analyze and rely on the available market statistics 6. I do a lot of trading on the accounting periods 7. I feel I have a control over the flow of investment returns	
Risk Perception	RP01-06	1. I associate the word "risk" with the notion of "opportunity" 2. The risk involved is more acceptable if I can get the potential personal gain I predict. 3. I would like to earn more than my current personal income level in the long-term. 4. I am looking for a business and job with a higher income	

Empirical Model

According to Nwokolo and Ogbulezie (2017), the empirical model is composed of equations that depict connections between variables, formulated based on empirical observations. It encompasses both direct and moderation effects, scrutinizing the associations between independent and dependent variables. The empirical model in this research stated as follows:

Direct Effects:

$$Y = B_0 + B_1X_1 + B_2X_2 + \epsilon \quad \ldots\ldots (1)$$

Moderation Effects:

$$Y = B_0+B_1X_1+B_2X_2+B_4M+B_5(X_1xM)+B_6(X_2xM) + \epsilon \quad \ldots\ldots (2)$$

where:

B = The regression coefficients that need to be estimated from the data.
X = Independent Variables
Y = Dependent Variable
M = Moderating Variable
ϵ = Random Error or Residual Error

Estimation Method

This research procedure is deemed suitable for two main reasons: firstly, the variables of interest are challenging to manipulate, and secondly, participants cannot be easily assigned to conduct and control groups as in experimental research. This quantitative research approach is well-established for studying relationships between variables. The study employs multivariate statistical methods, specifically Structural Equation Modeling (SEM) based on Partial Least Square (PLS), using the SmartPLS program. PLS is preferred due to its flexibility, not requiring multivariate normally distributed data or large samples. It is particularly effective for confirming theories, explaining relationships between latent variables, and accommodating constructs with both reflexive and formative indicators. The advantages of PLS include its capability to handle complex models, skewed data distributions, and direct calculation of moderator variables, aligning well with the intricacies of this study involving a single moderator variable.

Validity Tests

The measurement model, also known as the outer model, elucidates the relationship between each indicator block and its latent variable, with its evaluation relying on confirmatory factor analysis using the Multi Trait-Multi Method (MTMM) approach. Convergent and discriminant validity are examined, while reliability is assessed through Cronbach's Alpha and Composite Reliability (Ghozali & Latan, 2015). Convergent validity, gauged through the correlation between item and construct scores, is considered acceptable if it surpasses 0.70, with 0.50 to 0.60 deemed acceptable during scale development. Discriminant validity is determined by cross-loading comparisons, and reliability is confirmed when Composite Reliability and Cronbach's Alpha exceed 0.70. The outer model test results for Investment Decisions, Financial Literacy, Overconfidence, and Risk Perception are presented, with identified variables falling below 0.5 recommended for removal to enhance the model's reliability and validity.

Tests of Hypotheses

In examining the relationships among the variables, this study will employ PLS Structural Equation Modeling (SEM). PLS (Partial Least Square) is a variant-based approach within structural equation analysis (SEM), enabling simultaneous testing of the measurement and structural models. The measurement models are utilized to assess validity and reliability, while the structural models are employed to investigate causality through hypothesis testing and predictive modeling. PLS is considered a soft modeling technique as it doesn't impose strict assumptions regarding data measurement scales, allowing for the use of small sample sizes, even below 100 samples, according to Hair Jr. (2020).

Research Flow

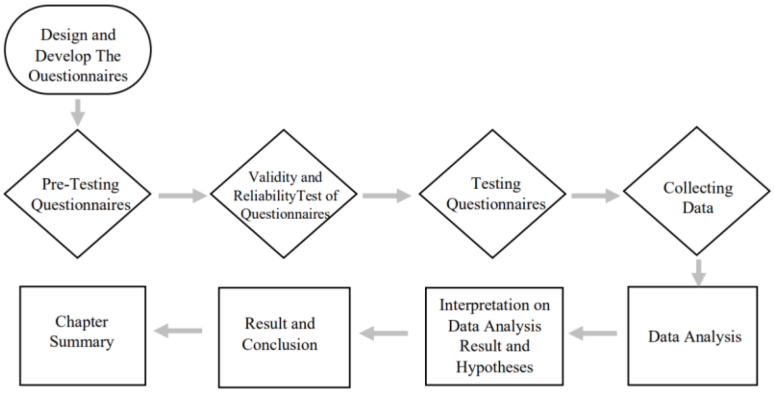

Figure 3.1 Flowchart of Data Processing

RESULT AND DISCUSSION

Validity Test

Convergent Validity

Table 4.1 Convergent Validity Assessment Results

Code	Loading Factor
ID01	0.736
ID02	0.784
ID03	0.756
ID04	0.853
FL01	0.797
FL02	0.974
FL03	0.860
FL04	0.881
FL05	0.880
FL06	0.778
FL07	0.839
FL08	0.709
O01	0.775
O02	0.804
O03	0.727
O04	0.886
O05	0.735
O06	0.754
O07	0.782
RP01	0.850
RP02	0.961
RP03	0.931
RP04	0.864

Table 4.1 presents loading factors for various codes representing constructs in the context of convergent validity testing. Loading factors indicate the strength and direction of the relationship between each item (question or statement) and its corresponding latent construct. In this case, the constructs include Investment Decision (ID), Financial Literacy (FL), Overconfidence (O), and Risk Perception (RP). The loading factors range from 0.709 to 0.974. For Investment Decision (ID), items ID01, ID02, ID03, and ID04 exhibit loading factors of 0.736, 0.784, 0.756, and

0.853, respectively. These values suggest a moderately strong positive relationship between the items and the latent construct of Investment Decision.

Financial Literacy (FL) is represented by items FL01 to FL08, with loading factors ranging from 0.709 to 0.974. These high loading factors indicate a strong positive relationship between the items and the Financial Literacy construct. Notably, item FL02 has the highest loading factor (0.974), indicating a particularly strong association.

Similarly, Overconfidence (O) is measured by items O01 to O07, and Risk Perception (RP) is represented by items RP01 to RP04. The loading factors for these items range from 0.727 to 0.886 and 0.850 to 0.961, respectively. These values suggest strong positive relationships between the items and their respective latent constructs.

Discriminant Validity

Table 4.2 Discriminant Validity Assessment Results

Variable	Validity Results	Conclusion
Financial Literacy	0.673	Reliable
Investment Decisions	0.788	
Overconfidence	0.722	
Risk Perception	0.763	

Table 4.2 presents the results of discriminant validity assessments for the variables in the study. Discriminant validity is a critical aspect of measurement validation, ensuring that each variable is distinct from the others. The results, expressed as validity scores, help determine the reliability and uniqueness of each construct in the study.

Financial Literacy exhibits a discriminant validity score of 0.673, indicating a high level of distinctiveness from the other variables. This suggests that Financial Literacy is a reliable and unique construct in the study, distinct from Investment Decisions, Overconfidence, and Risk Perception.

Similarly, Investment Decisions show a discriminant validity score of 0.788, reaffirming its reliability and distinctiveness from the other constructs. This suggests that Investment Decisions form a reliable and unique variable in the context of this study.

The construct of Overconfidence demonstrates a discriminant validity score of 0.722, reflecting a high degree of distinctiveness from the other variables. This implies that Overconfidence is a reliable and unique construct, separate from Financial Literacy, Investment Decisions, and Risk Perception.

Finally, Risk Perception exhibits a discriminant validity score of 0.763. Although slightly lower than the scores for Financial Literacy, Investment Decisions, and Overconfidence, this score still suggests a reasonable level of distinctiveness. Thus, Risk Perception is considered a reliable and unique construct in the study.

Descriptive Statistics

Table 4.3 Descriptive Statistics of Variables

Variable/Dimension	Code	Average
Investment Decision	ID01	3.68
	ID02	3.99
	ID03	4.04
	ID04	3.76
Financial Literacy	FL01	3.99
	FL02	3.88
	FL03	3.72
	FL04	3.72
	FL05	3.76
	FL06	3.7
	FL07	3.98
	FL08	3.71
Overconfidence	O01	3.99
	O02	3.68
	O03	3.77
	O04	3.72
	O05	3.71
	O06	4.04
	O07	3.72
Perceived Risk	PR1	3.71
	PR2	3.76
	PR3	3.93
	PR4	3.72

Table 4.3 provides the descriptive statistics of the variables, measured on a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The variables encompass dimensions related to Investment Decision, Financial Literacy, Overconfidence, and Perceived Risk.

