



# The Influence of Financial Literacy, Experienced Regret, Framing Effect and Mental Accounting on Millennial Generation Investment Decisions in DKI Jakarta with Risk Tolerance as Intervening Variables

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## ABSTRACT

This study discusses financial literacys, experienced regrets, framing effect and mental accounting on investment decisions with risk tolerance as an intervening variable. The number of respondents used in this study was 200 respondents. All respondents are millennials with age 21-40 years old and have a minimum income of IDR 5,000,000, who live in DKI Jakarta. The data in this study were obtained from the results of questionnaires which were then analyzed using SEM PLS analysis techniques with the help of the smartpls program. Based on the results of the analysis in this study the results of financial literacy, experienced regret, framing effects and mental accounting are applied to risk tolerance. The results of the subsequent analysis showed that financial literacy, regrets and framed the effect of influencing on investment decisions, while mental accounting directly cannot influence on investment decisions. The results of the analysis in this study also showed that risk tolerance can mediate the financial literature, experience regret, and the effect of framing on investment returns.

**Keywords:** *Financial Literacy, Experienced Regrets, Rraming Efects, Milenial Generation Investment*

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## INTRODUCTION

Millennial population in Indonesia is predicted to reach 34 percent of the population in 2020. Millennials are expected to have reached the productive age and are independent in the financial sector. Through investment, millennials will get financial freedom in the long term according to millennial needs in the future(Sustainable, 2019).

However, on priorities for workers freedom, investment has not been a priority. Some of those who have investment needs are traveling and still need a primary allocation for them. Meanwhile, those who do not invest allocate funds for daily consumption. Broadly speaking, the reason is that they do not have the right financial contribution for them in the form of money(Isna, 2019).

Indonesian Stock Exchange (IDX) data shows that millennials with an age range of 18-25 years have the highest growth in the last two years (Nurfadillah, 2018). However,

the highest investment volume is still held by the Baby Boom generation. P. The highest SID growth occurred in 2019. The number of Single Investor Identification (SID) at the end of 2018 to 29 November 2019 grew 48.77 percent, namely 2,409,075 SID. The number of permanent investors is not proportional to the population in Indonesia with the ratio of investors in Indonesia is only 0.8 percent of Indonesia's total 260 million population. While other countries have reached 20 percent, this shows the number of investors in Indonesia is still very low (Hidayat, 2019).

Based on data obtained from investors in Indonesia, it is still very minimal. This makes it difficult for Indonesians to determine investment decisions, both in terms of investment products and investment management. Some things are needed in making investment decisions such as financial literacy, experiencing the effects of framing regret, mental accounting, and risk tolerance from these investors.

The results of the National Financial Literacy Survey (SNLIK) in 2019 showed 76.19 percent people who use financial products and services. But only 38.03 percent who has financial literacy (Laoli, 2020). The LUNO survey "The Future of Money" with 15 percent of respondents is the generation that shows 50 percent of Indonesian respondents who need more information about how to use their money (Sustainable, 2019).

*Experienced regret* that is the experience experienced by someone who causes that person to regret making investment decisions. The number of Single Investor Identification (SID) in Indonesia increases every year, but not as much as 85% of investors fail to make a decision. Apart from the lack of knowledge and skills, but also because of the bad experiences they have experienced (Rahmawati, 2020).

Submitting different framing information can influence investor investment decision making. If investors provide information that is delivered with positive framing, investors will choose investments that have little risk or avert risk, but compile information submitted with negative framing, then investors will choose investments that are more risky or risk seekers (Nazilah, 2015).

*Mental accounting* also determines investment decision making by investors. Indonesia's millennial generation is still busy saving and around 44 percent of millennials invest once every one or two years, even 20 percent of them don't invest (Sustainable, 2019). There are only 2 percent millennial set aside funds for investment (Zuraya, 2019).

*Risk tolerance* is a strong factor in influencing the achievement of investment returns. Indonesian people's trust in investment is still very minimal. Local investors are afraid of high risks and local investors are still comfortable investing in the real sector rather than intangible assets (Main and Bestari, 2019). Based on a survey from Investennial Affluent, Millennial Investment generates 21 percent of millennial generation in the world is still allocated funds to save compared to investment (Gobell, 2019).

Based on the background that has been described, the researchers propose to conduct research under the title "the influence of financial literacy, regret experience, framing effect, and mental accounting on the taking of millennial generation investment in DKI Jakarta with risk tolerance as an intervening variable.

### **Behavioral Financial Theory**

Baker and Ricciardi (2014) explain the behavior used to consider investors making decisions by proving that people actually behave in making decisions (Baker and Ricciardi, 2014). Information in behavioral finance includes framing, heuristics,

overconfidence, regrets theory and mental accounting that can help to facilitate various financial decisions.

### **Prospect Theory**

This theory considers decisions between risky alternatives. Prospect theory describes investors who always reject losses, and they oppose comparative returns (Hens, Thorsten and Rieger, 2010). In making financial decisions depends on previous decisions so that the right results can be obtained (Baker & Ricciardi, 2014).

### **Investment decision**

Investment decision making is defined as capital investment decisions through the planning process, setting goals and priorities, setting goals, and using specific criteria to select long-term assets (Mowen, 2014). Some important things in determining investment decisions are return, risk and the relationship between return and risk. The reason individuals want to make investments is because of high returns. However, the higher the return, the greater the risk. While the relationship between returns and risk is expected to grow linearly (Artina and Cholid, 2018).

### **Financial Literacy**

Financial literacy is in accordance with the knowledge, skills and beliefs of the community regarding financial institutions and their service products as outlined in the index size parameters (Bhaskara, 2019). Financial literacy has a strong influence. Financial knowledge as an understanding of financial concepts is important for everyday life for financial welfare (Thomas, 2016). Dancing and Kewal (2013) developing financial literacy indicators that include general personal finance, savings and loans, insurance, investment.

### **Experienced Regret**

Experienced regret is an experience that a person is attending and causes the individual to be disappointed and disappointed in making an investment decision or accepting the results of taking an initial investment decision (Yohnson, 2008). Experienced regret is regret that arises due to mistakes in the past and affect decisions in the future (Wulandari, 2014). The indicator of experiencing regret is the experience of loss consisting of experience of loss, bad experience and difficulty in investing. Then is the experience of feeling sorry about compiling to make an investment

### **Framing Effect**

Framing is a phenomenon that is proposed inviting a decision to respond differently in the same problem presented in a different format. Kahneman & Tversky (1979) explain the influence of framing on decision making through the achievement theory of framing adopted by decision makers to influence their decisions (Fagley, Coleman, & Simon, 2010). The framing effect consists of positive framing with positive consideration in investment, choosing without risk, minimizing risk and prioritizing profits. Whereas negative framing has an indicator of choosing risky investments with probabilities determined by numerical.

### **Mental Accounting**

Mental accounting according to Copur (2015) as an individual loan to access their information into a manageable mental account. Mental accounting as a basis for interaction portfolio theory (CPM) where investors consider assets in layers, or mental accounts, depend on brand investment objectives (Baker & Ricciardi, 2014). Mental accounting has an indicator of costs between considering other costs, classifying routine expenses and minimizing risk. Meanwhile, for the benefits of the indicators, it is important to pay attention to the benefits and classify routine income in property investment.

## Risk tolerance

Astuti (2015) saying risk tolerance is the level of risk at which a person feels comfortable or in other words about the level of risk at which an investor wants to invest. According to Budiarto (2017) risk tolerance is an acceptable benefit in taking risks when investing. Indicators of risk tolerance can be seen from the ability of investors to accept risks that will be considered as risk seekers including: buying high-risk investments, buying investments with income, choosing benefits from security, minimizing the perception of risk not in line with expectations, lending without collateral, and buying investment products without consideration. Risk neutral: choose investments that are flexible, secure and return the same risk. Risk averter: choose investments without risk, low risk and buy investments with debt.

## METHOD

In this study, participants are young people who live in DKI Jakarta. The number of millennial generation of DKI Jakarta is 3,861,070. While the affordable population in this study is millennial generation (21-40 years) with a minimum of IDR 5,000,000. The sampling technique that will be used is non-probability sampling using purposive sampling and convenience sampling. The data source of this research was obtained directly from the sample that had been determined by questionnaire. The research method used today is through quantitative research. In this study there are four independent variables: financial literacy (X1), experienced regret (X2), framing effects (X3) and mental accounting (X4) with intervening variables are risk tolerance. And the variables that were successfully taken were successful decisions (Y). Data analysis using Structural Equation Model (SEM) analysis techniques to collect models and simultaneous relationships that are built between one or several independent variables with one or several dependent variables developed by PLS (Partial Least Square) V.3.0. SEM is an integrated analysis between factor and path analysis (path analysis).

### Theoretical Framework and Hypothesis Formulation

#### 1. Effect of financial literacy on risk tolerance

The level of financial literacy that is important in revenues related to financial investment. Research Pak & Mahmood (2015) showing investment becomes an important predictive variable that positively impacts the likelihood of holding a portfolio that is more risky. Research from Zakaria, et al (2017) shows that financial literacy is positively correlated with risk tolerance, low financial literacy implies low risk tolerance for making decisions and meaning in investment.

##### H1: LK impacts RT

#### 2. Effect of regret experienced on risk tolerance

Investor experience will not be okay or bad will bring decisions about spending and investment decisions. Therefore, the impact of past investments is positively related to changes that can affect investment decisions (Awais & Laber, 2016). However, many investors who fix regrets (experience regrets) related to the experience or experience in trading shares. This will have an impact on future decisions (Rinandiyana, Fahmi, Kusnandar, Economy, & Siliwangi, 2020).

##### H2: ER impacts RT

#### 3. Effect of framing effect on risk tolerance

D. Lestari (2015) showing decisions taken decisions that are framed with positive decisions chosen will lead to risk avoidance or reverse risk. Kahneman and Tversky revealed that when subjects were given certain framed choices, they would behave against risk (risk avoidance), while compiled subjects were offered things

that had the same essay and were framed as expected to be in accordance with the needs taken by risk seekers (seekers risk).

**H3: FE impacts RT**

**4. The influence of mental accounting on risk tolerance**

Accounting for investor behavior. First, risk preference, that is accepting risk (risk seeker), risk tolerance (risk averter), or neutral attitude (risk neutral). Second, the attitude of preference in receiving returns in the form of capital gains and dividends. This attracts the two attitudes by using framing to describe the investor's preferences (Nazilah, 2015).

**H4: MA impacts RT**

**5. Risk tolerance influences the mediating effect of financial literacy on investment decisions**

Zakaria, et al (2017) Uncovering financial literacy is positively related to risk tolerance, low financial literacy will result in low risk tolerance for making decisions and completing investments. Research Awais & Laber (2016) Demonstrating financial literacy has a significant influence on risk and investment decisions. It is proven that compilation of individuals having financial literacy will lead to greater risk and cause investors to choose investment risk securities.

**H5: RT is able to mediate LK that is intended for KI**

**6. The effect of mediating risk tolerance is regretting investment decisions**

Research from Putra (2016) Showing investors who are more willing to make investments that have a greater risk will calculate the risks that will arise compilation of people will take investment decisions. Associated with individuals who have high regrets will tend to choose investment products that have a higher risk, with regard to these individuals having regrets who are experienced and have enough experience in making investment decisions.

**H6: RT is able to mediate ER supported by IC**

**7. Risk tolerance mediates the effect of framing on investment decisions**

In making decisions must be based on the information presented. Nasution (2018) revealing with prospect theory explains how people who use risk averse policies (risk averse) compile positive decisions, and risk-seeking behavior (risk takers) compilation of decisions framed negatively (negative framing).

**H7: RT is able to mediate FE supported by IC**

**8. Risk tolerance mediates the accounting mentality of investment decisions**

Investment Investors. First, risk preference for accepting risk (risk seeker), risk tolerance (risk averter), or neutral attitude (risk neutral). Second, preference attitudes receive returns in the form of capital gains, dividends, or between capital gains and dividends. In choosing the attitude of investors addressing return and risk, framing explains the investor's preferences. Received results in receiving accepting returning or accepting risk in negative framing (Nazilah, 2015).

**H8: RT is able to mediate MAs supported on IC**

**9. The effect of financial literacy on investment decisions.**

Individuals with a minimum understanding of financial literacy will make poor investment decisions for individuals who discuss financial literacy well will make better investment decisions (Ahmad et al, 2016). The higher the level of financial literacy is needed, the more precise in determining the taking of financial products with a credit system and needed to be able to avoid financial problems (Artina & Cholid, 2018).

**H9: LK influences towards IC**

**10. Securities regret in investment decisions**

In Yonshon's research, he experienced significant positive regrets about investment decision making. The higher the regret, the investment decision will choose to bet in choosing the type of investment that has a higher risk (Putra, 2016). Investor yang mengalami kerugian masa lalu akan mempengaruhi keputusan konservatif akan semakin mempengaruhi keputusan investasi yang akan datang. Mempertimbangkan mengambil investasi, investor memutuskan berperilaku tidak rasional.

**H10: ERentingan terhadap KI**

**11. Pengaruh framing efek terhadap keputusan investasi**

Tversky dalam Baker (2014) mengutip bahwa penyajian (framing) dari berbagai alternatif dapat mempengaruhi risiko hasil dari keputusan yang dibuat. Dari perspektif akuntansi manajerial, manajer pertimbangan informasi akuntansi dan pengambilan keputusan yang menentukan terhadap masa depan perusahaan (Nazilah, 2015). Kahneman dan Tversky mengungkapkan pilihan orang setuju, memutuskan keputusan pada saat membuat keputusan tentang masalah. Persepsi masalah tidak hanya tergantung pada presentasi tetapi juga pada karakteristik pembuat keputusan (Baker & Ricciardi, 2014).

**H11: FE impacts KI**

**12. The influence of mental accounting on investment decisions**

Thaler revealed that mental accounting can change investors' decisions about whether to sell or buy certain assets included in their portfolios, regardless of the expected performance of any or all other assets (Baker & Ricciardi, 2014). This is a psychological factor that measures several purposes. First, it becomes self-control that causes people to think of making good decisions (Santi, Sahara, & Kamaludin, 2019)

**H12: MA has an impact on IC**

**13. Risk tolerance of investment decisions**

Research Yohnson (2008) explained that risk tolerance is significant in making investment decisions. Yonshon's research proves that investors with high risk tolerance will choose stock investments, while investors with low risk tolerance will choose investments in deposits (Yohnson, 2008). The higher the total value of risk tolerance, the greater the ability that investors will receive in taking investment risks (Budiarto, 2017).

**H13: Determine KI**

Based on the description above obtained financial literacy, regret experience, framing effects and mental accounting have an influence in determining investment returns with risk tolerance as an intervening variable, then the description of the research paradigm is as follows:

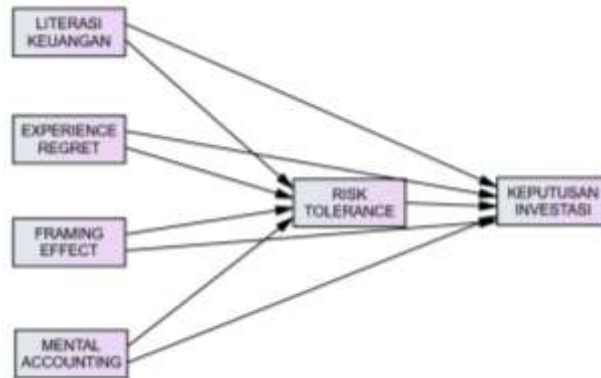


Figure 1 Conceptual Framework

## RESULTS AND DISCUSSION

### Description of Respondent Characteristics

Respondent characteristics are arranged according to gender, age, education, occupation, income per year, experience to invest.

Based on the results of the analysis that showed 200 respondents who were proposed in this study, the majority of respondents were male (56.5%), while the remaining 43.5% of respondents were female.

From the point of view of the analysis results show that of the 200 respondents who argued in this study, most respondents received 26-30 years (44.5%), while as many as 25% of respondents reached 21-25 years, as many as 24.5% of respondents There are only 31 - 35 years and as many as 6% of respondents reach 36 - 40 years.

From the education side, the results of the analysis showed that 200 respondents joined in this study, most of the respondents had an S1 degree (72%), while the remaining 20.5% had a S2 degree and 7.5% had a diploma degree.

Based on the work obtained by the results of the analysis showed that of the 200 respondents who needed this study, most of the respondents were private employees (45%), while the remaining 31% of respondents were BUMN employees, 20.5% of respondents were self-employed, 3% were students / students and 0.5% are civil servants.

Based on annual income the results of the analysis show that of the 200 respondents expected in this study, most respondents have 5-10 million per month, while as many as 19.5% of respondents have an understanding of 11-15 million, as much as 17% of respondents earn 16-20 million and as many as 11% of respondents earn > 20 million per month.

While in terms of experience needed to make an investment the results of analysis obtained from 200 respondents who participated in this study, the majority of respondents have earned for <1 year (52% 0, while as many as 31.5% of respondents worked for 1-3 years, as many as 14.5% of respondents experienced 4-8 years and 2% of respondents experienced > 8 years.

### Validity and Reliability of Research Instruments

Based on the results of the analysis show that all questions in the research instrument already have an R count > 0.361 which indicates that all question items are valid and can be used to measure the research variables.

**Table 1**  
**Instrument Validity Test Results**

<b>Variable</b>	<b>Indicator</b>	<b>R Calculate</b>	<b>R Table</b>	<b>Validity</b>
<b>Financial Literacy</b>	LK1	0.864	.361	valid
	LK2	.889	.361	valid
	LK3	.881	.361	valid
	LK4	0.811	.361	valid
	LK5	.891	.361	valid
	LK6	0.864	.361	valid
	LK7	.889	.361	valid
	LK8	.881	.361	valid
	LK9	0.811	.361	valid
	LK10	.891	.361	valid
	LK11	0.864	.361	valid
	LK12	.889	.361	valid
	LK13	.881	.361	valid
<i>Experience Regret</i>	ER1	0.868	.361	valid
	ER2	0.868	.361	valid
	ER3	0.922	.361	valid
	ER4	0.871	.361	valid
<i>Framing Effect</i>	FE1	0.863	.361	valid
	FE2	.887	.361	valid
	FE3	0.869	.361	valid
	FE4	.888	.361	valid
	FE5	0.841	.361	valid
<i>Mental Accounting</i>	MA1	.902	.361	valid
	MA2	.889	.361	valid
	MA3	0.914	.361	valid
	MA4	0.923	.361	valid
	MA5	0.869	.361	valid
<i>Risk Tolerance</i>	RT1	0.985	.361	valid
	RT2	0.926	.361	valid
	RT3	.876	.361	valid
	RT4	0.923	.361	valid
	RT5	.956	.361	valid
	RT6	0.985	.361	valid
	RT7	0.926	.361	valid
	RT8	.876	.361	valid
	RT9	0.923	.361	valid
	RT10	.956	.361	valid
	RT11	0.985	.361	valid



	RT12	0.926	.361	valid
<b>Investation decision</b>	KI1	0.650	.361	valid
	KI2	.874	.361	valid
	Q3	0.766	.361	valid
	KI4	0.781	.361	valid
	KI5	.371	.361	valid
	KI6	.874	.361	valid
	KI7	0.766	.361	valid

Source: Data processed (2020)

In this study, before distributing questionnaires to 200 respondents, the questionnaire was first tested on 30 respondents to determine the level of validity of the research instrument. Based on the overall research instrument test results are valid and can be used for research instruments to 200 respondents. This is because the value of  $R_{count} > 0.361$  and can be declared valid. Then, for the reliability test the cronbachs alpha value  $> 0.7$  was obtained. So that this research instrument declared reliable.

**Table 2**  
**Hasil Uji Reliabilitas**

<b>Variabel</b>	<b>Cronbachs Alpha</b>	<b>Keandalan</b>
Literasi Keuangan	0,978	dapat diandalkan
Rasakan Penyesalan	0,949	dapat diandalkan
Efek Pembingkaian	0,952	dapat diandalkan
Akuntansi Mental	0,964	dapat diandalkan
Toleransi resiko	0,989	dapat diandalkan
Keputusan investasi	0,906	dapat diandalkan

Sumber: Data diproses (2020)

### **Analisis PLS**

This research was analyzed using the Partial Least Square (PLS) analysis technique. by using PLS can illustrate the estimated model that can be used as a reference in showing the results of research hypotheses. This PLS includes the testing stage of the outer model, testing the goodness of fit model and testing the inner model.

1. Outer Model Testing

Table 3  
Outer Model Test Results

Variable	Indicator	Convergent Validity		Discriminant Validity	Reliability	
		Loading Factor	AVE		Cronbach's Alpha	Composite Reliability
Financial Literacy	LK1	0.918	0.818	0.904	.981	.983
	LK10	0.885				
	LK11	.898				
	LK12	.887				
	LK13	0.913				
	LK2	0.914				
	LK3	0.930				
	LK4	.906				
	LK5	.908				
	LK6	.902				
	LK7	0.895				
	LK8	.907				
	LK9	.891				
Experience Regret	ER1	0.905	0.861	0.928	0.946	0.961
	ER2	0.927				
	ER3	0.948				
	ER4	0.931				
Framing Effect	FE1	.909	0.843	0.918	.953	0.964
	FE2	0.921				
	FE3	0.923				
	FE4	0.923				
	FE5	0.915				
Mental Accounting	MA1	0.923	0.845	0.919	.954	0.965
	MA2	0.922				
	MA3	0.934				
	MA4	0.913				
	MA5	.903				
Risk Tolerance	RT1	0.930	.778	0.882	.974	0.977
	RT10	0.846				
	RT11	.872				
	RT12	.856				
	RT2	0.923				
	RT3	0.890				
	RT4	0.914				

	RT5	0.914				
	RT6	0.867				
	RT7	0.863				
	RT8	0.841				
	RT9	.859				
Investation decision	KI1	.903	0.794	0891	.957	0.964
	KI2	0.943				
	Q3	0.937				
	KI4	0.920				
	KI5	.873				
	KI6	0.831				
	KI7	0.823				

The test results above show that all indicators are valid and all constructs are declared reliable so that the analysis of research data can proceed to conduct the PLS Model test.

**2. Testing the goodness of fit model**

Next is the goodness of fit model test, based on table 4 shows that the value SRMR in the estimated model is 0.052. Because the SRMR value of the model is good at the estimated model below 0.10, the PLS model estimated in this study is declared perfect fit so it is feasible to use to test the research hypothesis.

**Table 4**  
**Goodness of fit Model**

GOF Criteria	Saturated Model	Estimated Model
SRMR	0.052	0.052

**3. Inner Model Testing**

Next is the inner model test. Testing the inner model includes testing the significance of direct effects, testing the indirect effect and measuring the magnitude of the effect of each exogenous variable on endogenous variables. All of these tests will be used to test the research hypothesis.

Based on the table below shows that there are exogenous variables that do not directly affect endogenous variables, namely mental accounting. Mental Accounting requires mediation to influence investment decisions. So risk tolerance is right to be a mediating variable between mental accounting and investment decisions

**Table 5**  
**Inner Model Testing**

<i>Direct Influence</i>					
	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (  O / STDEV  )	P Values
ER -> KI	0.170	0.173	0.077	2,217	<b>0.027</b>
ER -> RT	0.275	0.278	0.065	4,217	<b>0,000</b>
FE -> KI	0.159	0.163	0.081	1,970	<b>0.049</b>
FE -> RT	0.247	0.244	0.056	4,429	<b>0,000</b>
LK -> KI	0.152	0.151	0.071	2,150	<b>0.032</b>

LK -> RT	0.201	0.201	0.064	3,153	0.002
MA -> KI	0.039	0.037	0.087	0.445	0.657
MA -> RT	0.229	0.230	0.060	3,788	0,000
RT -> KI	0.327	0.324	0.094	3,494	0.001
<b>Indirect Influence</b>					
	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics (  O / STDEV  )</b>	<b>P Values</b>
ER -> RT -> KI	0.090	0.089	0.032	2,774	0.006
FE -> RT -> KI	0.081	0.077	0.025	3,181	0.002
LK -> RT -> KI	0.066	0.067	0.033	1974	0.049
MA -> RT -> KI	0.075	0.074	0.028	2,650	0.008

### Hypothesis Test Results

Hypothesis testing can be seen in the results of the study below:

#### Summary of Hypothesis Testing Results

No	Hypothesis	T Statistics (  O / STDEV  )	P Values	Decision
1	LK -> RT	3,153	0.002	received
2	ER -> RT	4.217	0,000	received
3	FE -> RT	4,429	0,000	received
4	MA -> RT	3,788	0,000	received
5	LK -> RT -> KI	1974	0.049	received
6	ER -> RT -> KI	2,774	0.006	received
7	FE -> RT -> KI	3,181	0.002	received
8	MA -> RT -> KI	2,650	0.008	received
9	LK -> KI	2,150	0.032	received
10	ER -> KI	2,217	0.027	received
11	FE -> KI	1,970	0.049	received
12	MA -> KI	0.445	0.657	rejected
13	RT -> KI	3,494	0.001	received

## DISCUSSION

### 1. Effect of Financial Literacy on Risk Tolerance

The analysis showed that hypothesis 1 was proven and concluded that financial literacy had a positive and significant effect on risk tolerance. The higher the financial literacy of millennial generation, the higher the risk tolerance of millennial generation. The contribution of financial literacy to the level of individual risk tolerance is 20.1%. The results of this study are in line with the research Pak & Mahmood (2015) shows that investment becomes an important predictive variable that positively impacts the likelihood of holding a portfolio that is more risky. Effect of framing effect on risk tolerance.

### 2. The effect of experienced regret on risk tolerance

The analysis shows that hypothesis 2 is proven and concluded that experienced regret has a positive and significant effect on risk tolerance. The higher experienced regret of the millennial generation, the higher the risk tolerance of the millennial generation. The contribution of experienced regret to the level of individual risk tolerance is 27.5%. The higher the level of risk chosen by an investor, the higher the return it gets. However, many investors experience regret (experienced regret) due to behavior or experience in conducting stock trading behavior (Rinandiyana et al., 2020)

**3. Effect of framing effect on risk tolerance**

The analysis showed that hypothesis 3 was proven and concluded that the framing effect had a positive and significant effect on risk tolerance. The higher the millennial generation framing effect, the higher the millennial generation risk tolerance. The contribution of framing effect to the level of individual risk tolerance is 24.7%.

Kahneman and Tversky revealed that when subjects were given certain framed choices, they were likely to behave in risk aversion, whereas when subjects were offered something that had the same essay and were framed differently, they might show risky behavior.

**4. The influence of mental accounting on risk tolerance**

The analysis shows that hypothesis 4 is proven and concluded that mental accounting has a positive and significant effect on risk tolerance. The higher the mental accounting of millennial generation, the higher the risk tolerance of millennial generation. The contribution of mental accounting to the level of individual risk tolerance is 22.9%. Mental accounting considers gains and losses. Research from Barberis and Huang implements mental accounting with narrow framing, namely framing financial decisions by considering attention to return or risk and evaluating investment decisions, so investors frame a transaction to determine the utility they receive.

**5. The effect of financial literacy on investment decisions mediated by risk tolerance**

The results of the analysis show that hypothesis 5 is proven and concluded that financial literacy can indirectly influence investment decisions mediated by risk tolerance. Research Aren & Aydemir (2015) shows a positive relationship between financial literacy and individual return expectations and also risk demand. Research Awais & Laber (2016) shows that financial literacy has a significant impact on risk tolerance and investment decisions.

**6. The effect of experienced regret on investment decisions is mediated by risk tolerance**

The analysis shows that hypothesis 6 is proven and concluded that experienced regret can have an indirect effect on investment decisions mediated by risk tolerance. Research also says that people who have more investment experience will be more tolerant of risk (Putra, 2016). In addition, decisions made by investors with less investment experience can lead to imperfect results (Awais & Laber, 2016).

**7. The effect of farming effect on investment decisions mediated by risk tolerance**

The results of the analysis in this study indicate that hypothesis 7 is proven and concluded that the framing effect can indirectly influence investment decisions mediated by risk tolerance. Nasution (2018) revealed with prospect theory explaining about where individuals exhibit risk averse behavior (risk averse) when

decisions are framed positively, and risk seeking behavior (risk takers) when decisions are framed negatively (negative framing).

**8. The influence of mental accounting on investment decisions mediated by risk tolerance**

The analysis shows that hypothesis 8 is proven and concluded that mental accounting can have an indirect effect on investment decisions mediated by risk tolerance. Investment behavior illustrates that investors have two possible attitudes. In showing the attitude of investors addressing return and risk, framing explains the investor's preferences. Resulting in an attitude of accepting return or accepting risk in negative framing or both in a balanced way (Nazilah, 2015).

**9. The effect of financial literacy on investment decisions**

The analysis shows that hypothesis 9 is proven and concluded that financial literacy has a positive and significant effect on investment decisions. The higher the financial literacy of millennial generation, the higher millennial generation investment decisions. The contribution of financial literacy to the level of individual investment decisions is 15.2%. The higher the level of financial literacy a person has, the more appropriate it is to determine the taking of financial products, especially with the credit system and later be able to avoid financial risk (Artina & Cholid, 2018).

**10. The influence of experienced regret on investment decisions**

The analysis shows that hypothesis 4 is proven and concluded that experienced regret has a positive and significant effect on investment decisions. The higher experienced millennial generation regret, the higher the millennial generation investment decision. The contribution of experienced regret to the level of individual investment decisions is 17%. The results of this study are in line with the results of Yonshon's experienced regret research having a significant positive effect on investment decision making. The higher experienced regret, the investment decision making will tend to be bolder in choosing the type of investment that has a higher risk (Putra, 2016).

**11. Effect of framing effect on investment decisions**

The analysis showed that hypothesis 11 was proven and concluded that the framing effect had a positive and significant effect on investment decisions. The higher the millennial generation framing effect, the higher the millennial generation investment decision. The contribution of framing effect to the level of individual investment decisions is 15.9%. The results of this study support the results of Tversky's research in Baker (2014) which states that the presentation (framing) of various alternatives can affect the risk outcome of decisions made. From a managerial accounting perspective, managers consider accounting information and make decisions that affect the company's future (Nazilah, 2015).

**12. The influence of mental accounting on investment decisions**

The analysis shows that hypothesis 4 is proven and concluded that mental accounting has no significant effect on investment decisions. This shows that mental accounting cannot directly influence millennial generation investment decisions. The results of this study are not in line with the results of Sumtoro and Anastasia's research. Santi et al. (2019) found that mental accounting has an influence on investors' decisions to invest in residential property.

**13. Effect of risk tolerance on investment decisions**

The analysis shows that hypothesis 13 is proven and concluded that risk tolerance has a positive and significant effect on investment decisions. The higher

the risk tolerance of millennial generation, the higher millennial generation investment decisions. The contribution of risk tolerance to the level of individual investment decisions is 15.2%. The results of this study Yohnson (2008), which revealed that risk tolerance has a significant effect in investment decision making.

## CONCLUSION

Based on the research that has been done empirically obtained conclusions. In detail, the conclusions obtained from this study are Financial literacy influences investment decisions mediated by risk tolerance, *Experienced regret* influence on investment decisions mediated by risk tolerance., *Framing effect* influences investment decisions mediated by risk tolerance. *Mental accounting* influences investment decisions mediated by risk tolerance. