THE INFLUENCE OF FINANCIAL BEHAVIOR, OVERCONFIDENCE, AND RISK PERCEPTION ON INVESTMENT DECISIONS WITH THE MODERATING EFFECT OF FINANCIAL LITERACY ON INDIVIDUAL MILLENNIAL GENERATION INVESTORS IN JAKARTA

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A THESIS

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CERTIFICATE OF APPROVAL

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Topic : The Influence of Financial Behavior, Overconfidence, and Risk Perception on Investment Decision with The Moderating Effect of Financial Literacy on Individual Millennial Generation Investors in Jakarta

We hereby declare that this Thesis is from student's own work, has been read and presented to Sekolah Tinggi Manajemen IPMI Board of Examiners, and has been accepted as part of the requirements needed to obtain a Master of Business Administration Degree and has been found to be satisfactory.

Jakarta, ...2023

Examined by,

NON-PLAGIARISM DECLARATION FORM

This Thesis is a presentation of our original research work. Wherever contribution of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. Also, this work is being submitted in partial fulfillment of the requirements for the Master of Business Administration degree and has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Jakarta,……………………2023

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Adlina Nadhila

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ACKNOWLEDGEMENT

ABSTRACT

Investment has become need in the society, it is no longer wants. The society need higher gain in shorter time period. The millennial generation is the largest population at a productive age and plays an important role in investing. However, many of them are still not getting their investment result as they expected. Therefore, there are many factors that must be considered by every investor in order to avoid the risks that may arise to losses in investing. This phenomenon was suspected because the millennial investors are still lack of financial literacy, risk management, reckless financial behavior, and overconfidence on investment decisions. Based on this, the main focus and purpose of this research is to evaluate and analyse the effect of financial literacy, risk perception, financial behavior, and overconfidence on investment decisions in the millennial generation in the Jakarta area to give ideas for the millennial investors and practitioners in making decision to invest. This paper fills a literature gap by testing the financial literacy as a moderator in the relationship of financial behavior, risk perception and overconfidence toward investment decision. The study utilized a quantitative survey of 200 millennial investors in Jakarta, and the data is analyzed using PLS-SEM. This study finds that financial behavior, overconfidence, risk perception has positive effect on investment decisions is accepted, which means that financial behavior affects investment decisions for millennial generation investors in Jakarta. The result also finds that financial literacy moderates the effect of financial behavior and overconfidence on investment decision, but it cannot moderate risk perception on investment decision. The findings in this study will assist the investors get the ideas in making decisions to invest it is likely to be influenced by these three factors. Moreover, financial literacy can moderate the effect of financial behavior and overconfidence on investment decisions. The role of financial literacy as the moderation variable can give the investors insight that financial literacy is something they should prioritize because financial literacy plays a huge role in controlling investors' irrational behavior in decision-making

Keywords : *investment decision, capital market, financial literacy, risk perception, financial behavior, risk perception*

CHAPTER I

INTRODUCTION

1.1 Research Background

Investment has become need in the society, it is no longer wants. Investment started to attract the society followed by the development of era and technology, which becomes more modern and reliable since information is easier to access, so does knowledge on investment. Because the society start to think that saving is no longer interesting, they need higher gain in shorter time period. Investment always be an interesting topic to talk because it talks about gain or profit in return meaning we use some of our money to buy investment instruments then expecting to get the return in some period. Investment is a process of buying assets with the intention of earning income or appreciation in the form of income payments or capital gains. Investment is the flow of capital used to support a nation's economic expansion and development. The market and the growth of the nation are supported by investors. A developing nation, like Indonesia, requires a rising supply of money. Over the past few years, individual investors' participation in the financial markets has increased. (Wijaya et al., 2023)

Each of investment products give various rate of returns. Some of them can be certain and the rest can be uncertain. Two types of investment are real and financial. Real assets are tangible goods in possession of a person. Financial securities represent papers that are dependent on real assets for creating wealth. Real assets are used to produce goods or services. They are tangible assets that have a physical form. Some examples of real assets are land and buildings, furniture, gold, silver, diamonds or artifacts. They may be marketable or non-marketable. They may also have the feature of being moveable or non-moveable. Financial assets are called paper securities. Some examples of these assets are shares, bonds, debentures, bills, loans, lease, derivatives and fixed deposits. Financial assets represent a claim by securities, on the income generated by real assets of some other parties. Such assets can be easily traded, as they are marketable and transferable (Singh, 2016). Moreover, the main goal for investors investing their funds in the capital market is to get a return on their investment. Return refers to the financial gain on investment returns (Abbas et al, 2022).

The millennial generation is the largest population at a productive age and plays an important role. Those included in the millennial generation are those born between 1981-1996, with an estimated age of 24-39 years. Based on the results of the 2020 Population Census, the Central Bureau of Statistics noted that the millennial generation dominates the structure of Indonesia's population composition by 25.87 percent (Central Bureau of Statistics, 2023). In this age cycle, they are at the peak of productive age and are starting to enter the workforce. In addition, this generation also tends to be more familiar and easily understand the latest technology in all aspects of life. Therefore, the millennial generation is suitable for investment because technology and innovation have shifted the pattern of economic activities that are often carried out online, starting from consumption, saving, including investment. To start investing in a right way for each of investment product, these millennial generations must have some skills and self control to avoid the risks of big loss. The significant growth of capital stock market investors in the past 3 years and the lack of experience of investors might not provide a sufficient period for financial literacy to weaken behavioral biases. Investors think that they have sufficient financial literacy based on information accessed through the internet, apps, or discussions with acquaintances or friends. However, this study shows that the self-perception of financial literacy by investors might not be as knowledgeable as their knowledge (Wijaya et al.,2023). Sembel et al. (2022) concluded financial intelligence is very important for everyone to have, in order to be able to empower money and place money appropriately.

Investment choices are not only in capital goods investments such as gold, land and buildings, but are starting to touch the realm of capital market investments. The millennial generation is not only faced with the level of complexity and increase in financial products, services, and markets, but will be more likely to accept financial risks in the future (Putri and Hamidi, 2019). Jonathan and Sumani (2021) concluded that financial literacy has a positive effect on millennial investors' investment decisions; perceptions of risk and return have a positive effect on millennial investors' investment decisions, and financial technology has a positive effect on millennial investors' investment decisions, and control variables consisting of family background and income positively affect millennial investors' investment decisions.

The capital market is an activity related to the public offering and trading of securities, public companies related to the securities they issue and professional institutions related to securities. This is as stated in Law Number 8 Year 1995 Article 1 Number 13. The capital market has an important role for the economy of a country, because functionally the capital market is a means of business funding or a means for companies to obtain funds from the investor community (Investor). The capital market is also functionally a means for the public to invest in financial instruments (OJK 2015).

Thus, the owners of capital, both individual investors and business entities, can channel funds to the capital market as a means of investment, and entrepreneurs can obtain additional capital funds to develop and expand their business network from investors in the capital market (Yuliana, 2010). The following capital market developments can be characterized by the large number of investors in the last three years from 2020 to January 2023 with significant growth. In 2021, there was an increase in the number of individual investors or Single Investor Identification (SID) of 92.99% from 2020. This increase is the most significant increase compared to the increase in 2022 compared to 2021 by 37.68% and the increase in January 2023 compared to 2022 by 1.65%. This is as mentioned in the investor demographic data published by KSEI.

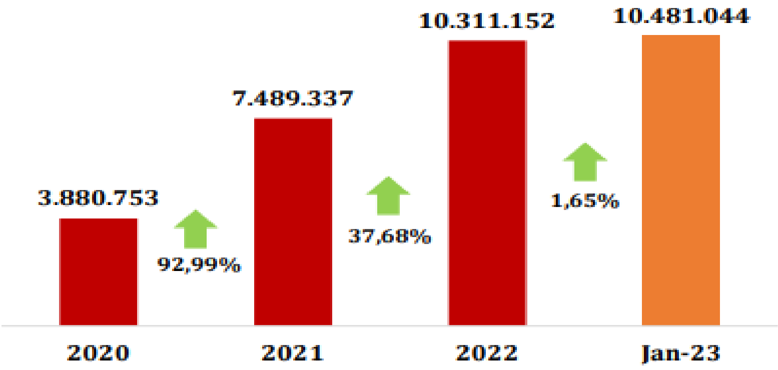

Figure 1.1 Growth Chart of Total Number of SIDs (2020-January 2023)

Source: Indonesia Central Securities Depository (IDX) Press News Year (2023)

Investment activities in the capital market are closely related to the determination of investment decisions by an investor. Investment decisions are policies taken on two or more alternatives to capital investment with the hope of getting a return in the future (Budiarto, 2017). In making investment decisions an investor tries to make rational decisions. However, over time the psychological factors of investors also influence in making investment decisions. Investors are expected to make rational decisions in order to get the return that is in accordance with what is desired. A rational attitude is an attitude of thinking that is based on reason and proven by existing data and facts. The role and nature, preferences, emotions and other things that are in humans can make humans behave irrationally (Ariani et al,2016).

Based on data published by the Financial Services Authority as of July 14, 2021, the Investment Alert Task Force (SWI) has stopped 11 entities suspected of conducting business activities without permission from the competent authority. As well as duplicating or acting on behalf of licensed entities, which has the potential to harm the public. Therefore, there are many factors that must be considered by every investor in order to avoid the risks that may arise to losses in investing. One of the factors that can influence financial decisions is financial behavior. Financial behavior is behavior related to the application of financial use. Sudindra and Naidu (2018) explain that financial behavior can be seen from four main areas, namely: saving, spending, borrowing, and investing. Financial behavior is built by various ideas and assumptions from economic behavior to determine alternatives from several choices with the aim of reducing errors in investment decision making. The choice of decisions taken is related to the involvement of the interaction of traits, emotions, preferences and various kinds of things inherent in humans as intellectual and social beings. Previous research conducted by Mehrotra (2018) states that behavior is very important when making wise investment decisions in contrast to research conducted by Mutawally and Asandimitra (2019) which states that financial behavior has no effect on investment decisions.

In addition to a person's financial behavior, the influence of human psychology or known as behavioral finance also affects the investment decision-making process. One of the behavioral finance factors is overconfidence, overconfidence is an aspect of bias that can influence investment decisions. Overconfidence is a feeling of excessive confidence in the ability and knowledge possessed in making investments (Budiarto and Susanti, 2017). When someone has excessive confidence, they will invest more often. This is due to confidence in the ability and knowledge possessed by investors. Overconfidence will later affect the stock market due to more buying and selling activities. The results of research conducted by Pradikasari and Isbanah (2018) state that overconfidence can affect investment decisions. This is because respondents believe they have the ability they have without seeing what risks will be accepted when investing. In contrast to the results of research conducted by Rahman and Gan (2020) overconfidence has a negative effect on investment decisions. This shows that the higher the overconfidence an investor has, the lower the accuracy of investment decisions so that investors underestimate the level of mistakes made. Therefore, the ability, success, and accuracy of information are overestimated by overconfident investors.

When making a decision to invest, an investor must be able to pay attention to what risks will be accepted when deciding to invest. Risk perception has an important role in human behavior related to decision making under uncertain conditions. In this case, risk perception needs to be considered in making investment decisions, especially for investors who are not experienced in business investment, not just business profitability (Nasr et al.,2019);(Costa et al., 2019).

Astuti et al (2018) states that risk perception has a significant positive effect on investment decisions, while Pradikasari and Isbanah (2018) states that risk perception has no effect on investment decisions. In this study, risk perception is based on the beliefs, considerations, attitudes and approaches of investors to risk attributes in investment products, which can be adjusted to other aspects of investment, such as profitability. This means that the perception of tolerable risk can influence investment decisions.

The level of complexity of financial products, services and markets encourages and makes the younger generation to be able to manage and analyze their finances in the future. This makes the role of financial literacy very important to understand investment products. By having sufficient financial literacy, it is hoped that an investor will make good investment decisions in accordance with what is expected, namely getting a return in the future.

People who have the intention to invest should ideally be based on good financial knowledge or financial literacy, so that their financial decisions have a clear direction (Saputro and Lestari, 2019). Financial literacy is a combination of awareness, knowledge, skills, attitudes, and behaviors needed to make financial decisions and to achieve financial success (Munyuki and Jonah, 2022). Financial literacy generally gives rise to the ability to make the right business decisions in using and managing money better. Adequate financial literacy has a positive influence on a person's financial behavior, especially in allocating finances appropriately (Robb and Woodyard, 2011). Weak financial literacy can lead to reduced financial sustainability due to poor business decision-making, leading to business failure. Low financial literacy can lead to poor financial outcomes (Xu and Zia, 2012).

In research by Patrisia and Fauziah (2019) and Putri and Rahyuda (2017) which states that financial literacy has a significant positive effect on investment decisions, although research conducted by Khairunizam and Isbanah (2019) states that financial literacy variables have no effect on investment decisions. However, in an investment, financial behavior and psychological conditions such as overconfidence that are not balanced with financial literacy will lead to financial failure. Therefore, financial literacy is thought to moderate the influence of behavior and psychological conditions of investors in making investment decisions. This is based on the results of research by Sabir et al (2019), Ahmad and Shah (2020), Arik and Sri (2021) which found that investment decisions can be well influenced by the quality factor of one's overconfidence if moderated by financial literacy. In addition, in research by Adil et al (2023) and Noviaanggie and Asandimitra (2019), which states that financial literacy can moderate financial behavior towards financial decisions.

From the description of the phenomenon and several studies above, there is a research gap that becomes the focus of researchers, namely there are pros and cons to the results of research on the influence between variables, namely overconfidence, financial behavior, risk perception, and also financial literacy on financial decisions. Therefore, this study will conduct research on the influence of these variables by including the moderating effect of financial literacy in the influence of financial behavior and overconfidence on financial decisions as previously done by previous studies. In addition, this study will also develop research by adding risk perception variables to financial decisions with the mediating effect of financial literacy as a renewal of previous research.

Based on this, the main focus of this research is the effect of financial literacy, risk perception, financial behavior, and overconfidence on investment decisions in the millennial generation in the Jakarta area. So it can be concluded that the current research is new, original, and has never been done before. Therefore, researchers are interested in conducting research with the title The Effect of Financial Behavior, Overconfidence, and Risk Perception on Investment Decisions with the Moderating Effect of Financial Literacy on Millennial Generation Individual Investors in Jakarta.

1.2 Problem Statement

Investment decisions made by an investor are closely related to investment activities in the capital market. According to Budiarto and Susanti (2017) investment decisions are decisions made on two or more capital investment options in the hope of getting a return in the future. An investor tries to make rational investment decisions. However, over time, investors' emotions also influence their investment decisions. It is expected that investors can make logical decisions to get returns that match their expectations. A rational attitude is a way of thinking that is based on reason and proven by data and facts. Roles, traits, preferences, emotions, and other things that exist in humans can cause humans to behave irrationally (Ariani et al.,2016).

According to information released by the Financial Services Authority on July 14, 2021, the Investment Alert Task Force (SWI) has stopped eleven organizations suspected of conducting business without the permission of the competent authority. In addition, duplicating or acting on behalf of licensed entities can endanger the public. Therefore, there are many factors that must be considered by every investor in order to avoid the risks that may arise to losses in investing. These factors must be considered by equity sales people in order to learn about potential investors so that they will reduce the risk of errors in achieving their target targets. Some factors that can influence financial decisions are financial behavior (Sudindra and Naidu, 2018), Overconfidence (Budiarto and Susanti, 2017) risk perception (Sembel et al., 2023) and financial literacy (Saputro and Lestari, 2019)

Therefore, this study will analyze the effect of financial behavior, overconfidence and risk perception by using the moderating effect of financial literacy through the Structural Equation Modeling (SEM) analysis method with the SmartPLS program tool. This is because PLS can be used to calculate moderator variables directly, because this study itself consists of 1 moderator variable (Ghozali, 2012).

1.3 Research Questions

Based on the background of the problem, this research problem can be formulated as follows:

1. How does financial behavior influence investment decisions on individual millennial generation investors in Jakarta?
2. How does overconfidence affect investment decisions on individual millennial generation investors in Jakarta?
3. How does risk perception affect investment decisions of individual millennial generation investors in Jakarta?
4. How does financial literacy moderate the influence of financial behavior on investment decision?
5. How does financial literacy moderate the influence of overconfidence on investment decisions?
6. How does financial literacy moderate the influence of investment decisions?

1.4 Research Objectives

With the formulation of the problem, this research has several objectives as follows:

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

1.5 Scope of the Study

This research will focus on investors from the millennial generation. Furthermore, this study will look at the interaction between the variables of financial behavior, overconfidence, risk perception, financial literacy, and investment decisions among the millennial generation. It investigates and analyses the relationship between the dependent variable and independent variables. The dependent variable is Investment Decision, and the independent variables are Financial Behavior, Overconfidence, and Risk Perception, and the moderating variable is Financial Literacy.

1.6 Significance of the Study

This study discusses the factors that influence investment decisions on individual millennial generation investors in Jakarta such as financial behavior, overconfidence, and risk perception through moderation of financial literacy. This research will be useful in theoretical and practical for equity sales, investors, and academics, especially for researchers' academic references and as a basis for further research. The following are the contributions of this research:

1. Theoritical

   The results of this study can be an input in the development of investment theory when viewed from the concept of financial behavior, overconfidence, risk perception, investment behavior, especially investment decision making for future researchers who want to study similar topics in the future related to investment decisions by examining several influencing factors.

2. Practical

   The results of this study can be an input for the government to be actively involved in developing an investment climate, which fosters the interest of the millennial generation to make the right investment decisions and as input for investors to learn about their financial behavior, and source of information for financial literacy.

1.7 Thesis Structure

This Thesis consists of six chapters that provided a systematic process to help readers understand this research's content. Each chapter provides details on:

Chapter I Introduction

This section describes the requirements for conducting an investigation. It also has various sections, including Introduction, Problem Identification, Research Objectives, Research Questions, Research Scope, and Research Restrictions.

Chapter II Literature Review

This section concentrated on the theoretical review that would serve as a guide for the study. It also displays the definition, frame, image, and past studies on this issue. A literature review is a collection of journals, newspapers, books, and other sources of information that can be used to support study.

Chapter III Methodology

This section describes the procedures for finishing the investigation. It is interested in the research process, such as the data analysis step by step. There will also be a hypothesis and the analysis indicators employed in the investigation.

Chapter IV Data Analysis

This section goes into detail on data analysis, which is an important part of the study. This section depicts the data processing mechanism, the outcomes of the data processors, and an analysis of the results.

Chapter V Conclusion and recommendations

This is the concluding chapter of the study, and it summarizes the complete analysis from beginning to conclusion.

CHAPTER II

LITERATURE REVIEW

2.1 Introduction

In Chapter Two, we will discuss the main constructs: financial behavior, overconfidence, and risk perception, as well as the moderator of financial literacy. A review of the most relevant literature is also included. Empirical studies that explain the relationships between variables, including moderators, are reviewed and summarized in tables to help the authors find discrepancies in the literature. Hypotheses and research models are based on the literature review of the relationships between variables.

2.2 Literature Review

Summary of Previous Research

Investment Decision

1. Mutawally and Asandimitra (2019) conducted research on the effect of financial literacy, risk perception, behavioral finance and investment experience on investment decisions of Surabaya students. This study aims to test and analyze the variables of herding and investment experience that affect investment decisions. Respondents are in a group of investors who depend on colleagues, friends or fellow investors as well as the majority decision without analyzing it first. Respondents are also included in the category of respondents who have sufficient experience in investment decisions so that the increasing experience will increase the number of investment decisions to hold a variety of profitable alternative stock alternatives.
2. Novianggie and Asandimitra (2019) has conducted research on The influence of behavioral bias, cognitive bias, and emotional bias on investment decisions for college students with financial literacy as the moderating variable. The results showed that herding bias, risk perception, overconfidence, representativeness, and financial literacy had a significant effect on investment decisions while the disposition effect and regretful

experience had no significant effect on investment decisions. Financial literacy is not a moderating variable, but an independent variable. The results showed that university students in Surabaya in making investment decisions based on advice from brokers or friends and experience in other investment financial instruments in the past, and using information from magazines or online news or investment decisions. This research is based on decision theory, herding theory, behavioral finance theory, and prospect theory.

3. Atmaningrum et al., (2021) conducted research on investment decisions as a result of knowledge, income, and self-control. This study aims to examine the effect of financial knowledge, income, and self-control variables on investment decisions mediated by financial behavior and financial attitudes. The results of this study indicate that financial knowledge has an influence on financial behavior, financial attitudes and financial investment. Income has an influence on financial behavior and financial attitudes, but does not affect investment decisions. Self-control has an influence on financial behavior and financial attitudes, but has no influence on investment decisions. Uniquely, this study found that the financial behavior variable did not have any influence at all on investment decisions.

Financial Literacy

1. Putri and Rahyuda (2017) conducted research on the effect of financial literacy level and sociodemographic factors on individual investment decision behavior. The purpose of this study was to examine the effect of financial literacy, sociodemographic factors, gender, income, and investment decisions. The results of this study indicate that the level of financial literacy has a positive effect on individual investment decision behavior. The influence of financial literacy variables is directly proportional to individual investment decision behavior, meaning that the higher a person's financial literacy, the better his individual investment decision behavior. The difference in influence between men and women on

individual investment decision behavior and income has a negative effect on individual investment decision behavior.

2. Dewanty and Isbanah (2018) conducted research on the determinants of financial literacy with the case of career women in Indonesia. The purpose of this study was to examine the effect of demographic factors, such as marital status, education level, income, and age, as well as financial socialization agents on financial literacy. The results of this study show that education level, income, and agent socialization have a positive influence on financial literacy, while marital status and age were found to have no effect on financial literacy. Marital status was found to have less influence on financial literacy. Unmarried women manage their finances, while married women have different responsibilities in financial decision-making. Education level affects financial literacy, but high school graduates, diplomas, or bachelor's degrees have a more significant and positive effect on financial literacy, especially financial knowledge and behavior. In addition, personal income affects financial literacy, where the higher the income of the female workforce, the wiser they are in financial management. Age does not affect financial literacy, but financial socialization agents have an influence on financial literacy. The most influential social agent for financial information of female workers in the financial sector is family (78%), then peers and media, 72.4% each. The government needs to focus on educating the development and improvement of financial literacy for the community as the right step in practicing financial planning early on to complete financial management through financial knowledge, financial attitudes, and financial behavior.
3. Hamka et al., (2020) conducted research on the effect of financial literacy on interest in investing. This study aims to analyze the effect of financial literacy on the investment interest of the Academic Community at the Indonesian Academy of Finance and Business International (AKBII), Bandung, Indonesia. The results showed that financial literacy has four aspects, namely general knowledge of personal finance, savings and loans, insurance, and investment, and each has a partial and simultaneous

influence on the investment decisions of lecturers, employees, and students. In this study, financial literacy has a strong influence on investment interest among academics at AKBII. However, only the partial aspects of savings and loans and investment significantly influence investment decisions among lecturers, employees, and students. This is because the aspects of savings and loans and investment can be directly related to how each individual manages assets or cash, makes loans, and determines the right form of investment to ensure financial security in the short and long term.

Financial Behavior

1. Kandpal and Mehrotra (2018) conducted the Role of Behavioral Finance in Investment Decision-A Study of Investment Behavior in India. This study aims to examine the effect of financial literacy and risk perception on student investment decisions in Jakarta. The results of this study indicate that behavior is very important when it comes to making wise investment decisions and therefore in choosing a particular investment option it requires a complete investor counter iders factors such as goals in life, spending habits, expenses, income, perceptions of investment, changes in lifestyle, time period, spending habits, expenses, income, perceptions of investment, changes in lifestyle, time period, nature towards investment, thought process, natural habits, one's financial studies, risk-bearing capacity, liquidity, and expected returns.
2. Khairunizam and Isbanah (2019) conducted research on the Effect of Financial Literacy and Behavioral Finance Factors on Investment Decisions (Study of Islamic Stock Investors at the Islamic Investment Gallery of UIN Sunan Ampel Surabaya). The results of this study indicate that the effect of financial literacy and behavioral finance factors (overconfidence, risk perception, loss aversion, and herding) on the study of investment decisions for Islamic stock investors in the Islamic investment gallery of UIN Sunan Ampel Surabaya Financial literacy on the respondents of this study was in the medium category, but this did not

affect investment decision making because respondents felt no need to use knowledge in making investment decisions. Although the respondents' level of risk perception is in the medium category and the level of loss aversion is in the high category, respondents still tend to be bold and less cautious in investing.

3. Saputro and Lestari (2019) conducted research on the effect of financial literacy and risk perception on student investment decisions in Jakarta. This study aims to examine the effect of financial literacy and risk perception on student investment decisions in Jakarta. The results of this study indicate that financial literacy has a significant influence on investment decisions. In addition, risk perception has a significant influence on investment decisions. The implication is that companies or institutions involved in financial services need to take advantage of technological developments to convey information about financial literacy or financial planning, so that this information can be easily received by the public, especially students. Companies or institutions involved in investment can explain more broadly about investment products, their risks, and investment benefits that can attract people, including students who invest in real assets (property, gold, etc.) and financial assets (deposits, stocks, and bonds). Finally, risk perception is influenced by investors' tolerance or preference for risk. Investors who will or want to make an investment must know in advance about the benefits and risks obtained from many investment products and services before investing.

Overconfidence

1. Pradikasari and Isbanah (2018) conducted research on the effect of financial literacy, illusion of control, overconfidence, risk tolerance, and risk perception on investment decisions for students in Surabaya City. This study shows that Overconfidence and risk tolerance have an effect on investment decisions. Respondents belong to a group of investors who are categorized as having higher financial literacy, but respondents feel that they do not need to use knowledge in making investment decisions. In

addition, in this study the average respondent looks at historical information, but that information cannot predict future changes, so respondents have no illusions. Control attitudes and tend to be cautious in making investment decisions. There is no effect of Risk Perception on investment decisions, because in this study the length of investment makes respondents make investment decisions that tend to like risk and expect a good situation in the future.

2. Sabir et al., (2019) conducted research on The role of overconfidence and past investment experience in herding behavior with a moderating effect of financial literacy: evidence from Pakistan stock exchange. This study aims to examine risk perception and trust in using online investment platforms from a gender perspective. The results provide strong evidence that overconfidence and past investment experience motivate investors towards herding behavior. It was found that financial literacy has a moderate impact on the relationship between cognitive profile and herding behavior. This study contributes to the behavioral finance literature and provides empirical evidence that investors' cognitive factors are significant predictors of investors' herding behavior. This study offers new empirical insights into investor behavior due to cognitive characteristics in the Pakistan stock market.
3. Rahman and Gan (2020) conducted research on Generation Y investment decisions: an analysis using behavioral factors. Managerial Finance. The results showed that the traits of anxiety and overconfidence were negatively associated with investment decisions while self-monitoring was positively associated. The traits of anger and herding behavior do not significantly affect investment decisions. Investment decision making differs significantly when examined based on gender, employment status and income allocation. Among these three variables, the results showed that only the self-employed and those in the 5-10 percent income allocation group were slightly positive vis-à-vis investment decision-making.

4. Arik and Sri (2021) conducted research on The Effect of Overconfidence and Optimism Bias On Stock Investment Decisions With Financial Literature as Moderating. The results showed that Overconfidence has a significant positive effect on stock investment decisions; Optimism bias has a significant positive effect on stock investment decisions; Financial literacy does not moderate the effect of overconfidence on stock investment decisions, however, financial literacy moderates the effect of optimism bias on stock investment decisions. Based on these results, investors, especially beginners, should learn more about financial literacy so that when deciding to invest, they can minimize losses.

Risk Perception

1. Aeknarajindawat (2020) conducted research on the effect of a combination of risk perception and risk tolerance on investment decision making. This study aims to investigate the effect of a combination of risk perception and risk tolerance on individual risky asset allocation decisions with the mediation of financial advice related to financial literacy and trust. The results of this study show that trust has a positive and significant relationship with risk perception and financial literacy, but financial literacy also has a positive and significant relationship with risk tolerance, but not significant with risk perception. In addition, risk perception and risk tolerance have a positive and significant relationship with asset allocation in the Indonesian banking sector. This means that people who are often risk-averse tend to emphasize negative outcomes by understanding more risks, while risk-seeking people tend to emphasize positive outcomes, thus understanding fewer risks. In addition, the findings of this study show that risk perception and risk tolerance have a negative and significant relationship, but risk perception and risk tolerance have a positive and significant relationship with asset allocation. On the other hand risk perception also creates a positive and significant relationship with risk tolerance and asset allocation.

2. Ahmad and Shah (2020) conducted research on Overconfidence heuristic-driven bias in investment decision-making and performance: mediating effects of risk perception and moderating effects of financial literacy. The results show that risk perception fully mediates the relationship between heuristic overconfidence on the one hand, and investment decisions and performance on the other. At the same time, financial literacy appears to moderate this relationship. The results suggest that overconfidence may impair the quality of investment decisions and performance, while financial literacy and risk perception may improve their quality.
3. Sembel et al (2023) conducted research on Financial Management Behavior and Investment Decision Making through financial knowledge, attitude, and emotional intelligence with risk perception. The result show that financial decisions are correlated with risk factors, especially in buying or selling investments. High risk is associated with high investment returns. The higher the risk perception, the lower the stock investment by investors. On the other hand, it concludes that risk perception significantly and positively influences investment decisions. found that risk perception influences individual investor decision making. This is an important cognitive attribute in financial behavior that influences investment. Often investors are susceptible to behavioral biases and cognitive errors and may choose suboptimal investment options. Risk perception and loss avoidance behavior are the most important components of decision making under risk contributing to the fact that risk aversion behavior has a significant impact on decision making.

2.3 Grand Theory Perspective

This study investigates investment decisions from a grand theory perspective. Grand theory is derived from an intermediary theory, the theory of planned behavior. Attitudes, subjective norms, and behavioral control influence a person's intention towards a certain behavior, according to Ajzen (1991). Concept refers to a part of a person's behavioral intention, so that a person can respond consistently by giving a judgment such as like or dislike. Behavioral control refers to a person's difficulty or ease associated with his behavior, while subjective norms refer to a person's perception of the thoughts of people who are considered to play a role and have expectations of him to do something. In terms of finance, these attitudes, subjective norms, and behavioral control are considered to positively and significantly influence investment decisions (Mohamed & Azam, 2020).

The study conducted by Wijaya et al. (2023) supports the behavioral finance theory, which states that investors make non-optimal financial decisions due to their illogical behavior. Investors use third-party information when choosing stocks to buy, sell, or hold, according to the study results. Investors end up making unreasonable decisions, which can cause the market to react too much or too little, making the market inefficient. Investors should use fundamental and technical analysis to correct their mistakes; this can reduce impulse, increase awareness, and make better investment decisions. Research on financial literacy examines how financial literacy affects behavioral biases in making stock investment decisions. The study found that financial literacy does not reduce behavioral biases in making stock investment decisions. Perhaps financial literacy programs are not enough to complete the entire financial development process, or financial knowledge does not necessarily mean making smart financial decisions. According to Wijaya et al. (2023), Additional supporting factors may be considered, such as investors' risk and return preferences.

In this study, these intermediate theories are derived to applied theories, namely: investment decision theory, financial literacy theory, risk perception theory, and profitability theory. Some of these applied theories are included in the research model using structural equation modeling (SEM).

2.4 Investment Decision

In general, investment decisions are an important part of behavioral finance. Financial behavior refers to human behavior related to money or financial management (Xiao, 2008). Financial management deals with cash, credit, and savings, as part of the general practice of financial behavior (Xiao et al., 2009). Financial behavior in the process of managing personal finances has serious consequences in the long run (Perry and Morris, 2005). Not all young people can handle spending money or managing income on their own. The choice of using cash, credit, or having savings depends on one's financial behavior. Assad (2012) explains that financial knowledge tends to influence financial decisions. Thus, financial behavior is assumed to underlie financial investment decisions.

Investment is a commitment to put funds or other resources over a certain period of time in the hope of obtaining future benefits or profits (Ainia and Lutfi, 2019). Investment relates to funds in various alternative assets, both real assets and financial assets (Bodie et al., 2018). Forms of real assets that can be used in placing investment funds are land, buildings, machinery and commodities such as gold. Forms of investment in financial assets are bank accounts, both savings and deposits, bonds, mutual funds, and stocks. In Indonesia, the most preferred and selected financial asset investment is the placement of funds in bank accounts (Ainia and Lutfi, 2019).

Investment is basically an economic activity that can be a way for a person to expand or maintain prosperity. However, in investing, people must be more careful in making investment decisions, so that they are not trapped in the wrong investment. In general, it can be said that investment decisions are part of financial decisions. Investment decision is the choice to take investment action. In order to make good financial decisions, people must not only have sufficient knowledge, but also have the ability to apply that knowledge to make the right financial decisions. By having adequate knowledge about finance, people will be able to manage their finances well, including making the right investment decisions. Adequate knowledge of finance helps entrepreneurs to develop their financial literacy and financial behavior and all this will affect investment decision-making. (Sindhu et al., 2016) suggest that investment decisions generally mean determinations made by investors about where, when, how, and how much funds will be invested in various financial products or instruments with the aim of generating income or value appreciation. Investment decisions are understood as decisions taken by each investor when investing. Whether investment decisions are good or bad can be seen from the way investors make financial choices in the future and whether they consider their financial decisions well. Investment decisions are a complex way of thinking, and the process is often inconsistent and cannot be predicted easily because investment decisions are based on various assumptions that are highly dependent on how much relevant information is successfully obtained (Christanti and Mahastanti, 2011).

Based on some of these opinions, it can be concluded that in this study, an investment decision is a person's or company's decision to manage financial resources through an investment mechanism with the aim of achieving expected profit results within a certain period of time. This investment decision can be seen from several main indicators, including: borrowing capital, equity participation, business expansion, determining the time and method of investment, determining the amount of investment funds, and determining investment instruments. Meanwhile, in this study, the investment decision variable is measured using a Likert scale and using question items taken from previous research conducted by Rahman and Gan (2020).

2.5 Financial Literacy

Financial literacy is understood as one's ability to process economic information and make sound decisions about financial planning, wealth accumulation, debt and the like (Lusardi and Mitchell, 2014). When people state about financial decisions, it relates to financial literacy related to the financial decisions they make. Financial literacy is understood as knowledge, skills and beliefs that influence a person's attitude and behavior to improve decision-making and financial management to achieve prosperity (OJK, 2013). In this case, financial literacy is considered to influence financial behavior, which leads to making the right investment decisions. This means that financial literacy is very important in making good financial decisions.

Financial literacy plays an important role in the financial sector, including in determining financial behavior and investment decisions. Financial literacy influences one's preferences in managing their financial plans and impacts the financial sector to a large extent. People with adequate financial literacy will benefit when working on their financial projects, such as in setting or allocating finances appropriately (Robb and Woodyard, 2011). Financial literacy encourages people to make decisions about their financial income based on their financial knowledge and skills (Huston, 2010). People's low financial literacy can affect their participation in various financial markets (Fedorova et al., 2015)

Financial literacy is assumed to influence financial behavior and financial decisions. Errors in financial decisions made in youth can lead to large losses (Lusardi et al., 2009) Financial literacy is often directly correlated with financial behavior (Fernandes et al., 2013). Financial literacy is seen as important nowadays so that people do not make financial mistakes (Cude, et al., 2006). Financial literacy influences financial behavior, which can affect financial decisions, including in relation to investment decisions. Financial literacy is a factor that is closely related to the economy, both individually and collectively. According to OJK (2013) financial literacy provides an understanding of the benefits and risks of financial products and services. The higher the financial literacy of the community, the more people use financial products and services, including in the context of making investment decisions.

Based on this explanation, it can be understood that financial literacy is the ability to make various mature considerations and take effective actions related to the use and management of money in the present and future. Financial literacy includes the ability to understand financial choices, future financial plans, and the management of financial challenges (Cohen and Nelson, 2011). Financial knowledge alone is not enough to encourage people to make good financial decisions. One factor that is assumed to influence good financial decision making is financial literacy. Financial literacy actually refers to a person's ability to make financial decisions in their best short, medium and long-term interests (Mandell, 2008). Financial literacy is understood as an individual's ability to process economic information and make sound decisions about financial planning, wealth accumulation, debt and the like (Lusardi et al., 2010) When people state about financial decisions, it relates to financial literacy related to the financial decisions made. Financial literacy is understood as knowledge, skills and beliefs that influence a person's attitude and behavior to improve decision-making and financial management to achieve prosperity (OJK, 2013). In this case, financial literacy is considered to influence financial behavior, which leads to making the right investment decisions. This means that financial literacy is very important in making good financial decisions.

Financial literacy plays an important role in the financial sector, including in determining financial behavior and investment decisions. Financial literacy can influence a person's preferences in managing their financial plans and will impact the financial sector in a broad scope. People with adequate financial literacy will benefit when working on their financial projects, such as in setting or allocating finances appropriately (Robb and Woodyard, 2011). Financial literacy encourages people to make decisions about their financial income based on their financial knowledge and skills (Huston, 2010). People's low financial literacy can affect their participation in various financial markets (Fedorova et al., 2015)

Financial literacy is assumed to influence financial behavior and financial decisions. Errors in financial decisions made in youth can lead to large losses (Lusardi et al., 2010). Financial literacy is often directly correlated with financial behavior (Fernandes et al., 2013). Financial literacy is seen as important nowadays so that people do not make financial mistakes (Cude et al., 2006). Financial literacy influences financial behavior, which can affect financial decisions, including in relation to investment decisions. Financial literacy is a factor that is closely related to the economy, both individually and collectively. According to OJK (2013) financial literacy provides an understanding of the benefits and risks of financial products and services. The higher the financial literacy of the community, the more people use financial products and services, including in the context of making investment decisions.

Financial literacy includes the ability to understand financial choices, plan for the future, and manage financial challenges (Cohen and Nelson, 2011). Financial literacy relates to how individuals manage money using knowledge about finance itself. Financial literacy reflects the ability to find the right sources to get the knowledge needed to make the right decisions about finance, influences financial behavior and ultimately can influence good financial decisions. Financial literacy is usually not easy to have, especially among the younger generation. However, they are required to have good financial literacy in order to better face their financial future. In Indonesia, the current young generation is said to include the 'millennial generation' and now accounts for about 24 percent of the total population or equivalent to 64 million people. Without having good financial literacy, they are generally more prone to financial vulnerability or loss. This happens due to a lack of preparation in financial management skills. In practice, financial literacy has the benefit of providing an understanding of the use of financial products and services in accordance with the needs of the community, so that they have good financial planning and decisions from the start. Therefore, by gaining an understanding of financial literacy, people can avoid investing in opaque financial instruments and make better financial decisions.

Based on this explanation, it can be understood that in this study financial literacy is the ability to make various mature considerations and take effective actions in connection with the use and management of money in the present and in the future. Financial literacy can be seen from several main indicators, namely: the ability to understand financial choices, the ability to plan for future finances, the ability to find the right sources of financial knowledge, the ability to save money, and the ability to borrow and pay loans. In this study, financial literacy is measured using a Likert scale, and uses question items developed by Rooij et al., (2007) on financial literacy.

2.6 Financial Behavior

Adequate financial literacy tends to have a positive influence on a person's financial behavior, especially in allocating finances appropriately (Robb and Woodyard, 2011). According to Virigineni and Rao (2017) financial behavior is the study of human psychology and rationality in making financial decisions which reduces traditional assumptions regarding the maximization of expected utility in efficient markets. Financial behavior is essentially behavior related to the application of financial use.

In financial behavior according to Virigineni and Rao (2017) there are three aspects that can influence financial behavior. These three aspects are psychology, finance, and sociology. According to Demircan (2016), the difference between traditional financial theory and behavioral finance is that traditional financial theory views an investor as a rational individual, while behavioral finance views an investor as an irrational but normal individual in financial behavior. In addition, traditional finance theory assumes that the market is efficient. In contrast, behavioral finance considers that the market is inefficient. The purpose of behavioral finance theory is to systematically understand and analyze the implications of financial markets viewed from a person's psychological point of view.

According to Sudindra and Naidu (2018), financial behavior can be seen from four areas, namely: saving, spending, borrowing, and investing. Someone who has a habit of saving, spending, and borrowing is usually less positive about running a business, while someone who usually invests tends to be able to develop a business well. This habit is based on good financial literacy. So, financial behavior in the form of habits to invest is influenced by financial literacy, and ultimately affects investment decision making. The measurement of financial behavior in this study uses indicators from Kandpal and Mehrotra (2018) namely clarity of purpose, understanding the product, risk analysis, investment comparison, linkage to goals, and individual requirements.

2.7 Overconfidence

Overconfidence is the belief that an individual's predictions are higher than reality. The concept of overconvidence comes from cognitive psychology and subjects who overestimate their own predictive ability and the accuracy of the information they provide. Anggirani (2017) argues that overconfidence can affect investors when making investment decisions, rational investors will try to maximize profits while minimizing the amount of risk taken.

According to Lakshmi and Minimol (2016) overconfidence is explained as excessive confidence in reasoning and judgment, they consider their abilities above the average of other investors. An investor behaves with overconfidence bias due to the limited information received, making investors feel that they have superior abilities and knowledge than other investors, Pompian (2012). An investor who is overconfident generally expects positive results from the investment decisions taken, investment returns will be attributed to the skills possessed in excess of the skills of other investors but if they experience negative results obtained, overconfidence investors associate with unfavorable conditions, Sheikh & Riaz (2012). It can be concluded that overconfidence is an investor's overconfident behavior, so that these investors believe and believe that their views and knowledge so that the information they get is ignored. This high self-confidence causes individuals to overestimate their knowledge.

According to (Wulandari and Iramani, 2014) there are 3 indicators of overconfidence. These indicators are the assessment of the accuracy of investment selection, the level of confidence in the abilities and knowledge possessed, and confidence in investment selection. However, in this study specifically overconfidence is measured using a Likert scale using question items taken from previous research by (Rahman and Gan, 2020).

2.8 Risk Perception

In general, it can be said that risk is an inherent feature of all types of financial investments due to the volatility of actual and expected outcomes in investments (Sindhu and Kumar, 2014). Meanwhile, perception is the process by which one seeks more detailed clarification of traceable information so that investors can make final judgments on the basis of their level of expertise and past experience. With such an understanding, the concept of risk perception refers to the way investors perceive the risk of financial assets based on their interests and experiences. Risk perception is the rational or irrational beliefs that a person, group or society holds about the probability of a risk event. Risk perception is an important success factor in making effective decisions in risky situations. In financial risk analysis, every investor has a tolerance for risk and a perception of risk. This investor's risk perception is an important factor that influences investment decisions.

Investment decisions can be influenced by many factors, and a better understanding of these factors can help investors make informed investment decisions and help them avoid repeating mistakes in the future in exploring the best financial investment opportunities (Sindhu and Kumar, 2014). Investors generally evaluate the risk and return of investment decisions. In this case, the investor's decision-making behavior is influenced by his attitude towards risk. In practice, at different levels of perception, each investor thinks differently about investment and makes decisions differently, so he usually takes risks according to their perception of risk, which ultimately affects his behavior towards risky investment decisions. In the current study, we examine the influence of risk perception on investors' decisions about their investments.

Almost all investments have financial uncertainty or risk. There is a positive relationship between expected returns and risk. When an investor expects high returns, he must be prepared to bear the uncertainty of high returns. According to Ainia and Lutfi (2019), knowing that the level of risk and return on investment varies, investors need to look at factors in investment related to asset allocation. Asset allocation relates to decisions regarding how investors allocate funds across various asset classes. Asset strategy is highly dependent on investment objectives, investment constraints, and the investor's attitude towards risk. Making effective investment decisions can be done by choosing investment instruments that match the expected return objectives.

Based on this explanation, it can be concluded that in this study, risk perception is a person's or company's perception of the opportunity for risk events on financial resources invested in a certain period of time. This risk perception can be seen from several main indicators, including: consideration of the need to seek more detailed clarification of the risks of investing, consideration of expertise and past experience when investing, the perspective of investors on the position of financial assets in investment, investor confidence regarding the opportunity for risk events, perceived level of tolerance for risk, and evaluation of risk and income from investment decisions. However, in this study, the risk perception variable is measured using a Likert scale and uses question items developed by Pasewark and Riley (2010)

2.9 The Effect of Financial Behavior on Investment Decision

Behavioral finance is built by various ideas and assumptions from behavioral economics to determine alternatives from several choices with the aim of reducing errors in investment decision making. The choice of decisions taken is related to the involvement of the interaction of traits, emotions, preferences and various kinds of things inherent in humans as intellectual and social beings. Previous research conducted by Kandpal and Mehrotra (2018) states that behavior is very important when making wise investment decisions in contrast to research conducted by Mutawally and Asandimitra (2019) which states that financial behavior has no effect on investment decisions. Based on this understanding, the following hypothesis can be formulated:

H1: Financial behavior has a positive influence on the investment decisions of millennials in Jakarta.

2.10 The Effect of Overconfidence on Investment Decision

When someone has excessive self-confidence, they will invest more often. This is due to confidence in the ability and knowledge possessed by investors. Overconfidence will later affect the stock market because there are more buying and selling activities. The results of research conducted by Pradikasari and Isbanah (2018) state that overconfidence can affect investment decisions. This is because respondents believe they have the ability they have without seeing what risks will be accepted when investing. In contrast to the results of research conducted by Rahman and Gan (2018) overconfidence has a negative effect on investment decisions. This shows that the higher the overconfidence an investor has, the lower the accuracy of investment decisions so that investors underestimate the level of mistakes made. Based on this understanding, the following hypothesis can be formulated:

H2: Overconfidence has a positive influence on the investment decisions of millennials in Jakarta.

2.11 The Effect of Risk Perception on Investment Decision

Perception is an aspect of thinking through the five senses that is influenced by information and then affects judgment. In this case, risk perception is a person's way of interpreting risk that differs from estimation or thought and reality. Risk perception plays a very important role in human behavior, in this case related to decision making in uncertain circumstances. People perceive a situation as risky if they have the potential to experience losses due to bad decisions that have been made, especially to financial conditions. Thus, risk perception is a person's consideration of risky conditions that depend on a person's characteristics and psychological conditions (Wulandari and Iramani, 2014). In this study, risk perception is assumed to influence investment decisions according to Hoffmann et al., (2015). The higher a person's risk perception, the more people avoid allocating funds to high-risk assets and prefer low-risk assets (Hariharan et al., 2000). Investors who have lower risk perception are more likely to choose to invest in high-risk ventures when compared to low-risk deposits (Aren and Zengin, 2016). This suggests that low risk perception plays an important role in encouraging investors to make investment decisions. Based on this understanding, the following hypothesis can be formulated.

H3: Risk Perception has a positive influence on the investment decisions of millennials in Jakarta.

2.12 Moderating Effect of Financial Literacy

Financial literacy generally leads to the ability to make the right business decisions in using and managing money better. Adequate financial literacy has a positive influence on one's financial behavior, especially in allocating finances appropriately (Robb and Woodyard, 2011). Weak financial literacy can lead to reduced financial sustainability due to poor business decision making, which leads to business failure. in an investment, financial behavior and psychological conditions such as overconfidence that are not balanced with financial literacy will lead to financial failure. Therefore, financial literacy is thought to moderate the influence of behavior and psychological conditions of investors in making investment decisions. This is based on the results of research by Sabir et al (2019), Ahmad and Shah (2020), Arik and Sri (2021), which found that investment decisions can be well influenced by the quality factor of one's overconfidence if moderated by financial literacy. In addition, in the research of Adil (2023) and Noviaanggie (2019), which states that financial literacy can moderate financial behavior towards financial decisions. Based on this understanding, the following hypothesis can be formulated:

H4: Financial literacy can be a mediator between financial behavior and millennials' investment decisions in Jakarta.

H5: Financial literacy can mediate between overconfidence and millennials' investment decisions in Jakarta.

H6: Financial literacy can mediate between risk perception and millennials' investment decisions in Jakarta.

2.13 Research Framework

This research was conducted based on the assumption that Investment Decisions among millennial entrepreneurs in Jakarta (Y) tend to be influenced by factors such as Financial Literacy (M), Financial Behavior (X1), Overconfidence (X2), and Risk Perception (X3). In this case, the millennial generation's investment decision is the dependent variable; Financial Behavior, Overconfidence, and Risk Perception are independent variables; and financial literacy is the moderating variable. Each of these independent variables is assumed to have a positive influence on the dependent variable, either directly or indirectly through intermediate variables. Based on these assumptions, the research framework is formulated as follows:

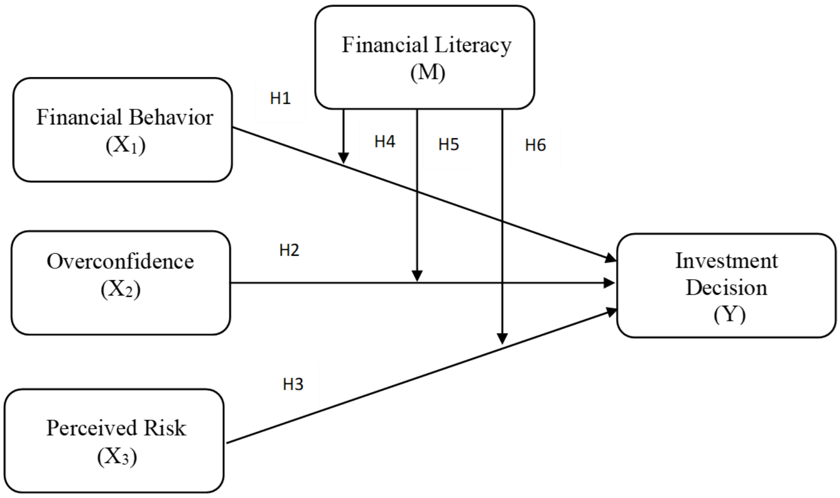

Figure 2.1 Research Framework

Source: Author, 2023

Based on the framework of Figure 2.1 the taking after is hypothesized:

H1: Financial behavior has a positive influence on the investment decisions of millennial investors in Jakarta.

H2: Overconfidence has a positive influence on the investment decisions of millennial investors in Jakarta

H3: Risk Perception has a positive influence on the investment decisions of millennial investors in Jakarta

H4: Financial literacy can moderate financial behavior of millennial investors in Jakarta on investment decisions.

H5: Financial literacy can moderate overconfidence of millennial investors in Jakarta on investment decisions.

H6: Financial literacy can moderate risk perception of millennial investors in Jakarta on investment decisions.

CHAPTER III

RESEARCH METHOD

3.1 Introduction

The sequence of research methods follows the flow as in Figure 3.1

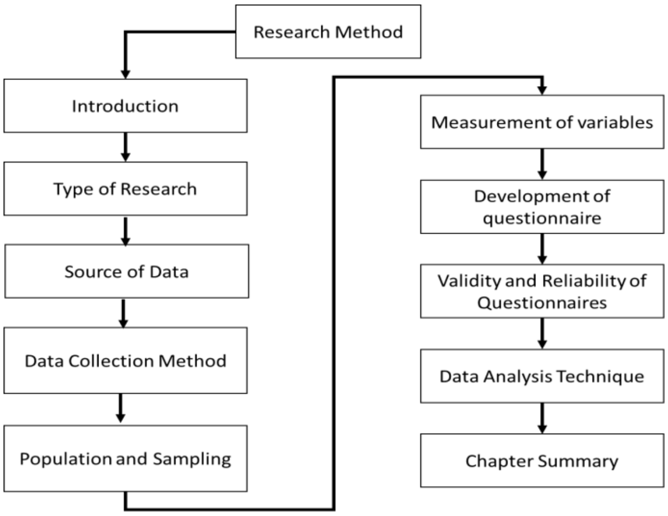

Figure 3.1 Flow Diagram of Chapter Three

Source: Developed by the author for Thesis, 2023

3.2 Type of Research

In this study, the researcher used the positivism paradigm as a perspective and philosophical belief that guides the way researchers see reality. The research is structured according to the positivist research philosophy, which holds that quantitative data collection is the best method for describing phenomena that have been directly observed, using deductive reasoning to advance theories that can be tested, and ultimately leading to the discovery of truth through scientific research (Saunders et al., 2019). This kind of research is fundamental and is done to advance science and theory (Sekaran, 2016). In order to support efforts to validate the model developed and forecast the outcomes to be attained, the study was carried out by investigating concepts and ideas pertinent to research activities; this allowed the goal to be prediction oriented.

With this paradigm, researchers tested the investment decision model of millennial entrepreneurs in Jakarta using quantitative methods and an explanatory approach. This approach is used to examine previously existing theories and test them according to the objectives and hypotheses of this study. It is hoped that the results of this quantitative research can be the basis for generalizing the investment decision model for the millennial generation in Jakarta.

3.3 Source of Data

Primary data and secondary data are the two types of data and information used in this research. Data sources that directly provide data to data collectors are called primary data, according to Sugiyono (2015). Primary data in this study were obtained from questionnaires distributed to respondents. The data is in the form of numbers obtained from the respondents' questionnaire answers. The answer options provided are in the form of a Likert scale of 1-5, which is worth 1 if the respondent's opinion on the questionnaire statement strongly disagree, worth 2 if disagree, worth 3 if undecided, worth 4 if agree, and worth 5 if strongly agree. The data was collected in tabulated form on MS Excel which was then processed using PLS-Smart statistical software. Meanwhile, secondary data comes from research that has been collected by others previously through searching and collecting from books, journals, articles, and other sources.

Table 3.1 Type of Data

Type of data	Description	Source of Data
Primary Data	Responses to questionnaires	Millennials in Jakarta, investing in capital market type of investment
Secondary Data	Source of data obtained by searching for and collecting materials from	books, journals, articles, and other data previously collected by others

Source: Developed by the author for this Thesis, 2023

3.4 Data Collection Method

The survey data from this study was collected by distributing questionnaires to 200 respondents who had been determined as a sample of millennials who had become investors. The questionnaire prepared as an instrument in this survey consists of several written statements that are formulated in advance and answered by the specified respondents (Sekaran and Bougie, 2016). Researchers used a closed questionnaire type, which means that the questionnaire has provided the answer and the respondent just has to choose and answer it directly (Sugiyono, 2015). The primary data of this survey research is quantitative and collected directly from respondents. In this study, primary data were collected through questionnaires distributed directly to respondents.

Before the survey research instrument was used for primary data collection, researchers conducted a pilot test on 30 millennials in Jakarta randomly. The initial survey data was statistically tested with the SmartPLS program to determine the validity and reliability of the survey instrument. After this instrument was valid and reliable for all indicators of Financial Behavior, Overconfidence, Risk Perception, and Financial Literacy, as well as Investment Decisions, the researcher continued quantitative data collection activities by distributing the instrument to 200 respondents among millennial entrepreneurs who were previously determined as a sample.

The sequence of data processing follows the flow as in Figure 3.1

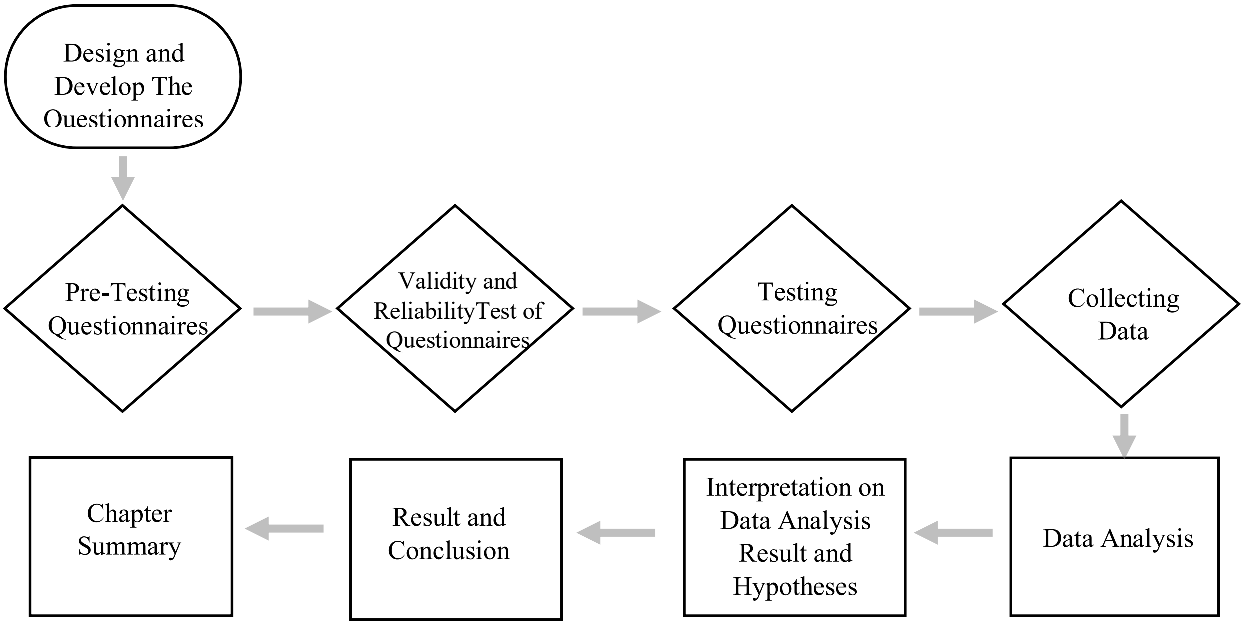

Figure 3.2 Flow Chart of Data Processing

Source: Developed by the author for Thesis, 2023

3.5 Population and Sampling

Population has a definition as a group of individuals or objects, events or things that are interesting to measure in research, which have the qualities and characteristics to be studied (Sekaran and Bougie, 2016). Researchers tested the investment decision model in the millennial generation in Jakarta as a population.

The sample is part of a population consisting of several members who have certain characteristics to be studied (Sekaran and Bougie, 2016). The basic idea of sampling is that by selecting some elements in the population, we can draw conclusions about the entire population. There are several compelling reasons for sampling, namely lower costs, greater accuracy of results, greater speed in data collection, and availability of population elements (Blumberg et al., 2014) .This research uses nonprobabilty sampling where this method does not provide equal opportunities or opportunities to be sampled (Cooper and Schindler, 2014).

The sampling technique in this study used convenience sampling techniques. The definition of convenience sampling is a collection of information or data from members of the population who agree to submit the data. That way, anyone who agrees to submit the data needed with the researcher, either meeting directly or indirectly, can be used as a sample in this study if the respondent is suitable as a source of information (Blumberg et al., 2014). It is said to be suitable as a source of information if the respondent has the criteria, namely the millennial generation who have become investors.

Because the population in this study fluctuates from year to year so that the exact number cannot be determined, the minimum sample determination of researchers uses the method described by Hair (2021), namely the Maximum Likelihood Estimation (MLE) technique which ranges from a minimum of 100 samples and a maximum of 200 samples. In this study, the sample to be taken was 100 respondents. This is based on the opinion of Widiyanto (2008) which states that the number of 100 people is considered representative because it is greater than the minimum sample.

3.6 Measurement of Variables

We tested a model of investment decisions among millennial entrepreneurs in Jakarta and the factors that influence them. This model is formed from three variables, among others: dependent variable, namely Investment Decision (Y), and independent variables, namely: Financial Behavior (X1), Overconfidence (X2), and Risk Perception (X3), and the moderating variable, Financial Literacy (M). These dependent, independent, and moderating variables are measured through surveys in data collection regarding investment decisions in the millennial generation in Jakarta. The following are the conceptual and operational definitions of the variables in the current study.

1. Investment Decision

   In the current study, investment decisions are defined as investor or company decisions to manage financial resources through an investment mechanism with the aim of achieving expected returns within a certain period of time. In this study, the investment decision variable is measured using a Likert scale and has 5 question items taken from previous research conducted by Rahman and Gan (2020) and Kourtidis et al (2011).
2. Financial Literacy

   In the current study, financial literacy is defined as the ability to make various mature considerations and take effective actions related to the use and management of money in the present and future. In this study, financial literacy is measured using a Likert scale, and has 10 question items. There are 6 questions taken from Wanyana (2012) dissertation and 4 questions taken from previous research by Sembel et al (2023) and Thi et al (2015).
3. Financial Behavior

   In the current study, financial behavior is behavior related to the application of financial use. Measurement of financial behavior in this study uses 6 indicators from Kandpal and Mehrotra (2018), namely clarity of purpose, understanding products, risk analysis, investment comparison, linkage to goals, and individual requirements.
4. Overconfidence

   Overconfidence is explained as excessive confidence in reasoning and judgment, they consider their abilities above the average of other investors. In this study specifically overconfidence is measured using a Likert scale in which there are 7 question items taken from previous research by Rahman and Gan (2020) and literature developed by Mumaraki and Nasieku (2016).

5. Risk Perception

In the current study, risk perception is defined as a person's or company's perception of the chance of risk events on invested financial resources within a certain period of time. In this study, the risk perception variable is measured using a Likert scale and has 6 question items from Sembel et al (2023) previous research and literature developed by Ahmed et al (2022).

Table 3.2 Operationalization Variables

Dimension	Items	Scale
Investment Decisions	1. My investment decision supports 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 5. My investment holding periods are spread over long span of time	Ordinal
Financial Literacy	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 usually attend seminars, conferences; workshops hosted by the IDX at least 3 times a year 9. I don’t have any trouble paying attention to the information on the stock market	Ordinal

	10. When seeking financial advice, I deal with licensed brokers, intermediaries or financial services companies	
Financial Behaviour	1. I invest for financial gain 2. I understand the investment product I choose 3. I have conducted a risk analysis of the investment I have chosen. 4. I have done a comparison of several investment products 5. This investment is in accordance with my goal to gain profit 6. I have individual requirements as an investor, namely having more income to save and invest beyond obligations and living needs.	Ordinal
Overconfidence	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 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	Ordinal
Risk Perception	1. I associate the word "risk" with the notion of "opportunity" 2. I avoid risk instead of managing it 3. The risk involved is more acceptable if I can get the potential personal gain I predict 4. I would like to earn more than my current personal income level in the long term 5. I am looking for a business and job with a higher income 6. I have willingness to take risks in financial decisions	Ordinal

The survey distributed to measure all research variables was developed into an instrument with a 5-point Likert scale with perception values of Strongly Disagree (STS-1), Disagree (TS-2), Neutral (N-3), Agree (S-4) to Strongly Agree

(SS-5). This survey instrument is used to test the influence of independent variables (Financial Behavior, Overconfidence, and Risk Perception) on the dependent variable (Investment Decision), and the role of mediating variables (Financial Literacy) on the influence of independent variables on the dependent variable. The results of this survey are expected to find a model of an investment decision in the millennial generation, especially related to the influence of financial behavior, overconfidence, risk perception, and financial literacy so that investment decisions can be made properly and appropriately in the millennial generation studied.

3.7 Data Analysis Technique

This research procedure is appropriate for this study for two reasons. 1) The variables of interest are difficult for the researcher to manipulate (Chambliss and Schutt, 2019) and 2) it is appropriate because participants cannot simply be assigned to conduct and control groups as they are in experimental research. This type of quantitative research is a well-known approach to studying relationships between variables Hult et al (2018). In addition, field research surveys using key informant reports and SEM are familiar to various researches in the field of business marketing Hult et al (2018).

Multivariate statistical methods refer to all statistical techniques that simultaneously analyze several measurements of individuals or objects under study, analyzing several variables that represent measurements related to individuals, companies, events, activities, situations, and so on (Chou and Huh, 2012). Multivariate statistics used in this study is Structural Equation Modeling (SEM) based on variants, namely Partial Least Square (PLS) with the SmartPLS program. PLS is a powerful analysis method because it is not based on many assumptions (Chou and Huh, 2012).Data do not have to be multivariate normally distributed (indicators with theoretical, ordinal, interval to ratio scales are used in the same model), and samples do not have to be large. In addition to being used to confirm theories, PLS can also be used to explain whether there is a relationship between latent variables. Because it is more data-focused and with limited estimation procedures, model misspecification has less effect on parameter estimates.

PLS can analyze as well as constructs formed with reflexive indicators and formative indicators, and this is not possible in covariance-based SEM because there will be unidentified models (Ghozali and Latan, 2012). Here are some reasons for using PLS in this study:

1. The PLS algorithm is not limited to the relationship between indicators and their latent constructs that are reflective, but the PLS algorithm is also used for formative relationships.
2. PLS can be used to estimate the path model
3. PLS can be used for very complex models consisting of many latent and manifest variables without experiencing problems in data estimation.
4. PLS can be used when the data distribution is very skewed or not spread over the mean value.
5. PLS can be used to calculate moderator variables directly, because this study itself consists of 1 moderator variable.

3.7.1 Descriptive Analysis

Descriptive analysis is an empirical descriptive analysis of the information obtained to provide a description / description of an event (who / what, when, where, how, how much) collected in the research (Fisher and Marshall, 2009). The data comes from the answers given by respondents to the items contained in the questionnaire. Furthermore, the researcher will process the existing data by grouping and tabulating then giving an explanation.

3.7.2 Measurement Model Test or Outer Model

The measurement model or outer model shows how each indicator block relates to its latent variable. Evaluation of the measurement model through confirmatory factor analysis using the MTMM (Multi Trait-Multi Method) approach by testing convergent and discriminant validity. Meanwhile, reliability testing is carried out in two ways, namely by using Cronbach's Alpha and Composite Reliability (Ghozali and Latan, 2015).

Convergent validity of measurement models with reflexive indicators can be seen from the correlation between item / indicator scores and construct scores. An individual reflective measure is said to be high if it correlates more than 0.70 with the construct to be measured. However, at the research stage of scale development, an assignment of 0.50 to 0.60 is still acceptable (Ghozali and Latan, 2015).

The discriminant validity of the indicator can be seen in the cross loading between the indicator and the construction. If the correlation of the construct with the indicator is higher than the correlation of the indicator with other constructs, this indicates that the latent construct predicts the indicators in its block better than the indicators in other blocks. Another method for assessing discriminant validity is to compare the square root of the average variance extracted (AVE) for each construct with the correlation between the construct and other constructs and the model. The model is said to have good enough discriminant validity if the AVE root for each construct is greater than the correlation between constructs and other constructs (Ghozali, 2016). Ghozali and Latan (2015) explained another test to assess construct validity by looking at the AVE value. The model is said to be good if the AVE of each construct is greater than 0.50.

In addition to the validity test, model measurement is also carried out to test the reliability of a construct. Reliability tests are carried out to prove the accuracy, consistency and accuracy of the instrument in measuring constructs. In PLS-SEM using the SmartPLS 3.0 program, to measure the reliability of a construct with reflexive indicators can be done in two ways, namely by using Cronbach's Alpha and Composite Reliability. The construct is declared reliable if the composite reliability value and Cronbach's alpha are above 0.70 (Ghozali and Latan, 2015)

1. **Convergent Validity**

   The measurement model shows how the manifest or observed variables represent the latent variables to be measured. Convergent validity is measured using the outer loading parameter. Individual reflexive measures can be said to correlate if the value is more than 0.5 with the construct to be measured

(Ghozali and Latan, 2015). The following are the results of the outer model test to show the outer loading value using the SmartPLS analysis tool.

Table 3.3 Loading Factor Value Investment Decisions

Code	Loading Factor
ID01	0.850
ID02	0.787
ID03	0.732
ID04	0.758
ID05	0.454

Source: Primary data processed, 2023

Based on Table 4.1 that the loading factor value of four variables is above 0.5, and one variable is below 0.5 (0.454), item ID05 must be removed. To be able to see more clearly the loading factor value, the Financial Literacy data is presented in Table 4.2:

Table 3.4 Financial Literacy loading factor value

Code	Loading Factor
FL01	0.768
FL02	0.714
FL03	0.710
FL04	0.586
FL05	0.816
FL06	0.699
FL07	0.653
FL08	0.476
FL09	0.761
FL10	0.433

Source: Primary data processed, 2023

Based on Table 4.2 that the loading factor value of eight variables is above 0.5, and two variables are below 0.5 (0.476 and 0.433), then items FL08 and FL10 must be removed. To be able to see more clearly the loading factor value, the Financial Behavior data is presented in Table 4.3.

Table 3.5 Financial Behavior variable loading factor value

Code	Loading Factor
FB01	**0.622**
FB02	**0.897**
FB03	**0.796**
FB04	**0.899**
FB05	**0.838**
FB06	**0.428**

Source: Primary data processed, 2023

Based on Table 4.3 that the loading factor value of five variables is above 0.5, and one variable is below 0.5 (0.428), then item FB06 must be removed. To be able to see more clearly the loading factor value, the exogenous Overconfidence construct data is presented in Table 4.4.

Table 3.6 Overconfidence variable loading factor value

Kode	Loading Factor
O01	0.825
O02	0.674
O03	0.759
O04	0.859
O05	0.776
O06	0.805
O07	0.727

Source: Primary data processed, 2023

Table 4.4 shows that the loading factor value of all variables is above 0.5, so nothing must be removed. To be able to see more clearly the loading factor value, the Risk Perception data is presented in Table 4.5.

Table 3.7 Risk Perception variable loading factor value

Code	Loading Factor
RP01	0.665
RP02	-0.312

Code	Loading Factor
RP03	0.639
RP04	0.658
RP05	0.462
RP06	0.899

Source: Primary data processed, 2023

Based on Table 4.5, the loading factor value of four variables is above 0.5, and one variable is below 0.5 (0.462 and -0.312), so items RP02 and RP05 must be removed.

2. **Discriminant Validity**

   Is a cross loading factor value that is useful for knowing whether the construct has adequate discriminant, namely by comparing the loading value on the intended construct must be greater than the other values. With the standard value for each construct must be greater than 0.5. based on Table 4.6 the cross loading value for each construct has a value of more than 0.5. this shows that the manifest variables in this study have appropriately explained the latent variables and prove that all items are valid.

Table 3.8 Cross Loading Value

Variable	Validity Results	Conclusion
Financial Behaviour	0.853	Reliable
Financial Literacy	0.861	Reliable
Investment Decisions	0.782	Reliable
Overconfidence	0.891	Reliable
Risk Perception	0.674	Reliable

Source: Primary data processed, 2023

3.7.3 Hypothesis Testing Analysis

To analyze the influence between existing variables, this study will use PLS Structural Equation Modeling (SEM). PLSn (Partial Least Square) is a variant-based structural equation analysis (SEM) that can test the measurement model and test the structural model simultaneously. Measurement models are used to test validity and reliability, while structural models are used to test causality (hypothesis testing with predictive models). PLS is an analytical method that is soft modeling because it does not assume that data must be measured on a certain scale, which means that the number of samples can be small, under 100 samples (Hair Jr, 2020).

CHAPTER 4

DATA ANALYSIS

4.1 Introduction

This chapter will explain the entire process and results of questionnaire development, instrument testing, data collection, data processing, descriptive analysis and data analysis of the research results. The impact of each independent variable and dependent variable should be explained through the analysis.

The questionnaire was developed using the Google form platform, and distributed to the millennial generation who have become investors. Fifty initial responses were received and analyzed to test the research instrument. This involved testing convergent and discriminant validity, which showed that the questionnaire was acceptable, easy to understand, and of high quality. Once the questionnaire was accepted, data collection continued until 200 responses to the questionnaire were collected. Data analysis and results were processed first starting with data processing, which included handling missing values and outliers and data evaluation. After that, descriptive analysis was conducted, and then statistical tests using SmartPLS 3 software. The measurement model and structural model of the model were further analyzed. Finally, conclusions was made after examining the hypothesized findings.

4.2 Data Preparation

Before continuing to distribute questionnaires to the target sample, the researcher conducted a pilot test with 50 collected data to ensure the validity and reliability of all thesis statements through convergent validity and dicriminant validity tests. From the test, 6 statements were found with a loading factor below 0.5 as a requirement for convergent validity and discriminant validity tests, which were then excluded to proceed to statistical methods. After the pilot test, diperoleh pernyataan dalam instrumen penelitian sebagai berikut:

Table 4.1 Operationalization Variables After Pilot Test

Dimension	Items	Scale
Investment Decisions	1. My investment decision supports 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	Ordinal
Financial Literacy	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	Ordinal
Financial Behaviour	1. I invest for financial gain 2. I understand the investment product I choose 3. I have conducted a risk analysis of the investment I have chosen. 4. I have done a comparison of several investment products 5. This investment is in accordance with my goal to gain profit	Ordinal
Overconfidence	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 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	Ordinal

Dimension	Items	Scale
	7. I feel I have a control over the flow of investment returns	
Risk Perception	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 have willingness to take risks in financial decisions	Ordinal

The researcher continued by distributing questionnaires to the target sample after pilot test, which consisted of 200 respondents from the millennial generation who have become investors. This resulted in 200 respondents who met the requirement that they had investing experience, otherwise they could not continue filling out the questionnaire.

4.3 Respondent Profile

This study has a specific respondent profile with a questionnaire that provides demographic information such as gender, age, occupation, and monthly income. Respondents for this study were selected with the criteria that they live in Jakarta and are investors who have invested in stocks, mutual funds, bonds, and other investment products in the capital market. The number of respondents who will answer and send the questionnaire is 200 respondents. The preliminary statement is a general screening for the sample, which is in accordance with the respondent's criteria, as shown in Table 4.1.

Table 4.2 Preliminary Questions

Category	Count	Percentage
Have you lived in Jakarta?	200	100
Do you have an investments in the capital market ?	200	100

Source: Google Form Report (2023)

Once respondents have provided confirmed answers to the two preliminary questions above, they will proceed to complete the demographic and measurement questions. If they do not fit the criteria in the first two questions, then they will not proceed to the next question. As we can see in Table 4.1, all samples live in Jakarta and have investments in the stock market.

Table 4.3 Respondent Profile

Demographic Variable	Category	Count	Percentage
Gender	Female	83	42
	Male	117	59
Age Group	25-28 yo	18	9
	29-32 yo	47	24
	33-36 yo	69	35
	37-40 yo	66	33
Job	Student	2	1
	Private sector employee	57	29
	Civil service employee	61	31
	Self-employed	71	36
	Housewife	9	5
Income per Month	5-10 million	12	6
	10-25 million	39	20
	25-50 million	83	42
	> 50 million	66	33

Source: Google Form Report (2023)

Based on this table, it can be found that the majority of respondents in this study are male as many as 117 people or 59%. In general, respondents' ages are between 33-36 years old as many as 69 respondents or 35% and 37-40 years old as many as 66 people and 33%, in addition to 47 respondents or 24% aged between 29-32 years old. These age groups represent a sample of productive age with relatively having fixed income for private employees, civil servants, or fluctuating income such as self-employed. The majority of them work as Self-employed (71 respondents or 36%), Private sector employee (61 respondents or 31%), Civil service employee (57 respondents or 29%). The income they receive each month reaches 10-25 million as many as 39 respondents or 20%. In addition, this study is dominated by respondents who earn 25-50 million or as many as 83 respondents or 42% of the total respondents, besides that 66 respondents or 33% of the total respondents earn more than 50 million. This indicates that the majority of those who invest have a large income each month.

4.4 Descriptive Statistic

The research data is presented on a rating scale from 1 to 5. The questionnaire was given to respondents to give their opinions on the indicators involved in the research variables. Based on the total number of answer choice categories, each research variable is classified into Strongly Disagree (STS) with a weight value of 1, Disagree (TS) with a weight value of 2, Neutral (N) with a weight value of 3, Agree (S), with a weight value of 4, and Strongly Agree (SS) with a weight value of 5. Furthermore, the data distribution of each variable is depicted in the form of a frequency distribution table. The following is a detailed summary of the data:

1. Investment Decisions

   The results of the distributed Investment Decisions questionnaire are shown below. We can find out the respondents' answers for each indicator of Investment Decisions by setting the answer categories.

Table 4.4 Respondents' Answers to Investment Decisions

Indicator	Mean
My investment decision supports my investment objectives	3.68
I prepared myself to face the risk of loss	3.99
I get my expected return on my investment decision	4.04
I have risk tolerance towards my investment decisions	3.76
Average	**3.87**

Source: Results of processed research data (2023)

Based on the tabulation, it can be seen that the Investment Decisions variable has an average (mean) value of 3.87 and generally indicates that Investment Decisions are important in capital market investment. Based on the table above, there is the highest indicator, namely, "I get my expected return on my investment decision" with a mean value of 4.04. Furthermore, there is the lowest indicator, namely "My investment decision supports my investment objectives" with a mean value of 3.68.

2. Financial Literacy

The results of the distributed Financial Literacy questionnaire are shown below. We can find out the respondents' answers to each indicator of Financial Literacy by setting the answer categories.

Table 4.5 Respondents' Answers to Financial Literacy

Indicator	Mean
I understand interest rates charged by bank, interest rate, loans charged by financial institutions	3.99
I understand how to do my personal financial management well	3.88
I know how to invest my money to buy shares on the stock market	3.72
I understand about the credit ratings carried out by companies	3.72
I am somewhat knowledgeable of stock market activities on the IDX	3.76
I clearly understand the role of brokerage firms in listing on the IDX	3.70
I always have trust when trading on the IDX	3.98
I don’t have any trouble paying attention to the information on the stock market	3.71
Average	**3.81**

Source: Results of processed research data (2023)

Based on this tabulation, it can be seen that the Financial Literacy variable has an average (mean) value of 3.81 and generally indicates that Financial

Literacy is important in capital market investment. Based on the table above, there is the highest indicator, namely, "I understand interest rates charged by banks, interest rates, loans charged by financial institutions" with a mean value of 3.99. Furthermore, there is the lowest indicator, namely "I clearly understand the role of brokerage firms in listing on the IDX" with a mean value of 3.70.

3. Financial Behaviour

The results of the distributed Financial Behaviour questionnaire are shown below. We can find out the respondents' answers to each indicator of Financial Behavior by setting the answer categories.

Table 4.6 Respondents' Answers to Financial Behaviour

Indicator	Mean
I invest for financial gain	3.76
I understand the investment product I choose	3.70
I have conducted a risk analysis of the investment I have chosen.	3.77
I have done a comparison of several investment products	3.72
This investment is in accordance with my goal to gain profit	3.71
Average	**3.73**

Source: Results of processed research data (2023)

Based on the tabulation, it can be seen that the Financial Behavior variable has an average (mean) value of 3.73 and generally indicates that Financial Behavior is important in capital market investment. Based on the table above, there is the highest indicator, namely, "I understand the investment product I choose" with a mean value of 3.70. Furthermore, there is the lowest indicator, namely "I have conducted a risk analysis of the investment I have chosen" with a mean value of 3.77.

4. Overconfidence

The results of the distributed Overconfidence questionnaire are shown below. We can find out the respondents' answers for each Overconfidence indicator by setting the answer categories.

Table 4.7 Respondents' Answers to Overconfidence

Indicator	Mean
I believe that my expertise and knowledge of the stock market can help outperform the market.	3.99
I feel I have sufficient ability to manipulate profitable investments	3.68
I feel that I am always lucky to invest in the best deals	3.77
I feel sufficiently experienced in forecasting investments	3.72
I take a short time to analyze and rely on the available market statistics	3.71
I do a lot of trading on the accounting periods	4.04
I feel I have a control over the flow of investment returns	3.72
Average	**3.80**

Source: Results of processed research data (2023)

Based on the tabulation, it can be seen that the Overconfidence variable has an average (mean) value of 3.80 and generally indicates that Overconfidence is important in capital market investment. Based on the table above, there is the highest indicator, namely, "I do a lot of trading on the accounting periods" with a mean value of 4.04. Furthermore, there is the lowest indicator, namely "I feel I have sufficient ability to manipulate profitable investments" with a mean value of 3.68.

5. Risk Perception

The results of the distributed Risk Perception questionnaire are shown below. We can find out the respondents' answers to each Risk Perception indicator by setting the answer categories.

Table 4.8 Respondents' Answers to Risk Perception

Indicator	Mean
I associate the word "risk" with the notion of "opportunity"	3.71
The risk involved is more acceptable if I can get the potential personal gain I predict	3.76
I would like to earn more than my current personal income level in the long term	3.93
I have willingness to take risks in financial decisions	3.72
Average	**3.78**

Source: Results of processed research data (2023)

Based on the tabulation, it can be seen that the Risk Perception variable has an average (mean) value of 3.78 and generally indicates that Risk Perception is important in capital market investment. Based on the table above, there is the highest indicator, namely, "I would like to earn more than my current personal income level in the long term" with a mean value of 3.93. Furthermore, there is the lowest indicator, namely "I associate the word "risk" with the notion of "opportunity"" with a mean value of 3.71.

4.5 PLS-SEM Analysis

To evaluate the hypotheses, structural equation modeling (SEM) was used in the data analysis. This is due to the fact that it has the ability to estimate various relationships and interrelationships while explaining measurement errors that occur during the estimation process (Hair et al., 2014). SEM offers an interesting method of theory testing, so this study used it. SEM will assess how the researcher's theory fits the data (to find out how the research variables affect each other) if the researcher shows the theory in the relationship between the measured variables.

The Structural Equation Model (SEM) method was used in this study. The measurement model used by the Smart PLS version 4.0 program is used to measure the intensity of each research variable. The structural model is used to analyze data and research hypotheses. It is designed to allow researchers to examine latent variables, indicator variables, and measurement errors directly to find out how each variable in the study impacts each other. Using arrows connecting each circle to a box, the reflective model calculates the distance between each construct or latent variable and its dimensions.

The path diagram of the Full Structural Model is obtained based on Partial Least Square estimation, as shown in Figure 4.1.

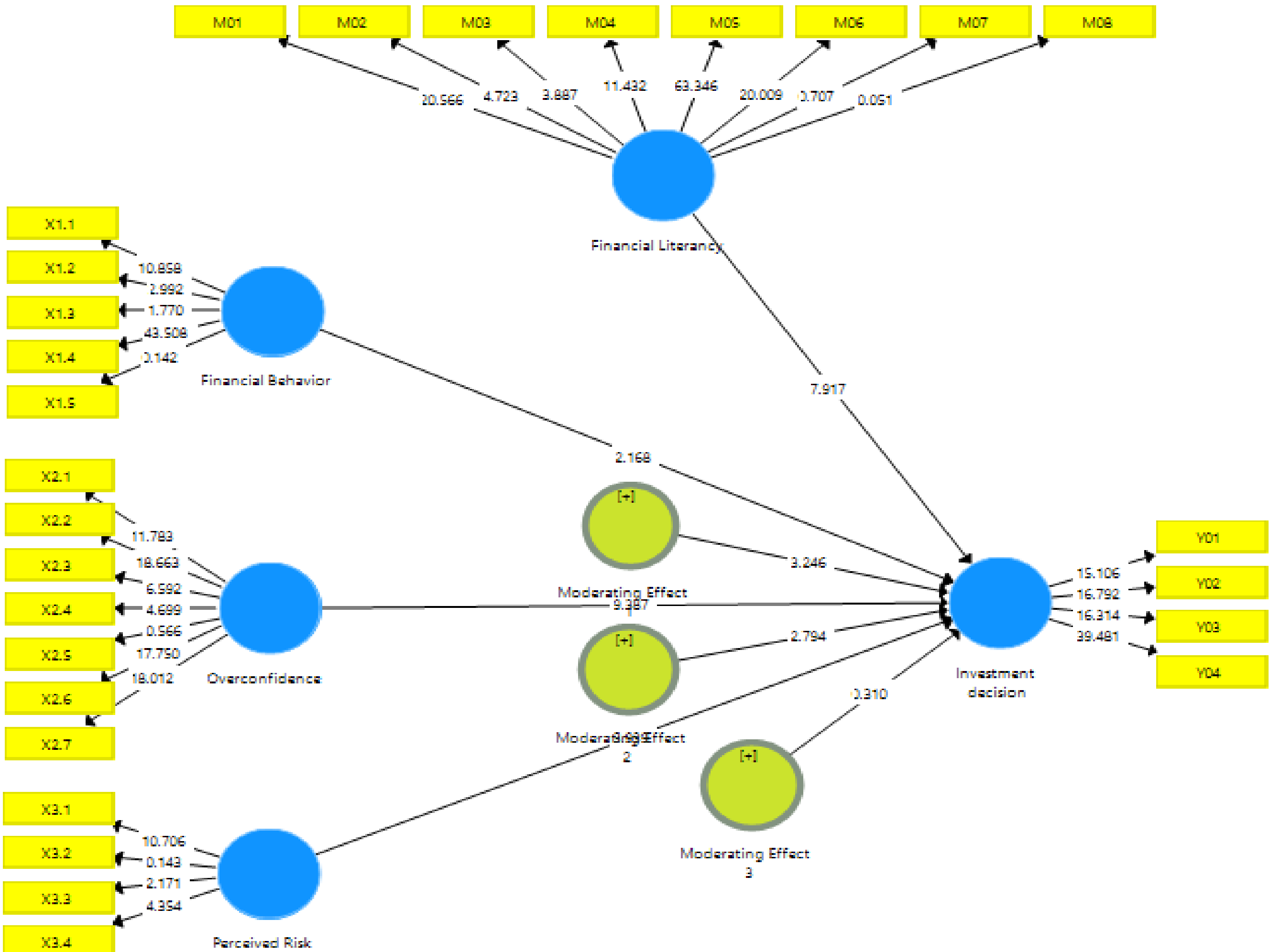

Figure 4.1 Structural Model

Source: PLS-SEM Result (2023)

Through the structural model above, it can be seen that the yellow box shows each indicator and the blue circle shows the latent variable. And there is a score on each arrow that shows the validity value of each indicator and to test the construct reliability of the variable under study. Indicators are said to be valid if they have a factor loading value >0.5 (Ghozali and Latan, 2015). There are two types of measurement models, namely reflective and formative measurement models. The reflective model is used to validate the indicators and latent variables used in this study.

4.5.1 Model Assumption Evaluation Test

Measurement model, or outer model with reflexive indicators, is evaluated by convergent and discriminant validity of indicators, and composite reliability for block indicators. The structural model, or inner model, is evaluated by analyzing the explained percentage of variance, i.e., the R2 value for the dependent latent construct, and the size of the structural path coefficient. The stability of these estimates is evaluated by using the t-parameter.

1. Outer Model
   a. Convergent Validity

      The measurement model shows how the manifest or observed variables represent the latent variables to be measured. Convergent validity is measured using the outer loading parameter. Individual reflexive measures can be said to correlate if the value is more than 0.5 with the construct to be measured (Ghozali and Latan, 2015). The following are the results of the outer model test to show the outer loading value using the SmartPLS analysis tool.

      From the results of the outer loading analysis Figure 4.1 shows that as many as 28 of the total variables, 28 items have a value greater than 0.5. To be able to see more clearly the loading factor value, Financial Literacy is presented in Table 4.9.

Table 4.9 Loading Factor Financial Literacy

Kode	Loading Factor
FL1	0.797
FL2	0.974
FL3	0.860
FL4	0.881

FL5	0.880
FL6	0.778
FL7	0.839
FL8	0.709

Source: Primary data processed, 2023

Based on Table 4.9 that the loading factor value of all variables is above 0.5, then nothing is removed. To be able to see more clearly the loading factor value, the Financial Behaviour data is presented in Table 4.10.

Table 4.10 Loading Factor Financial Behavior

Kode	Loading Factor
FB1	0.903
FB2	0.852
FB3	0.702
FB4	0.884
FB5	0.725

Source: Primary data processed, 2023

Based on Table 4.10 that the loading factor value of all variables is above 0.5, then nothing is excluded. To be able to see more clearly the loading factor value, the exogenous Overconfidence construct data is presented in Table 4.11.

Table 4.11 Loading Factor Overconfidence

Kode	Loading Factor
O01	0.775
O02	0.804
O03	0.727
O04	0.886
O05	0.735

O06	0.754
O07	0.782

Source: Primary data processed, 2023

Table 4.11 shows that the loading factor value of all variables is above 0.5, so no one is excluded. To be able to see more clearly the loading factor value, the exogenous Risk Perception construct data is presented in Table 4.12.

Table 4.12 Loading Factor Risk Perception

Kode	Loading Factor
PR1	0.850
PR2	0.961
PR3	0.931
PR4	0.864

Source: Primary data processed, 2023

Table 4.12 shows that the loading factor value of all variables is above 0.5, so no one is excluded. To be able to see more clearly the loading factor value, the exogenous Investment Decision construct data is presented in Table 4.13.

Table 4.13 Loading Factor Investment Decision

Kode	Loading Factor
ID1	0.736
ID2	0.784
ID3	0.756
ID4	0.853

Source: Primary data processed, 2023

Table 4.13 shows that the loading factor value of all variables is above 0.5, so no one is excluded.

b. Discriminant Validity

Discriminant Validity is a cross loading factor value that is useful for knowing whether the construct has adequate discriminant, namely by comparing the loading value on the intended construct must be greater than the other values. Based on Table 4.14, the cross loading value for each construct has a value of more than 0.6. this shows that the manifest variables in this study have accurately explained the latent variables and prove that all items are valid.

Table 4 14 Cross Loading Value

Variable	Validity Result	Description
Financial Behavior	0.747	Reliable
Overconfidence	0.722	Reliable
Risk Perception	0.763	Reliable
Financial Literacy	0. 673	Reliable
Investment Decision	0.788	Reliable

Source: Primary data processed, 2023

2. Inner Model

The structural model was evaluated using R-square for dependent constructs, Stone-Geisser Q-square test for Q2 predictive relevance, significance test of structural path parameter coefficients.

a. R-Square (R^2)

Evaluation of the structural model or inner model aims to predict the relationship between latent variables. The structural model is evaluated by looking at the percentage of variance explained, namely by looking at the R-Square value for endogenous latent constructs. The following is Table 4.16.

Table 4.15 R Square

Variable	R-square	R-square adjusted
Investment Decision	0.941	0.939

Source: Primary data processed, 2023

From the results in Table 4.16 shows that the Investment Decision value is 0.939. This value shows that Financial Behaviour, Overconfidence, Risk Perception, and Financial Literacy affect the Investment Decision variable by 93.9 percent and the rest (6.1) is influenced by other variables outside the variables in this study.

b. Significance Test (Bootstraping)

To find out whether a hypothesis is accepted or rejected, it can be done by paying attention to the significance value between constructs, t-statistics and p-values. In this way, the measurement estimates and standard errors are no longer calculated with statistical assumptions, but are based on empirical observations. In the bootstraping method in this study, the hypothesis is accepted if the significance value of the t-values is greater than 1.65 and or the p-values are smaller than 0.05, then Ha is accepted and Ho is rejected and vice versa.

Table 4.16 t Statistic

Hypothesis	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Financial Behavior -> Investment Decision	0.110	0.090	0.051	2.168	0.031
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
Moderating Effect 1 -> Financial Behavior	-0.185	-0.170	0.057	3.246	0.001
Moderating Effect 2 -> Overconfidence	0.137	0.121	0.049	2.794	0.005
Moderating Effect 3 -> Risk Perception	-0.007	-0.007	0.024	0.310	0.756

Source: Primary data processed, 2023

4.6 Hypothesis Testing

Based on Table 4.15, the determination of whether the hypothesis is accepted or rejected is explained as follows.

1. The Effect of Financial Behaviour on Investment Decision
    a. Hypothesis 1: There is an effect of Financial Behaviour on Investment Decision

       Ho: There is an effect of Financial Behaviour on Investment Decision

       Ha: There is no effect of Financial Behaviour Influence on Investment Decision

    b. Criteria

       If P values <0.05 then Ho is rejected and H1 is accepted.

    c. Results

       Hypothesis testing shows a P value of 0.031.

    d. Conclusion

       Based on the results of the above calculations, it can be concluded that hypothesis 1 is accepted and it is stated that there is an effect of Financial Behaviour on Investment Decision.

    This result is in line with the results of Kandpal and Mehrotra's research (2018) which states that behaviour is very important in making wise investment decisions. However, these results differ from research conducted by Mutawally and Asandimitra (2019) which states that financial behaviour has no effect on investment decisions.

2. The Effect of Overconfidence on Investment Decision
    a. Hypothesis 2: There is an Effect of Overconfidence on Investment Decision

       Ho: There is an Effect of Overconfidence on Investment Decision

       Ha: There is no Effect of Overconfidence on Investment Decision

    b. Criteria

       If P values <0.05 then Ho is rejected and H1 is accepted.

    c. Results

       Hypothesis testing shows a P value of 0.000.

    d. Conclusion

Based on the results of the above calculations, it can be concluded that hypothesis 2 is accepted and it is stated that there is an effect of Overconfidence on Investment Decision.

This result is in line with the results of Pradikasari and Isbanah (2018) which states that overconfidence can affect investment decisions. This is because respondents believe they have the ability they have without seeing what risks will be accepted when investing. However, these results differ from research conducted by Rahman and Gan (2020) overconfidence has a negative effect on investment decisions. This shows that the higher the overconfidence an investor has, the lower the accuracy of investment decisions so that investors underestimate the level of mistakes made.

3. The Effect of Perceive Risk on Investment Decision
   a. Hypothesis 3: There is an effect of Perceive Risk on Investment Decision

      Ho: There is an effect of Perceive Risk on Investment Decision

      Ha: There is no effect of Perceive Risk Influence on Investment Decision
   b. Criteria

      If P values <0.05 then Ho is rejected and H1 is accepted.
   c. Results

      Hypothesis testing shows a P value of 0.000.
   d. Conclusion

      Based on the results of the above calculations, it can be concluded that hypothesis 3 is accepted and it is stated that there is an effect of Perceive Risk on Investment Decision.

This result is in line with the opinion of Hoffmann et al. which states that risk perception is assumed to influence investment decisions, namely the higher a person's risk perception, the person will avoid allocating funds to high-risk assets and prefer low-risk assets (Hariharan et al., 2000). Likewise, the opinion of Aren and Zengin (2016), which states that investors who have lower risk perceptions are more likely to choose to invest in high-risk businesses when compared to low-risk deposits (Aren and Zengin, 2016).

4. The Moderating Role of Financial Literacy on the Effect of Financial Behaviour on Investment Decision
   a. Hypothesis 4: Financial Literacy moderates the effect of Financial Behaviour on Investment Decision

      Ho: Financial Literacy moderates the effect of Financial Behaviour on Investment Decision

      Ha: Financial Literacy cannot moderate the effect of Financial Behaviour on Investment Decision
   b. Criteria

      If P values <0.05 then Ho is rejected and H4 is accepted.
   c. Results

      Hypothesis testing shows a P value of 0.001.
   d. Conclusion

      Based on the results of the above calculations, it can be concluded that hypothesis 4 is accepted and it is stated that Financial Literacy moderates the effect of Financial Behaviour on Investment Decision.
5. The Moderating Role of Financial Literacy on the Effect of Overconfidence on Investment Decision
   a. Hypothesis 5: Financial Literacy moderates the effect of Overconfidence on Investment Decision

      Ho: Financial Literacy moderates the effect of Overconfidence on Investment Decision

      Ha: Financial Literacy cannot moderate the Effect of Overconfidence on Investment Decision
   b. Criteria

      If P values <0.05 then Ho is rejected and H5 is accepted.
   c. Results

      Hypothesis testing shows a P value of 0.001.
   d. Conclusion

      Based on the results of the above calculations, it can be concluded that hypothesis 5 is accepted and stated that Financial Literacy moderates the effect of Overconfidence on Investment Decision.

6. The Moderating Role of Financial Literacy on the Effect of Risk Perception on Investment Decision
   a. Hypothesis 6: Financial Literacy moderates the effect of Risk Perception on Investment Decision

      Ho: Financial Literacy moderates the effect of Risk Perception on Investment Decision

      Ha: Financial Literacy cannot moderate the effect of Risk Perception on Investment Decision
   b. Criteria

      If P values <0.05 then Ho is rejected and H4 is accepted.
   c. Results

      Hypothesis testing shows P values of 0.756.
   d. Conclusion

      Based on the results of the calculations, it can be concluded that hypothesis 6 is rejected and stated that Financial Literacy cannot moderate the effect of Risk Perception on Investment Decision.

The results of the three hypothesis tests related to the moderating role of Financial Literacy on the Effect of Financial Behaviour, Overconfidence, and Risk Perception on Investment Decision are in line with experts' opinions regarding Financial Literacy. In most cases, financial expertise resulted the ability to make better business decisions about money management and the use of it. There is a positive effect on the way a person behaves financially, especially when it comes to sharing money appropriately (Robb and Woodyard, 2011). Financial literacy is considered as a way to reduce the influence that an investor's actions and mental state have when they make investment decisions. This is because a lack of financial literacy can cause companies to fail in investment as well as poor financial behaviour and mental states, such as overconfidence, which can lead to financial failure. This is in line with research by Sabir et al. (2019), Ahmad and Shah (2020), and Arik and Sri (2021), who found that the quality factor of overconfidence moderated by financial literacy can affect how a person makes investment decisions. In addition, research by Adil et al (2023) and Noviaanggie and Asandimitra (2019) found that financial literacy can influence how a person makes investment decisions.

Table 4.17 Recapitulation of Hypothesis Test Results

	Hipotesis	**Keterangan**
H1	Financial Behaviour Affects Investment Decision	Accepted
H2	Overconfidence Affects Investment Decision	Accepted
H3	Risk Perception Affects Investment Decision Investment	Accepted
H4	Financial Literacy moderates the effect of Financial Behaviour on Investment Decision	Accepted
H5	Financial Literacy moderates the effect of Overconfidence on Investment Decision	Accepted
H6	Financial Literacy moderates the effect of Risk Perception on Investment Decision	Rejected

Source: Primary data processed, 2023

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this final chapter, the research will present the research conclusions and recommendations. In this chapter, we will review each of the research objectives and consider whether or not the research has fulfilled these objectives. In addition, this section will examine the contributions made to the academic and practical ramifications. Not to mention that this research has some limitations, and it is possible to conduct more research in the same or broader domain.

5.2 Conclusion

The strategic objective of this study is to gain insight into which variables have the most influence on investment decisions among investors in the millennial generation in the Jakarta area using behavioural theory with independent variables of financial behaviour, overconfidence, and risk perception measured in this study. In addition, this study also uses a moderating variable, namely Financial Literacy, which will strengthen the effect between the independent and dependent variables. In the background previously described, there are still research gaps that become the focus of researchers, namely there are pros and cons to the research results of the influence between variables, namely overconfidence, financial behaviour, risk perception, and also financial literacy on financial decisions.

Therefore, this study will conduct research on the influence of these variables by including the moderating effect of financial literacy in the influence of financial behaviour and overconfidence on financial decisions as previously done by previous studies. In addition, this study will also develop research by adding risk perception variables to financial decisions with the mediating effect of financial literacy as a renewal of previous research. The questionnaire distributed received 200 answers from millennial generation investors in Jakarta. The sample was then grouped by gender, age, occupation, and monthly income. The data collected offers high quality data for high quality to process and analyze.

5.3 Specific Conclusion

The first objective obtained the results that financial behaviour has a positive effect on investment decisions is accepted, which means that financial behaviour affects investment decisions for millennial generation investors in Jakarta.

The second objective obtained the results that overconfidence has a positive effect on investment decisions is accepted, which means that overconfidence has an effect on investment decisions on millennial generation investors in Jakarta.

The third objective obtained the result that risk perception has a positive effect on investment is accepted, which means that risk perception affects investment in millennial generation investors in Jakarta.

The fourth objective obtained the result that financial literacy moderates the effect of financial behavior on investment decision is accepted, which means that financial literacy can moderate the effect of financial behavior on millennial generation investors in Jakarta.

The fifth objective obtained the results that financial literacy moderates the effect of overconfidence on investment decisions is accepted, which means that financial literacy can moderate the effect of overconfidence on investment decisions on millennial generation investors in Jakarta.

The sixth objective obtained the results that financial literacy moderates the effect of risk perception on investment decisions is rejected, which means that financial literacy cannot moderate the effect of risk perception on investment decisions on millennial generation investors in Jakarta.

5.4 The Implication of the study

5.4.1 Theoretical implication

The findings of this study supported previous studies on the theory of planned behaviour widely used in investment decision research. Other researchers for investment decision usually only reach the scope of irrational behaviour and individual's prediction which lead to wrong investment decision. The outcomes of this study indicated the impact of financial behaviour, overconfidence and risk perception with moderating effect of financial literacy on investment decision for millennial investors in Jakarta can give a good insight with a new finding that financial literacy cannot moderate the effect of risk perception on investment decision.

5.4.2 Practical Implication

The results of this study reveal that Financial behaviour, Overconfidence, and Risk Perception have a positive effect on investment decisions. So that investors get the ideas in making decisions to invest it is likely to be influenced by these three factors. Likewise, the role of financial literacy can moderate the influence of Financial behaviour and Overconfidence on investment decisions, this can give the investors insight that financial literacy is something they should prioritized because financial literacy plays huge role in controlling investors' irrational behavior in decision making.

The results of this study can give good ideas for companies in capital market industries. To attract their new investors and maintaining the existing investors, they can use these factors explained on this study to educate their investors. Usually, investment management companies, brokerages, etc like to held seminars and outlooks as a service to educate their investors. But most of them only focus on how their investors get the satisfying return, with this study they can start to focus on how the investors behave rationally and risk management supported by financial literacy they already have.

5.5 Limitation of the Study and Recommendation for Future Studies

This study has limitations in time and variables used as factors that influence investment decisions so that it still cannot find out other factors that influence investment decisions. In addition, there is a risk of biased views from the respondents and limited sources to support questionnaire drafting to make it theoretically suitable.

Future research is expected to extend the research time and add variables as other factors that influence investment decisions. In addition, further research can expand the research population. Since different regions, spesific type of investment product, spesific occupation, and wider range of ages might result deeper analysis and impact.

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APPENDIX: QUESTIONNAIRE

THE INFLUENCE OF FINANCIAL BEHAVIOR, OVERCONFIDENCE, AND RISK PERCEPTION ON INVESTMENT DECISIONS ON MILLENNIAL GENERATION IN JAKARTA

Market Research

Halo, saya Adlina Nadhila, mahasiswa pascasarjana Ipmi International Business School. Saya melakukan riset pasar ini sebagai penelitian tugas akhir saya untuk melihat pengaruh dari financial behavior, overconfidence dan risk perception terhadap keputusan dalam berinvestasi. Jawaban bersifat rahasia dan hanya akan digunakan untuk tujuan penelitian akademis. Kontribusi anda sangat berarti, terima kasih!

Hello, I'm Adlina Nadhila, an MBA student at Ipmi International Business School. I conduct this market research as my final project research to see the influence of financial behavior, overconfidence and risk perception on investment decisions. Your answers are confidential and will only be used for academic research purposes. Your contribution is very meaningful for me, thank you!

Dimensions	Items to be Measured
Investment Decisions	5. My investment decision supports my investment objectives 6. I prepared myself to face the risk of loss 7. I get my expected return on my investment decision 8. I have risk tolerance towards my investment decisions
Financial Literacy	9. I understand interest rates charged by bank, interest rate, loans charged by financial institutions 10. I understand how to do my personal financial management well 11. I know how to invest my money to buy shares on the stock market 12. I understand about the credit ratings carried out by companies 13. I am somewhat knowledgeable of stock market activities on the IDX 14. I clearly understand the role of brokerage firms in listing on the IDX 15. I always have trust when trading on the IDX 16. I don’t have any trouble paying attention to the information on the stock market

Dimensions	Items to be Measured
Financial Behaviour	6. I invest for financial gain 7. I understand the investment product I choose 8. I have conducted a risk analysis of the investment I have chosen. 9. I have done a comparison of several investment products 10. This investment is in accordance with my goal to gain profit
Overconfidence	8. I believe that my expertise and knowledge of the stock market can help outperform the market. 9. I feel I have sufficient ability to manipulate profitable investments 10. I feel that I am always lucky to invest in the best deals 11. I feel sufficiently experienced in forecasting investments 12. I take a short time to analyze and rely on the available market statistics 13. I do a lot of trading on the accounting periods 14. I feel I have a control over the flow of investment returns
Risk Perception	5. I associate the word "risk" with the notion of "opportunity" 6. The risk involved is more acceptable if I can get the potential personal gain I predict 7. I would like to earn more than my current personal income level in the long term 8. I have willingness to take risks in financial decisions

ABBREVIATION

BPS : Badan Pusat Statistik

N : Neutral

OJK : Otoritas Jasa Keuangan (Financial Services Authority)

PLS : Partial Least Square

S : Setuju

SEM : Structural Equation Model

SPSS : Statistical Package for the Social Sciences

SS : Sangat Setuju

STS : Sangat Tidak Setuju

TRA : Theory of Reasoned Action

TS : Tidak Setuju

MLE : Maximum Likelihood Estimation

MTMM : Multi Trait-Multi Method

SEM : Square Equation Modelling

SID : Single Identification Number

STATEMENT LETTER

PAPER APPROVAL FORM