In terms of Investment Decision (ID), respondents, on average, expressed a moderate inclination toward agreement with the statements. The scores ranged from 3.68 for ID01 to 4.04 for ID03, suggesting a generally favorable disposition toward investment decisions among the surveyed individuals.

Financial Literacy (FL) dimensions exhibited varying average scores, with respondents indicating a moderate to high level of agreement. FL02 garnered the highest average score of 3.99, indicating a strong agreement, while other dimensions, such as FL03 and FL04, scored slightly lower, yet still within the range of agreement.

For Overconfidence (O), respondents, on average, displayed a moderate agreement with the statements. The scores ranged from 3.68 for O02 to 4.04 for O06, pointing towards a somewhat favorable inclination toward overconfident tendencies among the participants.

Perceived Risk (RP) dimensions showcased moderate average scores, ranging from 3.71 for RP01 to 3.93 for RP03. This suggests that respondents, on average, hold a moderate level of agreement regarding the perceived risks associated with their investment decisions.

Hypothesis Testing Results

Table 4.4 Path Coefficients and Statistical Measures

Path Coefficients	**Original sample (O)**	**Sample mean (M)**	**Standard deviation (STDEV)**	**t-statistics (|O/STDEV|)**	**P values**
Overconfidence -> Investment Decision	0.629	0.651	0.067	9.387	0.000
Risk Perception -> Investment Decision	-0.142	-0.141	0.036	3.939	0.000
Financial Literacy -> Overconfidence	0.137	0.121	0.049	2.794	0.005
Financial Literacy -> Risk Perception	-0.007	-0.007	0.024	0.310	0.756

Table 4.4 provides insights into the path coefficients and statistical significance of the relationships between variables in the study, focusing on the p-values. Firstly, the path coefficient between Overconfidence and Investment Decision is 0.629, indicating a positive relationship. The t-statistic of 9.387 is notably high, suggesting that this relationship is statistically significant (p-value = 0.000). This implies that the influence of Overconfidence on Investment Decision is not likely due to random chance, and the relationship is robust in the original sample.

On the contrary, the path coefficient between Risk Perception and Investment Decision is -0.142, indicating a negative relationship. The t-statistic of 3.939 is statistically significant (p-value = 0.000), suggesting that the negative influence of Risk Perception on Investment Decision is not likely to be a result of random chance in the original sample.

Moving on to the relationship between Financial Literacy and Overconfidence, the path coefficient is 0.137. The t-statistic of 2.794 is statistically significant (p-value = 0.005), indicating that Financial Literacy significantly contributes to the level of Overconfidence. This suggests that higher Financial Literacy is associated with increased Overconfidence among the participants.

However, when examining the relationship between Financial Literacy and Risk Perception, the path coefficient is -0.007, with a low t-statistic of 0.310 and a non-significant p-value of 0.756. This implies that Financial Literacy does not significantly impact Risk Perception in the original sample.

CONCLUSION

Conclusion

The initial objective, aiming to explore the impact of overconfidence on investment decisions among millennial generation investors in Jakarta, yielded affirmative results. The findings indicate a positive effect, suggesting that overconfidence significantly influences the investment choices of this demographic.

Moving to the second objective, which sought to examine the influence of risk perception on investment decisions among millennial investors in Jakarta, the obtained results support the hypothesis. The positive effect identified implies that risk perception plays a substantial role in shaping investment behaviors within this demographic.

The third objective, focusing on the moderating role of financial literacy in the relationship between overconfidence and investment decisions, achieved affirmative outcomes. This implies that financial literacy has the potential to moderate the impact of overconfidence on investment choices among millennial investors in Jakarta.

However, the fourth objective, which aimed to explore the moderating effect of financial literacy on the relationship between risk perception and investment decisions, did not align with the hypothesis. The results indicate that financial literacy does not have a moderating influence on the connection between risk perception and investment decisions among millennial investors in Jakarta.

Limitations of the Study

This study has limitations worth noting, urging caution in interpreting its findings. Firstly, its focus on millennial investors in Jakarta limits broader applicability due to regional socio-economic and cultural differences. Secondly, reliance on self-reported data through surveys may introduce response bias, potentially compromising accuracy. The cross-sectional design hinders establishing causal relationships between variables, emphasizing the need to refrain from inferring causation. Moreover, focusing on specific variables like overconfidence and risk perception may overlook other influential factors in millennial investment decisions. The use of Likert scales for measurement has inherent limitations, potentially affecting result precision. Lastly, the study lacks consideration of changes in the economic landscape over time, suggesting future research could benefit from longitudinal studies for a more dynamic perspective.

Theoretical Implications

The study's findings offer valuable insights into the behavior of millennial investors in Jakarta, which has implications for behavioral finance and investment decision-making. It highlights the role of overconfidence and risk perception in shaping investment decisions, building upon existing research in the field. Moreover, the study introduces the concept of financial literacy as a potential moderator, suggesting the importance of targeted financial education programs. However, the lack of evidence for financial literacy moderating the relationship between risk perception and investment decisions warrants further investigation into this area. The study's focus on individual millennial investors in Jakarta underscores the importance of considering local socio-economic and cultural factors when analyzing investment behaviors within a regional context.

Practical Implications

This study offers practical insights for various stakeholders. For individual investors, understanding the influence of overconfidence and risk perception on millennial investment decisions in Jakarta suggests the value of targeted interventions and educational programs to improve decision-making. Financial educators and policymakers can use the findings to recognize the role of financial literacy in moderating overconfidence, emphasizing the importance of tailored literacy initiatives. However, the study also highlights the need for a comprehensive approach, as financial literacy may not moderate the relationship between risk perception and investment decisions. Policymakers and educators should consider strategies that address both aspects. Investment professionals can apply these insights to improve client engagement and product design, acknowledging the impact of overconfidence on investment decisions and adapting approaches to enhance client satisfaction and trust.

The findings of this study offer valuable guidance for investment firms, financial advisors, and organizations serving millennial investors in Jakarta. Recognizing the significant impact of overconfidence on investment decisions underscores the importance of tailored services that cater to the unique characteristics and decision-making processes of this demographic. Integrating insights from behavioral finance into client engagement strategies, such as addressing overconfidence tendencies and offering diverse investment options, can enhance client satisfaction and trust. Understanding the role of financial literacy in moderating the relationship between overconfidence and investment decisions suggests opportunities for developing targeted communication strategies and personalized investment products. However, the lack of moderation by financial literacy on the relationship between risk perception and investment decisions requires nuanced consideration, indicating the need for additional measures such as integrating risk communication into advisory services. These insights also extend to talent management and training within investment firms, advocating for programs that include behavioral finance training to enhance advisors' ability to manage cognitive biases among millennial clients.

Policy Implications

The policy implications derived from this study are crucial for policymakers, regulatory bodies, and institutions shaping Jakarta's financial landscape. Recognizing overconfidence and risk perception as significant factors in millennial investment decisions underscores the need for targeted financial literacy programs. Policymakers can develop initiatives that address cognitive biases, equipping millennials with the skills to navigate investments effectively. Enhancing regulations based on insights can promote responsible investment practices, emphasizing transparency and ethical conduct within the financial industry. The finding that financial literacy moderate overconfidence suggests integrating financial education into educational curricula. However, the lack of moderation on risk perception calls for nuanced strategies, possibly involving collaborative efforts with industry stakeholders to develop targeted risk communication guidelines.

Future Research Implication (Recommendation)

The study's insights open avenues for future research aimed at understanding investment decision-making among Jakarta's millennial generation. Comparative studies across diverse urban settings in Indonesia can reveal variations in investment behaviors influenced by socio-economic and cultural factors. Exploring demographic variables like income levels, educational backgrounds, and professional experiences could provide nuanced insights into their interaction with overconfidence, risk perception, and financial literacy. Investigating the impact of technological advancements on millennials' investment choices, considering their tech-savvy nature, is another relevant avenue. Longitudinal studies tracking the evolution of investment behaviors over time and examining additional cognitive biases could provide a more comprehensive understanding. Furthermore, assessing the effectiveness of interventions and educational programs in influencing investment decisions would offer evidence-based recommendations for practical initiatives and policies.

REFERENCES

Ainia, N. S. N., & Lutfi, L. (2019). The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision making. *Journal of Economics, Business, & Accountancy Ventura*, *21*(3), 401–413.

Anggirani, N. (2017). *Pengaruh Risk Tolerance, overconfidence, dan Literasi Keuangan Terhadap Pengambilan Keputusan Investasi Masyarakat Surabaya*. STIE PERBANAS SURABAYA.

Astuti, D., Ginting, P., Sadalia, I., & Silalahi, A. S. (2018). The influence of financial education and promotion towards risk perception of students as investors at university investment gallery. *Academic Journal of Economic Studies*, *4*(2), 51–60.

Bodie, Z. K., & Kane, A. (n.d.). & Marcus, AJ.(2014). Investments. *McGraw-Hill Education*, 6.

Christanti, N., & Mahastanti, L. A. (2011). Faktor-faktor yang dipertimbangkan investor dalam melakukan investasi. *Jurnal Manajemen Teori Dan Terapan*, *4*(3), 37–51.

Ghozali, I., & Latan, H. (2015). Konsep, teknik dan aplikasi menggunakan Program Smart PLS 3.0. *Universitas Diponegoro. Semarang*.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., Black, W. C., & Anderson, R. E. (2018). *Multivariate Data Analysis*. Cengage Learning EMEA.

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

Lusardi, A., Mitchell, O. S., & Curto, V. (2014). Financial literacy and financial sophistication in the older population. *Journal of Pension Economics & Finance*, *13*(4), 347–366.

Pasewark, W. R., & Riley, M. E. (2010). It'sa matter of principle: The role of personal values in investment decisions. *Journal of Business Ethics*, *93*, 237–

253.
Pompian, M. M. (2012). *Behavioral finance and wealth management: how to build investment strategies that account for investor biases* (Vol. 667). John Wiley & Sons.
Pradikasari, E., & Isbanah, Y. (2018). Pengaruh financial literacy, illusion of control, overconfidence, risk tolerance, dan risk perception terhadap keputusan investasi pada mahasiswa di Kota Surabaya. *Jurnal Ilmu Manajemen (JIM)*, *6*(4), 424–434.
Rahman, M., & Gan, S. S. (2020). Generation Y investment decision: an analysis using behavioural factors. *Managerial Finance*, *46*(8), 1023–1041.
Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. john wiley & sons.
Sembel, R., Malau, M., Hutahaean, Y. S. R., & Desrianty, R. M. (2022). Bagaimana Mengelola Keuangan dan Investasi di Situasi yang Tidak Pasti Pada Masa Pandemi COVID-19? *IKRA-ITH ABDIMAS*, *5*(3), 156–161.
Sheikh, M. F., & Riaz, K. (2012). Overconfidence bias, trading volume and returns volatility: Evidence from Pakistan. *World Applied Science Journal*, *18*(12), 1737–1748.
Sindhu, R., Jandail, R. R. S., & Kumar, R. R. (2014). A novel approach for sentiment analysis and opinion mining. *International Journal of Emerging Technology and Advanced Engineering*, *4*(4), 522–527.
Trisnowati, Y., Achsani, N. A., Sembel, R., & Andati, T. (2023). Investment Decision in Indonesia Stock Exchange: The Demographic of Environmental, Social, and Governance Investors. *Indonesian Journal of Sustainability Accounting and Management*, *7*(1), 191–204.
Wijaya, R., Sembel, R., & Malau, M. (2023). How Heuristics and Herding Behaviour Biases Impacting Stock Investment Decisions with Financial Literacy as Moderating Variable. *South East Asia Journal of Contemporary Business, Economics and Law*, *29*(1), 6–12.
Wulandari, D. A., & Iramani, R. (2014). Studi experienced regret, risk tolerance, overconfidance dan risk perception pada pengambilan keputusan investasi. *Journal of Business & Banking*, *4*(1), 55–66.