





# The accessibility of investment in MSMEs as seen from the influence of financial literacy, income, and financial behavior of MSME business actors in Ponorogo Regency

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**Abstract.** Saving for the future is the primary goal of investors. This study aims to contribute to the theory and provide additional references for investing in investment. This research examines the influence of financial literacy and income on investment decisions, with financial behavior as an intervening variable. The study population consists of business actors in Ponorogo Regency, with a total of 202 respondents. The analyzed results conclude that the relationship between income and investment decisions, as well as financial behavior and investment decisions, has a significantly positive influence. However, the relationship between financial literacy and investment decisions does not have a significant influence. Meanwhile, financial literacy and income show a significantly positive influence on financial behavior. Additionally, financial behavior has an indirect effect on the relationship between financial literacy and investment decisions, and between income and investment decisions. These findings underscore the importance of investment in enhancing financial well-being.

**Keywords:** Financial Literacy, Income, Financial Behaviour, Investment Decision.

## 1. Introduction

Economic development in the era of globalization requires people to realize the importance of making sound financial decisions by managing their finances effectively. Understanding financial knowledge is essential as a reference in financial management. Proper financial management enables individuals to utilize their financial resources appropriately, preventing future financial problems. Therefore, it is crucial for the public to have insight and knowledge about financial management to achieve long-term financial goals. One of the ways to achieve long-term financial goals is by investing. According to [1], investment involves allocating a portion of current funds into financial instruments to gain future benefits. Investment is the act of committing capital for a certain period by purchasing financial instruments to earn returns. [2] defines investment as the deferment of current consumption to allocate funds to profitable investment assets for a specific period. [3] describes investment as the responsibility of using a sum of money to purchase financial assets now, aiming to receive returns in the future. Investments can be categorized based on their duration into long-term and short-

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term investments. Short-term investments are expected to yield returns within less than 12 months, while long-term investments are expected to yield returns over a period of more than 12 months. Various investment options include funds, government bonds, and stocks. According to KSEI data in December 2023, fund investors have dominated the capital market. The following is a comparison of the number of investors year over year:

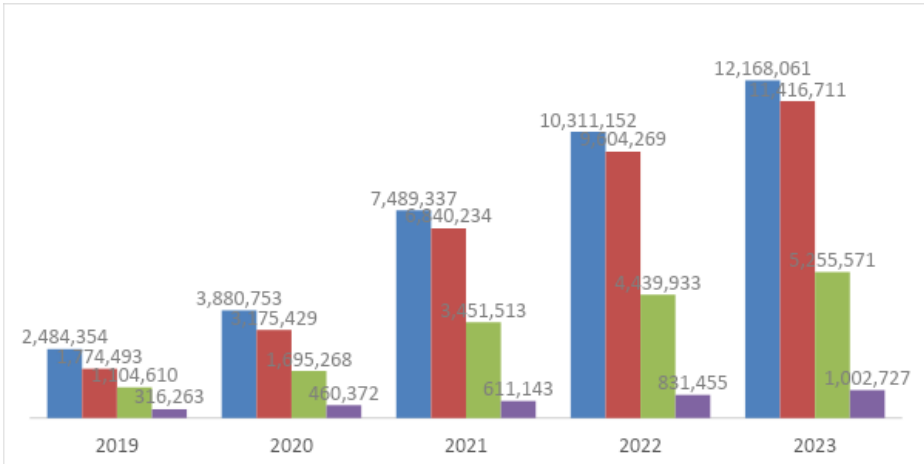


Figure 1. Investor Growth in Indonesia

More specifically, in Ponorogo Regency, the number of investors has also increased significantly. The following is the development of the number of SIDs in Ponorogo Regency:

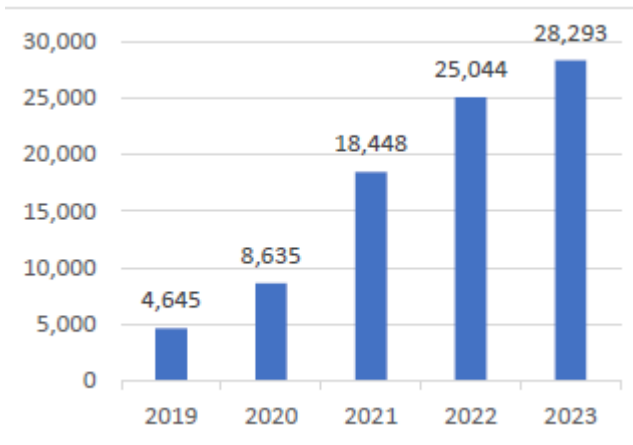


Figure 2. Investor Growth in Ponorogo Regency

This indicates that people in Ponorogo Regency who generally invest in land assets have started investing in financial assets in the last 5 years. Technological advancements have also become a key factor in facilitating investments for investors

or prospective investors. Interestingly, data from KSEI based on occupation, investors who work as entrepreneurs have a relatively small population compared to investors who have other jobs. However, investors who work as entrepreneurs have the highest total asset ownership. Entrepreneurship is a job where the income is uncertain so it requires competent management. According to [4], financial literacy encompasses the knowledge and skills that impact investors' financial attitudes and behaviors, enhancing decision-making and financial management to achieve financial goals. [5] state that financial literacy is a crucial aspect underlying individuals' investment decisions. Adequate financial literacy leads to sound investment decisions, whereas inadequate financial literacy results in poor investment choices. Financial literacy serves as a fundamental aspect for investors in making appropriate investment decisions [6]. It provides investors with clear goals, targets, and investment priorities.

In addition to financial literacy, an individual who invests must also have capital or investment funds. Investment capital can be acquired by allocating a portion of income for investment purposes. [7] suggest that as an individual's income increases, they will strive to enhance their understanding of financial management using better strategies than before. Therefore, income is a critical factor in making investment decisions. Higher individual income correlates with a larger amount of funds available for investment. Similarly, [8] state that the relationship between income and investment decisions has a positive impact.

Financial behavior is another aspect that influences investors' investment decisions. The factors of financial literacy and investor income require support from financial behavior. According to SNLKI [9], skills in financial management, supported by good financial attitudes and behaviors, can help investors utilize financial services that align with their risk profiles. [10] assert that if an individual's financial behavior is sound, they are more likely to make prudent investment decisions. [11] notes that better financial management increases the likelihood of investing, whereas poor financial management makes investing more difficult. Proficient financial behavior facilitates investors in creating, planning, and managing finances, as well as using financial products and services to make informed financial decisions.

## **2 Literature Review**

### **2.1 Theory of Behavioral Finance**

In finance, the theory of behavioral finance combines economic theory with psychology and sociology to help individuals make financial decisions. The shift from a certain to an uncertain situation leads to changes in behavior from rational to irrational tendencies. As social beings, humans interact with their surroundings, which can impact their behavior, thus necessitating the incorporation of psychology and sociology into financial theory. [12] state that behavioral finance involves analyzing financial rationality and human psychology. This theory explains that investors use several psychological factors in making decisions. The goal of behavioral finance is to provide insights to help the public understand the psychological processes and the influence of emotions on investment decisions. According to [13], psychological and sociological factors are significant because an individual's environment can impact their behavior. This theory can explain how psychological or mental skills will influence the management and problem solving of investors in Ponorogo Regency. [14] suggest that

enhanced investment planning and decision-making are supported by proficient financial management skills.

## **2.2 Theory Planned Of Behaviour**

The Theory of Reasoned Action (TRA) forms the foundation for the development of the Theory of Planned Behavior (TPB). TPB, an advanced extension of TRA by Ajzen, aims to predict specific individual actions. The assumption of this theory is that individual actions are not only governed by the individual themselves but also require perceived behavioral control, which can influence behavioral intentions. This theory provides an appropriate framework for planning necessary actions [15]. The Theory of Planned Behavior outlines various behaviors that can be predicted by certain factors. These influencing factors include positive or negative attitudes towards achieving a target behavior, subjective norms, and behavioral control. Positive or negative attitudes reflect beliefs about the outcomes of the individual's behavior. Subjective norms represent an individual's perception of the significance of information. Behavioral control describes the ease or difficulty of performing a behavior.

## **2.3 Investment Decision**

According to [16], investment can be considered a form of responsibility involving funds placed in financial assets to gain future profits. One reason individuals invest is the desire to increase wealth and meet important future needs. Investment decisions are commitments made from an individual's alternative choices aimed at obtaining the expected returns [17]. Based on these definitions, an investment decision can be understood as an activity undertaken by individuals to achieve the expected returns through available alternative investment services. Investing in real assets or financial instruments is a common choice as an alternative investment instrument. Each investment asset choice shares a commonality: the higher the return rate, the higher the associated risk. In recent years, the trend of investing in financial instruments has been increasing, with funds having the highest number of investors.

## **2.4 Financial Literacy**

According to the official OJK website, financial literacy is the understanding, skills, and confidence that impact attitudes and behaviors, even financial planning, in achieving financial well-being. Financial literacy, as defined by [18], is the foundation for making financial policies to avoid unnecessary problems when making financial decisions. Understanding financial concepts to achieve efficient actions is one aspect of financial literacy [19]. The definition of financial literacy encompasses several concepts, including knowledge, financial skills, awareness, and the ability to plan and manage funds. The level of financial literacy can assist individuals in making financial decisions. As an individual's level of financial literacy increases, their financial planning will improve. Having a plan is a necessary step in the journey to achieve long-term financial goals. Without thorough planning, an individual will lack direction in reaching long-term financial objectives. Additionally, individuals can avoid investment

frauds that promise high returns. Consequently, they will have the ability to achieve financial well-being.

## **2.5 Income**

According to [20], income is the result obtained based on performance over a certain period. The income generated can vary due to certain factors. Apart from the industrial sector, the total effort exerted can influence an individual's business outcomes. The greater the effort an individual puts in, the higher the income they will receive. According to [21], income is the result of an individual's performance and efforts. Safyarni et al. (2017) define income as all the revenue an individual receives, which can come from sales, salaries, investment profits, or other sources. From these definitions, income can be understood as the compensation obtained through effort over a certain period. As an individual's income increases, their readiness to face potential life instabilities also increases.

## **2.6 Financial Behavior**

According to [22], financial behavior refers to an individual's actions in utilizing and managing their finances. Personal financial behavior is the attitude formed when an individual can make considerations and plans related to budgeting to have savings, recognize potential risks, and adjust needs and budgets necessary for their business continuity. [23] define financial behavior as the integration of psychological and financial aspects of an individual, which forms the basis for making financial decisions to manage current and future needs. Based on these definitions, financial behavior can be defined as financial attitudes or skills influenced by psychological abilities in planning and managing finances in daily life or future preparations. Proficient individual financial behavior can provide financial stability and help avoid unnecessary problems.

# **3 Method**

## **3.1 Research Design**

This research was quantitative, examining the causal relationships between several variables using data collection through questionnaires and data analysis to test established hypotheses [24] Inferential statistical analysis in this study was used to examine sample data, with the results generalizable to the population [25]. The data source utilized in this research was primary data, which was obtained directly from first-hand sources by using questionnaires to collect data from the target population. A 5-point Likert scale, ranging from 1 for "strongly disagree" to 5 for "strongly agree," was employed in the study. The variables investigated included financial literacy, income, financial behavior, and investment decisions. Given the large population size, an adequate sample size representative of the population was determined based on [26], who suggested that the minimum sample size should be 10 times the number of indicators. With 16 indicators in this study, 160 respondent samples were required. In

this study uses purposive sampling, especially sampling techniques supported by criteria that have been set from the population. The criteria set as considerations for determining the sample are as follows:

1. An entrepreneur
2. Having investments in financial assets

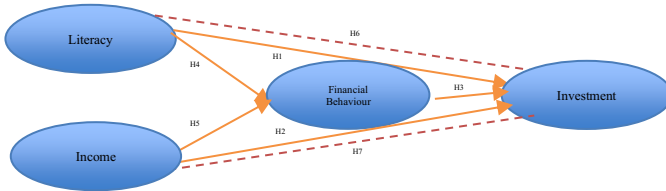


Figure 3. Theoretical Framework

### 3.2 Metode Analisis

Partial Least Squares (PLS) is a SEM modeling approach using multivariate statistical techniques that can process multiple response variables. PLS is useful for research involving structural equation modeling, which analyzes relationships [27]. There are two elements in the PLS path model: the inner model and the outer model [26]. In this research, PLS testing was facilitated using SmartPLS 4.0 software.

## 4 Results and Discussion

### 4.1 Results

#### Respondent Characteristics

In this study, the researchers identified a total of 202 respondents from Ponorogo Regency. All respondents were segmented into the following categories:

Table 1. Respondent Characteristics

Category	Characteristics	Number	Percentage
Gender	Male	144	71.29 %
	Female	58	28.71 %
Age	<20 years	12	5.94 %
	20-29 years	30	14.85 %
	30-39 years	18	8.91 %

	40-49 years	110	54.46 %
	>50 years	32	15.84 %
Monthly Investment Amounts	<Rp 1.000.000	133	16.34 %
	Rp 1.000.000 – Rp 1999.000	33	65.84 %
	Rp 2.000.000 – Rp 2.999.999	17	8.42 %
	Rp 3.000.000 – Rp 4.999.999	8	3.96 %
	>Rp 5.000.000	11	5.45 %

Descriptive Statistics

Descriptive analysis is a data analysis technique that examines the information obtained without drawing any conclusions (Sugiyono, 2015).

Table 2. Descriptive Statistics

Variable	Item	Mean	Grand Mean
Financial Literacy	LK1	4.436	4.03
	LK2	3.901	
	LK3	4.495	
	LK4	4.569	
	LK5	4.599	
	LK6	3.723	
	LK7	3.708	
	LK8	3.832	
	LK9	3.748	
	LK10	3.535	
	LK11	3.743	
Income	P1	3.782	3.91
	P2	3.876	
	P3	3.916	
	P4	4.163	
	P5	3.970	
	P6	3.787	
	PK1	4.376	
Variable	Item	Mean	Grand Mean
Financial Behavior	PK2	4.262	4.17
	PK3	4.307	
	PK4	4.040	
	PK5	3.975	
	PK6	3.990	
	PK7	4.381	
	PK8	4.010	
	PK9	3.847	
	PK10	4.292	
	PK11	4.218	
	PK12	4.356	
	Investment Decisions	KI1	
KI2		4.000	
KI3		4.337	
KI4		4.054	
KI5		4.025	
KI6		4.153	
KI7		4.183	

Based on the results from the above table, the statistics were obtained from data processed using the Smart PLS 4.0 application, revealing that the financial literacy variable has a grand mean value of 4.03; income has a grand mean value of 3.91; financial behavior has a grand mean value of 4.17; and investment decisions have a grand mean value of 4.13. From these grand mean values, it can be concluded that the grand mean category is relatively high, and respondents agree with the statements provided for each variable by the researcher.

Discriminant and Convergent Validity Testing

Convergent validity is used to test the relationship between indicators in measuring constructs that should correlate. Then, discriminant validity testing can use cross-loading measurements where the associated construct must have a higher loading than its correlation or cross-loading.

Table 3. Validity Testing

Variable	Indicator	Cross Loading		Variable	Indicator	Cross Loading
Financial Literacy	LK1	0.770		Financial Behavior	PK2	0.859
	LK2	0.736			PK3	0.823
	LK3	0.763			PK4	0.790
	LK4	0.720			PK5	0.799
Income	P1	0.801			PK6	0.790
	P2	0.794		Investment Decision	KI1	0.784
	P3	0.771			KI2	0.890
	PK1	0.704			KI3	0.863

The calculation of the validity test above indicates that each variable studied is valid. Based on the table, all indicators have a cross-loading higher than 0.70, and within the associated construct, the cross-loading value is higher for the variable it forms compared to other variables. Based on this test, it can be said that the indicators in this study have good and acceptable convergent and discriminant validity, suitable for forming other variables.

Reliability Test

A reliability test assesses the precision of the measurement tools used to collect research data [36]. According to [36], a research instrument can be considered reliable if it consistently produces data that is accurate and trustworthy.

Table 4. Reliability Test

Variable	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho-c)	Average Variance Extracted (AVE)	Remark
Financial Literacy	0.740	0.745	0.835	0.559	Reliable
Income	0.707	0.723	0.832	0.622	Reliable
Financial Behavior	0.802	0.814	0.884	0.717	Reliable
Investment Decision	0.883	0.884	0.912	0.633	Reliable

The above calculations are the results of the reliability test for each variable, indicating that each variable is reliable. According to Nunnally & Streiner in Yusup (2019), an instrument is considered reliable if the Cronbach's alpha reliability coefficient is greater than 0.70. Based on this statement, the calculations above are considered reliable and appropriate because the Cronbach's alpha values exceed 0.70. Additionally, the composite reliability values also exceed 0.7, further confirming reliability

R-Square Test



The R-Square test in SEM PLS is aimed at measuring the extent of the influence between exogenous and endogenous variables in a study. This value indicates whether the influence is weak, moderate, or strong. An R-Square value of 0.75 or higher indicates a strong influence between variables. An R-Square value of 0.50 or higher indicates a moderate influence, whereas an R-Square value of 0.25 or higher indicates a weak influence between variables [29].

Table 5. R-Square Test

	<i>r-Square value</i>	<i>r-Square Adjust value</i>	<b>Remark</b>
Financial behavior (Z)	0.599	0.589	Moderate
Investment Decision (Y)	0.506	0.515	Moderate

Based on the R-Square calculation process above, it was found that the R-Square value of financial behavior is 0.599 or 59.9%, which is considered moderate. This indicates that the financial behavior variable can be influenced by financial literacy and income variables by 59.9%. The investment decision variable has a value of 0.506 or 50.6%, also considered moderate, indicating that the investment decision variable can be influenced by financial literacy, income, and financial behavior variables by 50.6%.

#### F-Square Test

The F-Square test is used to assess the quality of the model being used. According to [29], this value indicates whether the influence in the structural model is weak, moderate, or strong. F-Square values of 0.02, 0.15, and 0.35 provide insights into the strength of the predictor's influence on the latent variable.

Table 6. F-Square Test

	Value of <i>f-Square</i>	Remark
Financial Literacy → Investment Decision	0.021	Low
Income → Investment Decision	0.109	Low
Financial Behavior → Investment Decision	0.305	Moderate
Financial Literacy → Financial Behavior	0.376	Strong
Income → Financial Behavior	0.132	Low

Financial literacy in relation to investment decisions has an F-Square value of 0.021, and income in relation to investment decisions has an F-Square value of 0.109, both indicating weak relationships. Additionally, the relationship between income and financial behavior has an F-Square value of 0.132, indicating a weak relationship. However, financial behavior in relation to investment decisions shows an F-Square value of 0.305, which is considered moderate. Meanwhile, financial literacy in relation to financial behavior has an F-Square value of 0.376, indicating a strong relationship.

#### Hypothesis Testing

According to Haryono (2016), a hypothesized variable relationship is accepted if it meets the criteria of having a  $t$ -value  $> 1.96$  and a  $p$ -value  $\leq 0.05$ . Based on this criterion, the results of this study show:

Table 7. Hypotheses Testing

	Hypothesis	Original Sample	<i>t-values</i>	<i>p-values</i>	Remark
Financial Literacy → Investment Decision	H <sub>1</sub>	0.126	1.488	0.137	Rejected
Income → Investment Decision	H <sub>2</sub>	0.261	3.954	0.000	Accepted
Financial Behavior → Investment Decision	H <sub>3</sub>	0.498	5.538	0.000	Accepted
Financial Literacy → Financial Behavior	H <sub>4</sub>	0.506	4.881	0.000	Accepted
Income → Financial Behavior	H <sub>5</sub>	0.498	5.538	0.000	Accepted

Based on the hypothesis testing above, it shows that financial literacy does not affect investment decisions. The  $t$ -statistic result of  $1.488 < 1.96$  and  $p$ -value of  $0.137 > 0.05$  indicate that H1 is rejected. The second hypothesis test shows that income has a positive and significant effect. The  $t$ -statistic result of  $3.954 > 1.96$  and  $p$ -value of  $0.000 < 0.05$  indicate that H2 is accepted. The influence of financial behavior on investment decisions has a positive and significant relationship, with a  $t$ -statistic of  $5.538 > 1.96$  and a  $p$ -value of  $0.000 < 0.05$ , indicating that H3 is accepted. A positive and significant relationship is shown between financial literacy and financial behavior, with a  $t$ -statistic of  $4.881 > 1.96$  and a  $p$ -value of  $0.000 < 0.05$ , indicating that H4 is accepted. Meanwhile, the relationship between income and financial behavior shows a positive and significant result, indicated by a  $t$ -statistic of  $5.538 > 1.96$  and a  $p$ -value of  $0.000 < 0.05$ , indicating that H5 is accepted.

Table 8. Uji Hipotesis Mediasi Hypothesis Testing for Mediation

	Hypothesis	Original Sample	<i>t-value</i>	<i>p-values</i>	Keterangan
Financial Literacy → Financial Behavior → Investment Decision	H <sub>6</sub>	0.252	4.617	0.000	Accepted
Income → Financial Behavior → Investment Decision	H <sub>7</sub>	0.149	2.810	0.005	Accepted

The results of the mediation hypothesis testing show that financial behavior has an influence in mediating the relationship between financial literacy and income. The  $t$ -statistic is  $4.617 > 1.96$  and the  $p$ -value is  $0.000 < 0.05$ , indicating that H6 is accepted. Additionally, financial behavior also acts as a mediator in the relationship between income and investment decisions, with a  $t$ -statistic of  $2.810 > 1.96$  and a  $p$ -value of  $0.005 < 0.05$ , indicating that H7 is accepted.

## 4.2 Discussion

### The Influence of Financial Literacy on Investment Decisions

Based on the above analysis, the results indicate that financial literacy (X1) does not significantly affect investment decision variables (Y). This means that financial literacy does not influence fund investment decisions among investors in Ponorogo Regency. The descriptive analysis results show that the highest mean of the financial literacy variable is in the insurance dimension. Additionally, the highest mean of the investment decision variable is in the risk dimension. These findings suggest that investors in Ponorogo Regency feel the need to have insurance first before they can invest. Although insurance does not directly impact investment decisions, it can protect investors' finances from unexpected events. This way, investors do not need to sell their investments hastily to cover unforeseen costs, thus maintaining portfolio stability and allowing them to stay focused on their investment goals.

The lack of influence of financial literacy on investment decision-making indicates that the financial literacy of investors in Ponorogo Regency is relatively low. One contributing factor to this low financial literacy is the lack of education on finance and investment. The increasing number of fund investors and the low level of financial literacy among investors in Ponorogo Regency indicate that investors experience Fear of Missing Out (FoMO). FoMO describes individuals who worry about missing out on important or enjoyable events that others are experiencing. In this context, investors feel left behind in making investments. FoMO can occur because individuals are influenced by social media or peers. A lack of understanding of investment, risk analysis, and fear of missing out on an investment trend results in irrational investment decisions. This can lead to financial losses for investors. Consistent with the research by [30] the awareness, skills, and insights into investing remain low.

### The Influence of Income on Investment Decisions

Based on the above analysis, the relationship between income (X2) and investment decisions (Y) has a positive and significant influence. This means that income affects the investment decisions of investors in Ponorogo Regency. The higher the income level, the better the investment decisions of investors in Ponorogo Regency. The descriptive analysis results show that the highest mean of the income variable is in the employment dimension. Additionally, the highest mean of the investment decision variable is in the risk dimension. These findings suggest that investors in Ponorogo Regency need to have a job first before they can invest. Income is the result obtained from work or business over a certain period. The larger the investor's income, the more income can be allocated for investment. There are 11 investors in Ponorogo Regency in this study who invest more than Rp 5,000,000

Investment is considered a means to increase wealth or assets and achieve financial goals, thereby motivating individuals to invest more. This aligns with the research conducted by Yundari & Artati (2021), which states that higher income can lead to an increased desire to understand the benefits of investing. An increased understanding can lead investors to evaluate their investment strategies for better outcomes, thereby

increasing the chances of achieving the expected returns. Increasing understanding can make investors evaluate their investment strategies better so that the opportunity to get the expected return is higher. This will reduce the tendency to remain in the status quo bias, namely the tendency to be in the comfort zone because it encourages individuals to be more active in making investment decisions. However, with the highest mean investment variable in the risk dimension, millennial investors in Ponorogo Regency focus more on avoiding risk than getting profit/benefit. This indicates that millennial investors in Ponorogo Regency experience a tendency towards loss aversion bias, where investors tend to feel pain rather than pleasure at the same level and the majority of millennial investors in Ponorogo Regency allocate their income to assets that have low risk.

### The Influence of Financial Behavior on Investment Decisions

According to the above analysis, the relationship between financial behavior ( $Z$ ) and investment decisions ( $Y$ ) has a positive and significant influence. This indicates that the investment decisions of investors in Ponorogo Regency can be influenced by financial behavior. The descriptive analysis results show that the highest mean of the financial behavior variable is in the dimension of regular savings, while the mean of the investment decision variable is in the risk dimension. These findings suggest that investors in Ponorogo Regency engage in regular savings behavior when making investments. Regular savings is beneficial for financial management, as it helps investors develop a foundation of financial discipline. This indicates that investors have a positive attitude towards investment and are therefore making preparations to prevent financial crises that may arise from investment.

Having sound financial behavior assists investors in managing emotions and making rational investment decisions. According to DM (2021), better financial behavior leads to greater responsibility and more effective investing. Understanding financial behavior helps investors manage cognitive biases, resulting in more rational investment decisions. An individual's financial behavior can be seen through how well they manage their finances, ultimately leading to increased financial well-being [31]. This study aligns with [32], suggesting that good financial management results in better investment decisions.

### The Influence of Financial Literacy on Financial Behavior

Based on the above analysis, the results indicate that the relationship between financial literacy ( $X1$ ) and financial behavior ( $Z$ ) has a positive and significant influence. This means that financial literacy affects the financial behavior of investors in Ponorogo Regency. The descriptive analysis results show that the highest mean of the financial literacy variable is in the insurance dimension, while the mean of financial behavior is in the regular savings dimension. These findings suggest that having insurance represents good financial behavior for investors in Ponorogo Regency. Insurance helps investors manage their finances more effectively by allocating funds for other needs. Additionally, having insurance provides peace of mind, allowing individuals to focus on more important matters.

Good financial literacy helps investors understand basic concepts such as income management, expenditure, savings, investment, and debt management. Knowledge and skills related to financial literacy improve individuals' financial attitudes and behaviors. Moreover, understanding financial literacy aids investors in planning rational finances to achieve stability and financial goals. This study is consistent with [33], stating that good financial literacy supports a positive financial behavior mindset. Individuals with a healthy mindset tend to prioritize basic needs and financial goals over consumptive desires, helping them avoid financial problems that could disrupt their financial stability. Having good financial literacy will help individuals make more informed and wise decisions that positively influence financial behavior so that the individual's financial behavior is more rational and informed.

### The Influence of Income on Financial Behavior

The analysis results indicate that the relationship between income (X2) and financial behavior (Z) has a positive and significant influence. This shows that income affects the financial behavior of investors in Ponorogo Regency. The descriptive analysis reveals that the highest mean of the income variable is in the employment dimension, while the highest mean of the financial behavior variable is in the regular savings dimension. These findings suggest that income earned from employment encourages investors to engage in financial management practices such as regular savings. Regular savings can help individuals improve financial discipline, preparing them to achieve long-term goals and face the future. Needs such as buying a house or children's education can be planned through regular savings, reducing potential future financial problems.

Generally, investors with higher incomes have greater awareness of the importance of financial behavior. This awareness helps them manage their finances more wisely and achieve better financial stability. Additionally, individuals with higher incomes can more easily cover unexpected expenses not protected by insurance, without disrupting their planned financial management. This is relevant to behavioral finance theory that higher income will reduce emotional stress in financial aspects and make it possible to develop better financial habits, such as discipline in saving or investing. This study aligns with [34], indicating that as income increases, investors become more cautious in using their money. This caution reduces consumptive behavior, thereby increasing the allocation of funds for savings.

### The Mediating Role of Financial Behavior in the Relationship Between Financial Literacy and Investment Decisions

According to the analysis, the results show that the relationship between financial literacy (X1) and investment decisions (Y) can be significantly mediated by financial behavior. This indicates that financial behavior has an indirect effect on the relationship between financial literacy and investment decisions among investors in Ponorogo Regency. The descriptive analysis shows that the highest mean of the financial behavior variable is in the regular savings dimension, the highest mean of the financial literacy variable is in the insurance dimension, and the highest mean of the investment decision

variable is in the risk dimension. These findings suggest that regular savings behavior can mediate the relationship between financial literacy and investment decisions among investors in Ponorogo Regency. Financial behavior enhances planning and decision-making in investments.

Financial behavior can drive investors to set financial goals, plan, manage finances, and make informed investment decisions. In making investment decisions, investors need good financial planning and management. Well-planned and informed investments increase the likelihood of profitability. Financial behavior supports financial literacy through a knowledge-based approach to making investment decisions [35]. Improving financial literacy should be accompanied by efforts to build good financial behavior to enhance the benefits of investment decisions. Investors evaluate their financial behavior based on their beliefs to achieve optimal results. Better investment planning is supported by good financial management skills [14]. Thus, investors can better achieve their long-term financial goals.

### The Mediating Role of Financial Behavior in the Relationship Between Income and Investment Decisions

Based on the above analysis, the relationship between income (X2) and investment decisions (Y) can be significantly mediated by financial behavior (Z). This indicates an indirect effect of income on investment decisions through financial behavior among investors in Ponorogo Regency. The descriptive analysis shows that the highest mean of the financial behavior variable is in the regular savings dimension, the highest mean of the income variable is in the employment dimension, and the highest mean of the investment decision variable is in the risk dimension. These findings suggest that long-term regular savings behavior can mediate the relationship between income and investment decisions among investors in Ponorogo Regency. Wisely allocated income allows individuals to make well-planned and structured investments, diversify their portfolios to reduce risk, and increase returns, thereby improving financial well-being.

The income of each investor can vary due to the level of effort they put in. However, investors in Ponorogo Regency exhibit good financial behavior, including regular saving habits. Investors with higher incomes can allocate a portion of their earnings to savings, which will be invested. Sufficient income and competent financial behavior impact investment decisions. Regular saving habits help investors maintain financial discipline, such as allocating emergency funds that provide financial security and reduce worries about unexpected needs. Good financial behavior prevents investors from engaging in consumptive behavior that could reduce funds available for investment. Therefore, developing good financial behavior enhances the commitment to allocating funds for investment. This study aligns with [7], who found that increasing income encourages investors to understand the benefits of saving and investing for the future.

## 5 Conclusion

The purpose of this study is to examine the influence of financial literacy and income on fund investment decisions among investors in Ponorogo Regency through financial behavior. The results show that income and financial behavior have a significant positive effect on investment decisions. However, financial literacy does not have a significant effect on investment decisions. Financial literacy and income have a significant positive effect on financial behavior. Additionally, financial behavior significantly mediates the relationship between financial literacy and investment decisions, as well as the relationship between income and investment decisions.

According to Theory of Planned Behavior regarding behavioral control, as the desire to achieve long-term financial goals increases, individuals have more control over their behavior. On the other hand, behavioral biases also need to be considered so that individuals know the right assets according to their risk profile. Based on the research findings on fund investment decisions among investors in Ponorogo Regency, it is recommended that future researchers explore further the relationship between financial literacy and investment decisions, particularly other factors that may act as barriers. Comparative studies with similar investment decision variables could provide valuable insights, especially by using various methods, a larger number of respondents, and a broader geographical scope to produce more accurate research results. For fund investors in Ponorogo Regency, it is important to improve income and financial behavior, which have proven to be significant in making investment decisions. Nevertheless, enhancing financial literacy is also necessary to build better portfolios and avoid fraud. This approach is expected to improve investment decisions in fund assets, even though financial literacy does not have a significant direct effect on investment decisions.

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