



**THE EFFECT OF FINANCIAL LITERACY, FINANCIAL PLANNING, AND RISK TOLERANCE ON INVESTMENT DECISIONS WITH FINANCIAL TECHNOLOGY AS A MODERATING VARIABLE  
(STUDY ON GENERATION Z IN DKI JAKARTA)**

**Mahendra Aulia Pradipta**

Magister Management, Faculty of Economic and Business,  
Universitas Sebelas Maret

Email: [mahendra\\_aulia\\_p@student.uns.ac.id](mailto:mahendra_aulia_p@student.uns.ac.id)

Informasi Naskah	Abstract
<b>Diterima:</b> 18 July 2024 <b>Revisi:</b> 23 Agustus 2024 <b>Terbit:</b> 28 Agustus 2024 <b>Keywords:</b> <i>Financial Literacy, Financial Planning, Risk Tolerance, Financial Technology, Gen Z</i>	<p><i>This study aims to analyze the effect of financial literacy, financial planning, and risk tolerance on investment decisions with financial technology as a moderating variable. This study is a quantitative study with a purposive sampling technique. The population of this study is Generation Z in DKI Jakarta Province with a sample of 204 people. The data is collected using a questionnaire prepared in Google Forms. The data is analyzed using PLS-SEM (Partial Least Square - Structural Equation Modeling) using SMARTPLS application Version 4.</i></p> <p><i>The results showed that financial literacy and financial planning have a significant positive effect on investment decisions. However, risk tolerance does not affect investment decisions. Furthermore, the role of financial technology as a moderating variable can strengthen the influence of financial planning and risk tolerance, but not financial literacy.</i></p>

## Introduction

It is undeniable that the COVID-19 pandemic has caused an economic downturn due to social limitations that affect various lines of business. According to the data from Indonesia Statistics (BPS) (2020), the DKI Jakarta economy experienced an 8.23% decline for two quarters. As a result, people purchasing power for household consumption or investment have not shown a sign of recovery. Various efforts have been taken to create added value and promote economic acceleration. These effects include the revocation of regulations that limit social activities in the community (PPKM) at the end of 2022. However, the efforts have not generated economic recovery in Indonesia in general.

Financial benefit is the main objective of people who enter the workplace. In general, people allocate their money for consumption, saving, and investment. The ability to manage

one's financial condition is vital to achieving financial independence in the future, while financial knowledge also helps someone avoid getting scammed. Many people are not afraid to invest large sums of money expecting high returns without sufficient investment expertise and skill.

Initial study and investment product identification are needed before making any investment decision. These steps provide sufficient information regarding the type of investment selected and provide the best way to identify the investment mechanism and the environment surrounding the investment target. Hence, fraud under the guise of investment can be suppressed and even avoided if people have high financial literacy. Investors also need to understand risks, in which investment value could drop at any time. They need to understand that every investment product has risk, therefore, they understand that stock prices might go down and that they might need to sell their investment products at low prices for some urgent needs. Understanding such information will prepare investors for unexpected conditions in the future.

Investment decision is affected by various factors, including one's financial literacy. Financial literacy is the knowledge, skill, and belief that affect one's attitude and behavior that will improve their decision-making quality in managing their financial condition to achieve prosperity (OJK, 2022). The statistical report on the National Survey of Financial Literacy and Inclusion 2022 (SNLIK) from the Financial Service Authority (OJK) showed that the DKI Jakarta Literacy Index in 2022 was 52.99%. This index declined from 2019 at 59.16%, showing that financial literacy in DKI Jakarta went down.

Previous studies on the factors that affect investment decisions showed inconsistencies in their findings. For example, Patil & Gokhale (2023), Philipas & Avdoulas (2019), Putri & Hamidi (2019), and Ovami & Lubis (2020) found a significant impact of financial literacy on investment decisions. Contrasting the finding from Tiwari & Yadav (2022), Mohta & Shunmugasundaram (2024), Pradikasari & Isbanah (2018), and Astiti et al. (2019) that financial literacy shows no effect on investment decisions.

Another important factor affecting investment decisions besides financial literacy is financial planning because appropriate financial planning will bring good and sustainable returns for investors (Gustika, G & Yaspita, H., 2021). financial planning in investment decision-making allows investors to be more prepared in deciding what products to buy and allows them to avoid loss. It is normal for an investor to expect a high return from their investment, but they also need to pay attention to the risk that they must bear (Yasid, 2019).

The science and technology development has brought about various financial services products, including Fintech, that contribute to the national economic growth. According to Bank Indonesia (BI) (2018), Financial Technology is the combination between technological development and financial services. BI also added that the financial technology development brings benefits for consumers, business people, and the national economy, despite its risks potential that might disturb the existing financial system if not well mitigated.

Based on the data from the Indonesian Central Securities Custodian (2022), Indonesia has 8.3 million capital market investors dominated by Millennials and Generation Z with a total of 80% of all registered investors. Young investors in Indonesia often invest in stocks, followed by mutual funds. With the technological development, Generation Z or Gen Z tends to be more adaptive and flexible in following technological development. This generation also adapting well and is interested in new trends and investments. These conditions are supported by various modern life facilities, the larger opportunity to access e-commerce, shopping center

development, transportation and mass media access, and faster information dissemination (Ridhayani & Johan, 2020).

Previous studies showed inconsistencies that make investment decisions an exciting topic to be studied. This study will discuss the relationship between financial literacy, financial planning, risk tolerance, and investment decisions, with financial technology as a moderating variable. This study is conducted on Generation Z who live in DKI Jakarta. Generation Z is defined as a generation that was born between 1997 and 2012.

## **Theoretical Review and Hypothesis**

### **Behavioral Finance Theory**

This theory explains that fundamentally humans are affected by their emotions in making financial decisions, therefore, such decisions tend to be less efficient. In behavioral finance, a decision might be affected by various aspects that might cause biases, such as emotion, character, liking, and other factors that exist in humans as an intelligent and social creature. These biases affect investors' decisions to make irrational behavior in a financial decision-making context (Pradikasari & Isbanah, 2018).

### **Financial Literacy**

financial literacy is the knowledge, skill, and confidence that affect financial attitude and behavior to improve decision-making and financial management quality to achieve prosperity.

### **Financial Planning**

Financial planning is one's life purpose achieved through a well-arranged financial plan covering short-term and long-term objectives.

### **Risk Tolerance**

Risk tolerance can be defined as how far an investor can accept risk resulting from their investment decision.

### **Financial Technology**

Financial Technology is the new financial service model developed through innovation in information technology.

### **Investment Decision**

Capital investment aims to generate future profit or return.

### **Generation Z**

Generation Z is a generation that was born in 1997-2012 (Muhtar, 2023). This generation is the first generation that grew up with computers and the internet on their hands (Restiani, et al., 2022). Therefore, this generation learns about the financial sector relatively quickly and easily, and they can implement the knowledge into their daily life.

## **Hypotheses**

- H1 : Financial Literacy positively affects Gen Z's investment decision in DKI Jakarta.
- H2 : Financial Planning positively affects Gen Z's investment decision in DKI Jakarta.
- H3 : Risk Tolerance positively affects Gen Z's investment decision in DKI Jakarta.
- H4 : Financial Technology strengthens the effect of Financial Literacy on Gen Z's investment decision in DKI Jakarta.
- H5 : Financial Technology strengthens the effect of Financial Planning on Gen Z's investment decision in DKI Jakarta.
- H6 : Financial Technology strengthens the Risk Tolerance effect on Gen Z's investment decision in DKI Jakarta.

H7 : Gender, Education, and Income positively affect Gen Z's investment decision in DKI Jakarta

## Research Methods

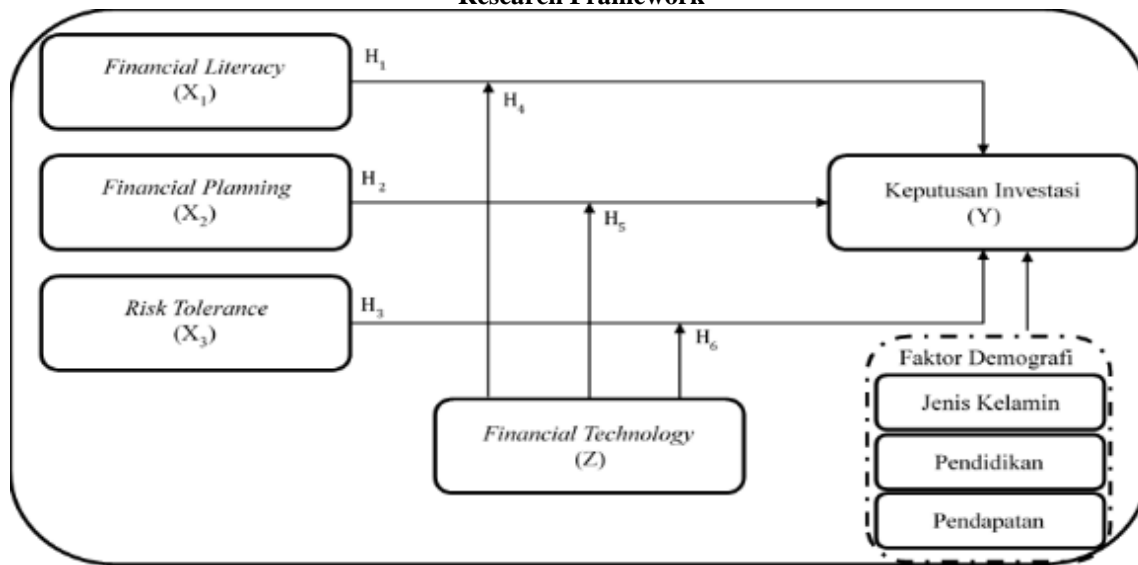
The data analyzed in this study is primary data. Primary data is collected directly from the research object using developed measures or data collection methods directly from the research objects as the information source (Azwar, 1997). The primary data in this study is collected from respondent's answers to a questionnaire developed using Google Forms.

The population in this study is Generation Z in DKI Jakarta. The total of Generation Z in DKI Jakarta according to Indonesia Statistics (2020) is 2,709,528 people. The samples in this study are determined using the Slovin formula resulting in the final number of samples of 204 respondents.

This study was conducted on Generation Z investors who live in DKI Jakarta and were born between 1997 and 2012. Gen Z is selected as the object of study because according to Indonesia Statistics (2020) report, Gen Z is placed second after millennials, with a total of 2.7 million people or about 25.65% of the total population of the capital city. The proportion shows that most of the DKI Jakarta population falls under the productive age, indicating the province still enjoys its demographic bonus. This condition could benefit the economy if properly managed (OJK, 2022).

According to the research problems and objectives that combine the theoretical concept and other empirical studies, the proposed research model is as follows.

**Figure 1.**  
**Research Framework**



## Operational Definition of Variables

The independent variables in this study are financial literacy, financial planning, and risk tolerance. The dependent variable in this study is investment decision, and the moderating variable is financial technology. Demographic factors, such as gender, education, and income are added as control variables.

### Data Collection Method

The samples in this study were selected using the purposive sampling method. The variables were measured using interval measures that are four points Likert Scale. Each questionnaire item has four possible responses: Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). Hertanto (2017) argued that this modification aims to remove the middle option of the five-point Likert Scale.

### Data Analysis Technique

This study applies a quantitative study approach. The proposed hypotheses were tested using Partial Least Square (PLS) on SmartPLS version 4.0. Partial Least Square is a multivariate method that compares several exogenous variables and many endogenous variables (Lara, G., 2022). The technique used in the analysis was Structural Equation Modeling (SEM) which produces a fit model (Narindra, 2017). There are two steps of SEM-PLS analysis, as follows:

#### 1. Measurement Model Analysis (Outer Model)

Measurement model analysis tests the construct that will be analyzed in a study for its validity and reliability. The measurement model analysis consisted of Convergent Validity (Outer Loading & Average Variance Extracted), Discriminant Validity (Fornell Larcker Criterion), Cronbach's Alpha, and Composite Reliability.

#### 2. Structural Model Analysis (Inner Model)

The structural model analysis aims to test the hypotheses proposed in the study. The analysis consisted of several tests, including the Goodness of fit model (R square) and hypotheses testing.

### Result and Discussion

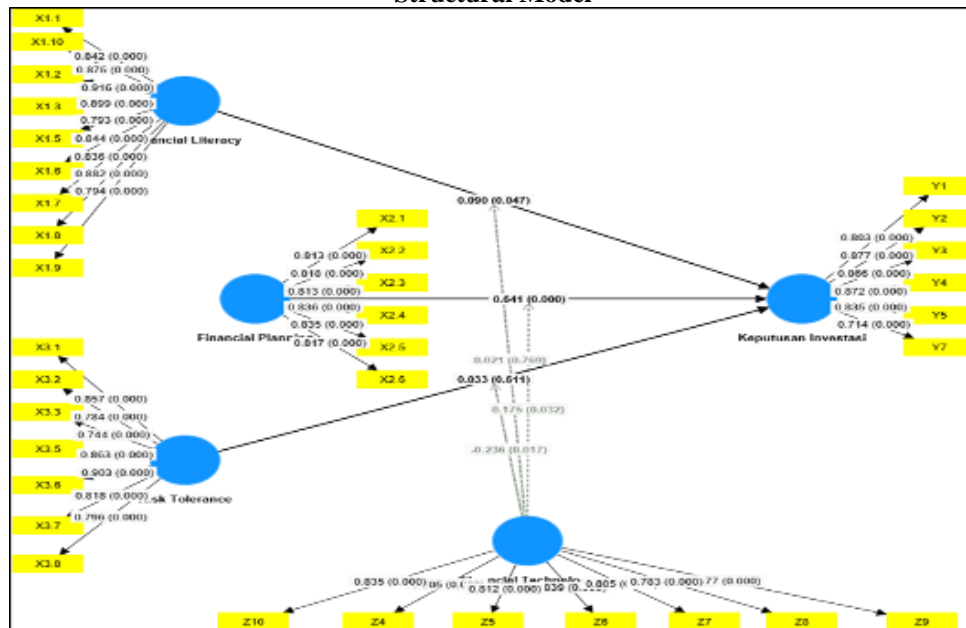
The respondents in this research consist of the Z Generation living in the DKI Jakarta Province, totaling 204 respondents selected using purposive sampling. The majority of the respondents, as presented in Table 1, are between 23 and 26 years of age, female, living in Central Jakarta, have permanent employment, have not been married, are university (bachelor) graduates, and have monthly income between Rp 5,000,000 – Rp 10,000,000.

**Table 1. Respondent Characteristics**

Characteristics		No. of respondents	Percentage
Age	11 – 14	1	0.49
	15 – 18	6	2.94
	19 – 22	4	1.47
	23 – 26	194	95.10
	Total	204	100
Sex/gender	Male	90	44.12
	Female	114	55.88
	Total	204	100
Residence	North Jakarta	36	17.65
	West Jakarta	31	15.20
	Central Jakarta	59	28.9
	East Jakarta	38	18.63
	South Jakarta	40	19.61

Characteristics		No. of respondents	Percentage
Employment	Total	204	100
	Student/not yet working	6	2.94
	Part-time worker	12	5.88
	Fulltime worker	140	68.63
	Entrepreneur	46	22.55
Marriage Status	Total	204	100
	Single	139	68.14
	Married	65	31.86
Highest Education Level	Total	204	100
	Middle school or equal	3	1.47
	High school or equal	3	1.47
	Diploma	5	2.45
	Bachelor	183	89.71
	Graduate level	10	4.90
Monthly Income	Total	204	100
	No monthly income	2	0.98
	Under Rp 5,000,000	9	4.41
	Rp 5,000,000 – Rp 10,000,000	191	93.63
	Rp 10,000,000 – Rp 15,000,000	2	0.98
	Over Rp 15,000,000	0	0

Figure 2.  
Structural Model



**Measurement Model Analysis (Outer Model)**

The outer model is a measurement implemented to determine the correlation specification between indicators and their respective latent variable, to establish a valid and reliable measurement (Hussein, 2015). The basis for convergent validity determination is whether the outer loadings are greater or equal to 0.7.

**Table 2.**  
**Outer Loadings**

	<i>Financial Literacy</i>	<i>Financial Planning</i>	<i>Financial Technology</i>	<i>Investment Decision</i>	<i>Risk Tolerance</i>	<i>Financial Technology x Financial Literacy</i>	<i>Financial Technology x Risk Tolerance</i>	<i>Financial Technology x Financial Planning</i>
X1.1	0.842							
X1.10	0.875							
X1.2	0.916							
X1.3	0.899							
X1.5	0.793							
X1.6	0.844							
X1.7	0.836							
X1.8	0.882							
X1.9	0.794							
X2.1		0.813						
X2.2		0.818						
X2.3		0.813						
X2.4		0.836						
X2.5		0.835						
X2.6		0.817						
X3.1					0.857			
X3.2					0.784			
X3.3					0.744			
X3.5					0.863			
X3.6					0.903			
X3.7					0.818			
X3.8					0.796			
Y1				0.803				
Y2				0.877				
Y3				0.866				
Y4				0.872				
Y5				0.835				
Y7				0.714				
Z10			0.835					
Z4			0.805					
Z5			0.812					
Z6			0.839					
Z7			0.805					

	<i>Financial Literacy</i>	<i>Financial Planning</i>	<i>Financial Technology</i>	<i>Investment Decision</i>	<i>Risk Tolerance</i>	<i>Financial Technology x Financial Literacy</i>	<i>Financial Technology x Risk Tolerance</i>	<i>Financial Technology x Financial Planning</i>
Z8			0.783					
Z9			0.777					
Financial Technology x Risk Tolerance							1	
Financial Technology x Financial Planning								1
Financial Technology x Financial Literacy						1		

Table 2 shows that all statements have an outer loading value greater than 0.7. This result shows that all statements in Table 2 are valid and meet the convergent validity criteria. The next convergent validity is conducted based on the AVE value, in the current research, each variable AVE shows a value greater than 0.5, reflecting a good measurement. The AVE value is presented in Table 3.

**Table 3.**  
**Average Variance Extracted**

	<i>Average Variance Extracted (AVE)</i>
<i>Financial Literacy</i>	0.73
<i>Financial Planning</i>	0.676
<i>Financial Technology</i>	0.653
Keputusan Investasi	0.689
<i>Risk Tolerance</i>	0.681
<i>Financial Literacy x Financial Technology</i>	1.000
<i>Financial Planning x Financial Technology</i>	1.000
<i>Risk Tolerance x Financial Technology</i>	1.000



Based on the outer loading and AVE value as reported in Table 2 and Table 3, it can be concluded that the current research has met the criteria for convergent validity, thus, further tests can be conducted, namely discriminant validity.

The discriminant validity test is conducted using the *Fornell Larcker Criterion* (FLC). This test is conducted by comparing the correlation value for each variable to that variable and should not be lower than other variables. Table 4 reported the correlation value between the variables and the variable itself. If the correlation value is greater than the correlation of the variable with the other variables, then the model is considered to have good discriminant validity.

**Table 4.**  
**Fornell Larcker Criterion**

	Financ ial Literac y	Financi al Plannin g	Financia l Technol ogy	Investm ent decision	Risk Toleran ce	Financia l Literacy * Financia l Technol ogy	Financia l Planning * Financia l Technol ogy	Risk Toleranc e * Financia l Technol ogy
<i>Financial Literacy</i>	0.854*							
<i>Financial Planning</i>	0.235	0.822*						
<i>Financial Technolo gy</i>	0.146	0.533	0.808*					
<i>Investme nt Decision</i>	0.241	0.723	0.443	0.83*				
<i>Risk Tolerance</i>	0.292	0.424	0.473	0.408	0.825*			
<i>Financial Literacy * Financial Technolo gy</i>						1*		
<i>Financial Planning * Financial Technolo gy</i>						0.854	1*	
<i>Risk Tolerance * Financial Technolo gy</i>						0.418	0.604	1*

Following the validity test is the reliability test. The reliability test in this research is conducted based on the composite reliability > 0.7 and Cronbach's Alpha > 0.7 (Ghozali & Latan, 2015).

Composite Reliability ( $\rho_a$ ) and Composite Reliability ( $\rho_c$ ) as reported in Table 5 derived from data processing conducted in SmartPLS 4.0. The previous SmartPLS version does not report a separated Composite Reliability ( $\rho_c$ ) score as both measurements are considered as part of the Composite Reliability, where the value is accepted if the score is greater than 0.7. Table 5 shows the result of the reliability test, where the score for both measurements is greater than 0.7, thus the current research construct is considered reliable.

**Table 5.**  
**Cronbach Alpha & Composite Reliability**

	<i>Cronbach's alpha</i>	<i>Composite reliability (<math>\rho_a</math>)</i>	<i>Composite reliability (<math>\rho_c</math>)</i>
<i>Financial Literacy</i>	0.954	0.962	0.96
<i>Financial Planning</i>	0.904	0.904	0.926
<i>Financial Technology</i>	0.912	0.916	0.93
Investment Decision	0.908	0.914	0.93
<i>Risk Tolerance</i>	0.922	0.934	0.937
<i>Financial Literacy x Financial Technology</i>	1.000	1.000	1.000

### Structural Model Analysis (*Inner Model*)

The structural model test can be done by considering the R square value as reported in the model Goodness of Fit test. An R square value of 0.67 shows a strong relationship, while a score of 0.33 shows a moderate relationship and a score of 0.19 shows a weak relationship (Chinn, 1998).

**Table 6.**  
**R Square**

	<b>R-square</b>	<b>R-square adjusted</b>
<b>Investment decision</b>	0.600	0.586

As reported in Table 6, the result of data analysis conducted in SmartPLS 4, returned an R-square value of 0.600, this can be concluded that *financial literacy* ( $X_1$ ), *financial planning* ( $X_2$ ), *risk tolerance* ( $X_3$ ), and *financial technology* ( $Z$ ) simultaneously affect the investment decision variables ( $Y$ ) for 60%, while the rest of 40% is affected by other variables not specified in the current research model. Therefore, it can be concluded that, based on the R-square value, the relationship is moderate. A higher R square value indicates a better determination level.

### Hypothesis Testing

To test whether the proposed hypothesis is supported or not supported, data analysis can be done by considering the significant level of each construct, t-statistic, and p-value. This way, the measurement estimates and standard error are no longer calculated based on statistical assumption, but instead using an empirical observation. In the *bootstrap* method employed in

this research, a hypothesis is supported when the t-value significance is greater than 1.96 or when the *p-value* is lower than 0.05, when this happens, it can be concluded that  $H_1$  is supported and  $H_0$  is rejected, and vice versa.

**Table 7.**  
**The Effect Between Latent Variable**

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values	Result
<i>Financial Literacy -&gt; Investment Decision</i>	0.09	0.089	0.045	1.984	0.047	Positive and significant
<i>Financial Planning -&gt; Investment Decision</i>	0.641	0.63	0.109	5.873	0	Positive and significant
<i>Risk Tolerance -&gt; Investment Decision</i>	0.033	0.03	0.066	0.508	0.611	Not-supported
<i>Financial Technology x Financial Literacy -&gt; Investment Decision</i>	0.021	0.026	0.072	0.294	0.769	Not-supported
<i>Financial Technology x Risk Tolerance -&gt; Investment Decision</i>	-0.236	-0.203	0.099	2.382	0.017	Positive and significant
<i>Financial Technology x Financial Planning -&gt; Investment Decision</i>	0.175	0.163	0.082	2.143	0.032	Positive and significant

### **Effect of Financial Literacy on Investment Decision**

Table 7 shows the result of the hypothesis test. Based on the result, the effect of Financial Literacy ( $X_1$ ) on Investment Decision (Y) has a t-statistic value of 1.984, which is higher than 1.96. The original sample for this variable is 0.09, showing a positive sign with a *p-value* of 0.047 ( $< 0.05$ ). Considering this result, it can be concluded that the  $H_1$  proposed in this research is supported, therefore, *financial literacy* has a significant and positive effect on investment decisions. In general, the level of financial literacy refers to a personal understanding of financial concepts and the ability to manage personal finance, thus, allowing them to make the correct investment decision. This result suggests that respondents with better financial literacy will make better investment decisions.

### **The Effect of *Financial Planning* on Investment Decision**

The t-statistics for the relationship between *Financial Planning* ( $X_2$ ) and Investment Decision is 5.873 ( $> 1.96$ ), therefore,  $H_2$  in this research is supported showing that *financial planning* has a significant effect on investment decisions. The *original sample* score is 0.641 suggesting a positive sign, with a *p-value* of 0 ( $< 0.005$ ). This result suggests that when financial planning is done correctly and appropriately, then it can help respondents in making the right investment decision and reducing the risk of loss. It shows that the high level of financial planning done by the Z Generation before investing their money leads to high investment decisions. Furthermore, a respondent with good financial planning will make a good investment decision. This result is in line with previous research by Christian & Pratiwi (2022) and Updana & Herawati (2020) who found that financial planning has a significant effect on investment decisions.

### **The Effect of Risk Tolerance on Investment Decision**

Referring to Table 7, the t-statistic for *risk tolerance* ( $X_3$ ) on Investment Decision (Y) is at 0.508, which is lower than 1.96. This result shows that *risk tolerance* ( $X_3$ ) has no significant effect on investment decisions. The significance value based on the *p-value* is 0.611, greater than 0.05. Considering this score  $H_3$  is not supported, therefore, *risk tolerance* has no effect on investment decisions, suggesting the low level of risk tolerance among Gen Z, which leads to lower investing activity. Additionally, respondents may not have sufficient financial knowledge, particularly those living in DKI Jakarta, thus, making them quite worried about making investments. This result contradicts research results by Pujiyanto & Mahastanti (2012) who found that investors with high risk tolerance tend to choose investments with high risk. However, the current result is in line with research by Anwar, M.R & Leon, F.M (2022), and Mutlu Ummuhan & OzerGokhan (2022), who find that risk tolerance has no effect on Investment Decision.

### **The Effect of *Financial Technology* as a Moderating Variable on the Relationship between *Financial Literacy* and Investment Decision**

The following hypothesis test for  $H_4$ , returned a t-statistic of 0.294, which is lower than 1.96, showing that *financial technology* (Z) does not moderate the relationship between *financial literacy* ( $X_1$ ) and Investment Decision (Y). Meanwhile, the *p-value* is at 0.769 ( $> 0.05$ ), thus, concluding that  $H_4$  is not supported. The data analysis result shows that financial technology does not moderate the relationship between financial literacy and investment decisions. This result is in line with research by Geriadi, M. A (2023) and Solihudin et al. (2023), which found that technological advancement in the financial sector cannot increase investment decisions even when the individual has the understanding and knowledge of a financial product/service. Technology advancement, ease in using technology-based financial applications, and higher productivity in using FinTech, including security features that become the indicator for financial technology, do not encourage respondents' financial literacy growth in terms of investment decisions.

### The Effect of *Financial Technology* as a Moderating Variable on the Relationship between *Financial Planning* and Investment Decision

Based on Table 7, hypothesis testing for  $H_5$  shows a t-statistic value of 2.143 ( $>1.96$ ), which suggests the role of *financial technology* (Z) as a moderating variable in the relationship between *financial planning* ( $X_2$ ) and investment decisions (Y). Meanwhile, the *p-value* returns a significance level of 0.032 ( $< 0.05$ ) and an *original sample* value of 0.175, which shows a positive sign. This result means that an increase in *financial planning* will lead to an increase in investment decisions. Following these results, it can be concluded that  $H_5$  is supported, suggesting that *financial technology* moderates the relationship between *financial planning* and investment decisions. This strengthens the research result conducted by Rahardjo (2019) who finds that FinTech can help an individual in facilitating financial planning, thus, assisting investors in making a good financial plan and actualizing their future financial objectives.

### Moderating Effect of *Financial Technology* on the Relationship between *Risk Tolerance* and Investment Decision

The hypothesis test for the  $H_6$  shows a t-statistics value of 2.382 ( $> 1.96$ ), which means that *Financial Technology* (Z) has a moderating role in the relationship between *risk tolerance* ( $X_3$ ) and investment decision (Y). The significance score obtained from the *p-value* is 0.017, which is lower than the Alpha ( $\alpha$ ) value at 0.05. The *original sample* value is -0.236 showing a negative sign, suggesting that lower risk tolerance will improve investment decisions. Therefore, it can be concluded that  $H_6$  is supported, where *financial technology* moderates the effect of *risk tolerance* on investment decisions. This result shows a high level of interest among Gen Z respondents to use FinTech, even though they know about the risks of investing. This result proves that investor with a high level of financial technology understanding affects the effect of risk tolerance on investment decisions. This result is in line with research by Fajrina et al. (2022), Asfira (2019), and Rahmayanti (2017), stating that financial technology can strengthen the effect of risk tolerance in making investment decisions.

### The Effect of Gender, Education, and Income on Investment Decision

Table 8.

The Effect of Control Variable

Gender	Frequency	Percentage	Scoring	Mean	Std. Dev
Male	90	44.12	1	107	58
Female	114	55.88	2	99	60
Total	204	100		103	59
Education level	Frequency	Percentage	Scoring	Mean	Std. Dev
Middle school or equal	3	1.47	1	3	2
High school or equal	3	1.47	2	56	88
Diploma	5	2.45	3	9	2
Bachelor	183	89.71	4	107	56
Graduate level	10	4.90	5	119	66
Total	204	100		103	59

<b>Gender</b>	<i>Frequency</i>	<i>Percentage</i>	<i>Scoring</i>	<i>Mean</i>	<i>Std. Dev</i>
<b>Monthly income</b>	<i>Frequency</i>	<i>Percentage</i>	<i>Scoring</i>	<i>Mean</i>	<i>Std. Dev</i>
No monthly income	2	0.98	0	3	2
Under IDR 5,000,000	9	4.41	1	65	80
ID 5,000,000 – IDR 10, 000,000	191	93.63	2	106	57
IDR 10,000,000 – IDR 15,000,000	2	0.98	3	84	108
Diatas IDR 15,000,000	0	0	4	0	0
Total	204	100		103	59

Table 8 reported that the total number of male respondents is 90 respondents (44.12%) and female respondents totaled 114 respondents (55.88%). This shows that the majority of respondents are female, suggesting higher involvement in this research compared to male respondents. Based on education level, there are 5 education categories namely the middle school or equal level, high school or equal level, Diploma graduate, Undergraduate/Bachelor degree, and graduate level (Master). From the five categories, the majority of the respondents hold the undergraduate/bachelor at 89.71% or equal to 183 respondents. This ratio is due to the need to understand the type of investment before making an investment decision by respondents. The lowest education level of the respondents is Middle school and high school with 1.47% each, which equals 3 respondents for each category. This condition is mainly because a higher education level will help respondents understand the most suitable type of investment. At the same time, a higher level of education can help respondents to make investment decisions quicker and more accurately. Based on the income category, the respondents can be divided into five groups (categories), among others are respondents with no monthly income, respondents with monthly income under Rp 5,000,000, those with Rp 5,000,000 – Rp 10,000,000 monthly income, respondents with Rp 10,000,000 – Rp 15,000,000 monthly income, and those with monthly income above Rp 15,000,000. Most respondents have a monthly income between Rp 5,000,000 – Rp 10,000,000, with a total of 191 respondents or 93.63%.

### Conclusion

Based on the data analysis result and discussion, thus, the following conclusion can be drawn from the research:

1. Financial literacy has a positive and significant effect on investment decision
2. Financial planning has a positive and significant effect on investment decision
3. Risk tolerance does not affect investment decision
4. Financial technology can strengthen the effect of financial planning on investment decision
5. Financial technology can strengthen the effect of risk tolerance on investment decision
6. Financial technology does not strengthen the effect of financial literacy on investment decision

## Implication

### 1. For individual

Before making an investment decision an individual, particularly the Gen Z residing in DKI Jakarta Province, is expected to seek necessary education to improve their financial literacy through various media such as training or education about an investment instrument and risk management, to help them in making a wiser investment decision. Other than that, Generation Z is advised to have a lifestyle that supports saving and investment management, such as managing expenses wisely and transforming their mindset to not get trapped in a hedonistic lifestyle.

### 2. For the Government

The government of Indonesia through the Financial Services Authority (OJK) needs to strengthen the regulation on FinTech usage to include various development programs such as funding schemes that encourage more productive FinTech funding compared to the current consumptive scheme while improving consumer protection. Aside from that, OJK also needs to prioritize equal access to FinTech, reaching not only the urban area. The government can also increase the dissemination of financial and digital literacy, including FinTech usage for investment to the wider community.

### 3. For industrial sector

The financial industry sector in its capacity to improve financial performance needs to be innovative in its improvement of platform display quality, service quality, profitability, operational cost reduction, and providing attractive rewards or cashback to attract investor interest.

## Recommendation

Future research can extend the population coverage and consider other variables such as Indonesia's current economic condition, investment product quality, lifestyle, and individual characteristics, adding more control variables and other moderating variables that can affect investment decisions. Thus, researchers can improve the research quality and significance, as well as contribute more to theoretical development within the same topic.

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