

## Financial Literacy and Overconfidence in Investment Decision Making

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**Abstract.** Financial literacy and overconfidence need to be examined in relation to investment decision-making because the higher the level of individual literacy, the more optimal the investment decision-making becomes. Conversely, the higher the level of individual overconfidence, the easier it is to make investment decisions. This study aims to empirically examine the influence of financial literacy and overconfidence on investment decision-making. The research was conducted on students who are members of the KSPM (*Kelompok Studi Pasar Modal / Capital Market Study Group*) at several campuses with an *Indonesia Stock Exchange Investment Gallery* in the cities of Makassar and Surabaya. The urgency of this study is to empirically assess the level of financial literacy and the level of *self-confidence* among young investors. This research employs a quantitative descriptive design, using primary data collected through questionnaires distributed directly to students who met the study's criteria, to maintain a satisfactory return rate. Data were analyzed using SEM-PLS. The results show that financial literacy has no significant effect on investment decisions, whereas overconfidence does influence investment decisions. These findings suggest that psychological factors, particularly overconfidence, may outweigh knowledge-based considerations in shaping students' investment behavior. The implication of this study is that while improving financial literacy remains important, investment education programs should also address behavioral biases such as overconfidence, to better prepare young investors for rational and sustainable financial decision-making.

**Keywords:** literacy; finance; overconfidence; and investment

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### INTRODUCTION

The digital era includes all data-based information so that some individuals want and believe in carrying out activities that are beneficial for the present and the future (Williamson, 2017). This can be seen from the increase in investment from various types of products in the Indonesia capital market. Investments can currently be made in various ways, either independently through applications that can be downloaded on mobile phones (mobile phones) or through banking services or even through third parties. Investment is a financial management activity that utilizes cash through the investment of funds owned to produce in the future. Investing requires behavioral and technical aspects in addition to conducting analysis in decision-making to buy and sell various types of assets (Hala et al., 2020; Vasilieva, 2024). The main goal for investment is to earn profits and increase wealth or assets. However, making an investment is not an easy decision so enough knowledge is needed to invest.

Having financial knowledge is very important from every individual or entity when making investments (Krische, 2019). Every individual or entity can maximize their decision to decide on the ideal financial product with the knowledge they have, this is known as financial literacy (Lusardi, 2019). Financial literacy is an understanding of money and financial items that people may use. Based on the results of a survey by the Financial Services Authority (OJK) throughout the Indonesia of 2014 in 2014, it was stated that as many as 93.79% of the Indonesia people did not have the knowledge to invest in the capital market, but based on the results of a survey conducted in 2020, it was seen that there was an increase in financial literacy. In fact,

financial literacy is an important aspect in increasing financial literacy for economic expansion (Clichici & Moagar-Poladian, 2022; Vovchenko et al., 2018).

The choice to invest is not always in accordance with the assumptions or perceptions of the data obtained. The idea of expected benefits substantially affects the individual's investment choices. The concept of anticipated utility is a risky decision in order to maximize results. The opinion states that decision-makers are rational, despite the fact that such decisions are often irrational (Pothos et al., 2021). However, decision-making depends on human psychological factors. Human decision-making behavior is influenced by psychological factors (Julmi, 2019). Psychological and emotional factors are understood as decisions that affect finances and markets (Bhanu, 2023).

According to Nofsinger (2001) stated that financial behavior theory is defined by the study of how we as humans actually behave when making decisions related to finance called Behavioral Finance (Bogunjoko, 2022). Behavioral finance is a concept that describes how psychology affects an individual's investments and financial actions. Psychological factors affect the behavior of the investor. Investors have investment decisions and risk tolerance that are influenced by other individual character overconfident factors (Song et al., 2022). Age, education level and family status are all mentioned as determinants. Younger investors (under 30) are often more tolerant of risk. Younger investors with higher incomes put their capital and shares in more profitable portfolios (Muktadir-Al-Mukit, 2022). In contrast, married investors are less likely to invest in mutual funds and stocks.

Socioeconomic considerations have a role in financial management in addition to demographic considerations. Education, employment, income and wealth ownership are indices of socioeconomic position (Loke, 2017). An individual's perspective on spending, investment savings, credit and money management may be influenced by their parents' parenting, employment and social status. According to research, a person's literacy level is determined by their parents' occupation and social status. Financial literacy and financial management are closely interrelated, the more financial literacy a person has, the more effective they can manage their money. There is also an opinion that individuals with the ability to make good financial judgments will not experience financial difficulties in the future, will show good financial behavior and will prioritize their needs over their desires.

The time span from 2017-2022 shows an increase in investors involved in the capital market of the Indonesia Stock Exchange. Based on the growth in the number of investors, it turns out that it is dominated by millennials or under the age of 30 years out of the total number of investors (Patil & Gokhale, 2022). In this age range are students, it indicates that they are familiar with the investment they get from the course and also their involvement in the community in the campus environment, namely KSPM (Capital Market Study Group) this is a big revolution by the Indonesia Stock Exchange by providing an Investment Gallery on each campus in Indonesia, including the Ujung Pandang State Polytechnic campus and several campuses in the city of Makassar so that the level of investment in millennials is growing rapidly. Financial literacy in millennials is getting stronger.

Presentation on financial literacy, the relationship between financial literacy and investment choices, demographics and socio-economic aspects as well as the relationship between financial literacy and investment decisions (Choudhary et al., 2021). Encourage academics to conduct a more in-depth study of the influence of financial literacy levels and the factors that influence it. Supporting the growth of investment in the millennial generation requires in-depth knowledge of investment activities and investment decisions (Jaya et al., 2021; Zega & Satato, 2025). Continuing previous studies that show the impact of financial statements on investment decisions when the millennial generation is required to conduct in-depth research on how to utilize financial statements when investing. The researcher is interested in conducting

research that focuses on how the millennial generation, in this case students, make investments by utilizing financial statements, wealth and family ethnicity as criteria in decision-making (Pokharel & Maharjan, 2024; Reavis et al., 2021). Students who will be the subjects of this research are students who study on campuses that have an Investment Gallery (GI) and are members of KSPM from the GI on campus. This is because the student has a higher level of literacy than other students. Makassar and Surabaya are big cities in Indonesia so many business and investment activities are carried out, so it is quite feasible to be the subject of this research. This is what is the novelty or novelty of another research.

Previous research by Lusardi and Mitchell (2014) demonstrated that financial literacy significantly influences investment decision-making, where individuals with higher literacy levels tend to make more rational and profitable decisions; however, their study primarily focused on the general population in developed countries without considering the specific context of young investors in developing nations. Meanwhile, found that psychological factors, particularly overconfidence, play a more dominant role than financial literacy in shaping students' investment decisions, although the study was limited to a single region and thus lacked broader generalizability (Suriyanti et al., 2024; Tansuchat & Thaicharo, 2025).

The objective of this research is to analyze the influence of financial literacy, overconfidence, and demographic as well as socio-economic factors on students' investment decision-making. The benefit of this study lies in providing empirical contributions to the development of behavioral finance theory in the context of young investors in Indonesia, while also offering practical insights for educational institutions, regulators, and capital market industries to design strategies that enhance financial literacy and promote healthier investment behavior.

## RESEARCH METHOD

This study was a quantitative descriptive study that used primary data collected through questionnaires distributed to students who were members of KSPM in each campus Investment Gallery. This was because KSPM members regularly received capital market education from the Indonesia Stock Exchange through the Capital Market School.

The population of this study consisted of students from a campus in the city of Makassar that had an Investment Gallery established by the Indonesia Stock Exchange. However, the research sample consisted of students who were members of KSPM (Capital Market Study Group) on campuses in the cities of Makassar and Surabaya. The sample was collected using a purposive sampling method, with the condition that respondents were still active students and members of KSPM.

The data in this study were analyzed using Smart Partial Least Square (SmartPLS). The reason for using SmartPLS was that it was considered an application that made it easier to analyze Partial Least Square (PLS). PLS is a type of Structural Equation Model (SEM) based on variance-based structural equation modelling.

## RESULTS AND DISCUSSION

This research was conducted on students on campuses located in the city of Makassar and Surabaya and have an Investment Gallery corner established by the Indonesia Stock Exchange. The students who are respondents to this research are students who are members of KSPM (Capital Market Study Group). The respondents of this study were 100 KSPM students. Before taking data on actual research respondents, the validity and reality of the questionnaire were tested through a Pilot Test on 30 students. Respondents who have become respondents in the pilot test stage cannot become the main respondents of this study.

The data collection process was carried out directly by the researcher by visiting the campus where the Investment Gallery is located in the city of Makassar and the city of Surabaya. Several respondents in Makassar filled out the questionnaire using a form link, but the response from the respondents was very small, so data was collected directly by the research team. Data collection was carried out for 3 months (12 weeks) starting from May 2024 to July 2024 to avoid not meeting the target of research data, the researcher distributed a questionnaire of 150 questionnaires. However, as many as 100 questionnaires have returned and can still be processed further.

### ***Pilot Test***

Pilot tests are used to test the feasibility of research instruments, before the main survey is carried out. The pilot test was carried out on 30 students of the Ujung Pantai State Polytechnic. The validity test was carried out using the loading factor value of convergent validity and AVE (Average variance extracted). For construct realism use a Cronbach's alpha value of more than 0.7. The test in the pilot test of the loading limit value used was 0.7 (Ghozali, 2008; Hair et al., 2021; Taherdoost, 2017) The following are the results of testing the measurement model by looking at the loading factor.

**Table 1. Convergence Validity Test**

<b>Indicator</b>	<b>Standard</b>	<b>Conclusion</b>
LK1	>0,70	Valid
LK2	>0,70	Valid
LK3	>0,70	Valid
LK4	>0,70	Valid
LK5	>0,70	Valid
LK6	>0,70	Valid
LK7	>0,70	Valid
LK8	>0,70	Valid
LK9	>0,70	Valid
LK10	>0,70	Valid
OV1	>0,70	Valid
OV2	>0,70	Valid
OV3	>0,70	Valid
OV4	>0,70	Valid
OV5	>0,70	Valid
OV6	>0,70	Valid
OV7	>0,70	Valid
OV8	>0,70	Valid
OV9	>0,70	Valid
OV10	>0,70	Valid
OV11	>0,70	Valid
KI1	>0,70	Valid
KI2	>0,70	Valid
KI3	>0,70	Valid
KI4	>0,70	Valid
KI5	>0,70	Valid
KI6	>0,70	Valid

Source: data processed, 2024

The validity test of the construct is decided based on the AVE value. The construct is valid if the AVE value is >0.5 (Hair et al., 2021) The following are the results of the validity test of the pilot test construct in this study.

**Table 2. Construct Validity Pilot Test**

Construction	AVE	Standard	Conclusion
Financial Literacy	0.672	>0,5	Valid
Overconfidence	0.566	>0,5	Valid
Investment Decision	0.541	>0,5	Valid

Source: data processed, 2024

Based on table 1 and table 2, it can be concluded that all questionnaires are valid and can be used to measure the construct in this study. The next step is to test the construct reality of this study using Cronbach alpha and composite reality values. The following are the results of the construct feasibility test for the pilot test which has a loading factor of > 0.7.

**Table 3. Construct Reality Test Pilot Test**

Indicators	Cronbach's alpha	Composite reliability	Standard	Conclusion
LK	0.916	0.923	>0.7	Reliable
OV	0.914	0.919	>0.7	Reliable
KI	0.902	0.913	>0.7	Reliable

Source: data processed, 2024

Based on table 3, it can be concluded that all questionnaires have been reliable and can be used in this study.

At this stage, an inner model analysis is carried out that describes the relationship between variables based on substantive theory

1. Hypothesis testing by assessing the significance and relevance of structural model relationships

This stage uses path coefficients, standard errors, significance levels, t-value and p-value to assess the significance and relevance of the structural model relationship in this study. The significance value ( $\alpha$ ) used was 0.10 The following are the results of the assessment of the significance and relevance of the structural model which can be seen in the following table.

**Table 4. Hypothesis Testing**

Hypothesis		Coefficient	t-statistic	p-values	Conclusion
Hypothesis 1	LK -> KI	-0.080	0.559	0.576	Not Supported
Hypothesis 2	OV -> KI	0.764	5.869	0.000	Supported

Source: data processed, 2024

Based on table 4, it shows hypothesis 1, p-value > significance value so that the hypothesis is not supported which states that Financial Literacy does not directly affect investment decisions and also has a negative direction. Hypothesis 2 shows a p-value < a significance value so that the hypothesis is supported which states that overconfidence has a positive effect on investment decisions. The following figure 1 below shows the results of the research hypothesis as follows:

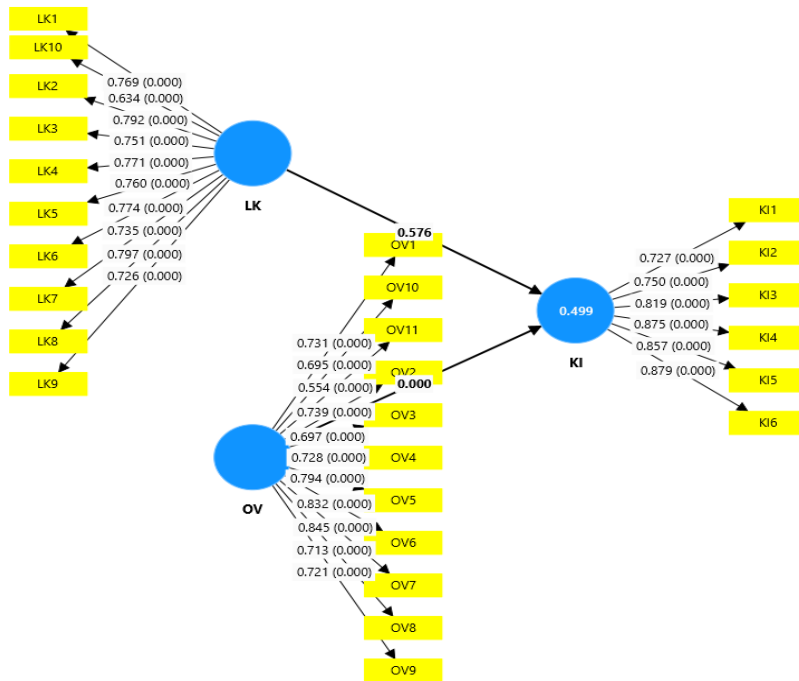


Figure 1. research hypothesis results

**Assess the power of the model's explainer**

This test stage uses the value of the determination coefficient (R-Square and the effect measure (f2) which aims to assess the explanatory strength of the research model. The results of R2 and f2 of this study are seen in table 5 below:

**Table 5. Determination Coefficient Test Results**

	<b>R-Square</b>	<b>Results</b>
Investment Decision	0.499	Medium

Source: data processed, 2024

Based on table 5, when viewed from the R-Square value, the change (variance) of investment decisions can be explained by financial literacy and overconfidence of variability 0.499 or 49.99 means the variable is medium while the rest is explained by other variables outside this study. Therefore, it can be concluded that the model used in this study has high predictive ability (Hair et al., 2021).

The following are the results of the effect size using F-Square for direct effect based on (Hair et al., 2021).

**Table 6. F-Square Test Results**

Hypothesis	<b>F-Square</b>	<b>Effect Size</b>
LK -> KI	0.006	Able to explain
OV ->KI	0.512	Able to explain

When viewed from the value of f-square, financial literacy and overconfidence are able to explain investment decisions.

### **The Effect of Financial Literacy on Investment Decisions**

Based on table 4, the p-value is  $0.576 > 0.05$  and the path coefficient value is  $-0.080$  which shows that financial literacy has insignificant effect in investment decisions. This provides evidence that the financial literacy owned and applied by students who are members of the Investment Gallery KSPM does not significantly affect their investment decisions. Respondents born between 1995-2010 are Generation Z, have characteristics that are fluent in technology, interact with social media, tend to be expressive and multitasking. In addition, the influence of social and media is very influential because social media and ongoing trends can be one of the factors that financial literacy does not have an influence on generation Z. Recommendations from influencers, friends or those who are going viral on social media without considering financial knowledge (financial literacy). Generation Z also has easy access to investment applications such as the Ajaib application which is a stock trading application or a cryptocurrency application. Generation Z can invest with little knowledge and experience. The application simplifies the investment process so that people can invest without understanding the inherent risks of the investment so that it can reduce the impact of conventional financial literacy that emphasizes diversification and risk management. Despite having available sources of information, not all generation Z receive adequate financial education even though they are studying with financial management courses, financial statement analysis or capital market theory courses even for students who have become members of the Capital Market Study Group. So many do not assess the importance of financial literacy in making their investment decisions. Generation Z tends to be more optimistic and believes in the potential for a bright future. This can encourage them to make investment decisions based on the potential for huge profits rather than rational analysis based on financial knowledge.

### **The effect of overconfidence on investment decisions**

Based on table 4, the p-value is  $0.000 < 0.005$  and the path coefficient value is  $0.746$  which shows that overconfidence significantly influences investment decisions. Overconfidence or excessive confidence can greatly influence investment decisions, especially for Generation Z. When it comes to handling knowledge and making wise decisions, Generation Z often exudes confidence. They may take on greater risks in investing if they feel they have specific information or insights. Thanks to the internet and social media, Generation Z is growing up in the digital age, when news, opinions, and financial information are easily accessible.

If the information is really weak or deceptive, it can give individuals the idea that they already know enough to make wise investment choices. A common trait of Generation Z is a strong sense of confidence in their capacity to handle knowledge and make thoughtful judgments. They may be more willing to take risky investments if they feel they have specific information or insights. Growing up in the digital age, Generation Z has easy access to news, opinions, and financial information through social media and the internet. While the information may be incomplete or deceptive, it can give people the idea that they already know enough to make wise investment decisions. The tendency to imitate the investment choices of others, especially peers or influential people, can also lead to overconfidence. Although their circumstances and backgrounds are different, people may feel more optimistic about their own chances of success if they witness the success of others.

## **CONCLUSION**

This study examined the impact of financial literacy and overconfidence on investment decision-making among Generation Z students who were members of the Capital Market Study Group (KSPM) in

Makassar and Surabaya. The results showed that financial literacy did not significantly affect investment decisions, as formal financial knowledge often failed to translate into rational behavior due to the stronger influence of social media, accessible investment platforms, and trend-following habits. Conversely, overconfidence was found to significantly drive investment decision-making, with students frequently relying on incomplete or unverified online information, thereby taking greater risks under the belief that they were sufficiently informed. These findings highlight the stronger role of psychological and behavioral factors compared to knowledge-based considerations in shaping young investors' financial actions. Future research should explore strategies to balance financial education with behavioral training, particularly interventions that mitigate overconfidence and promote critical evaluation of digital financial information sources.

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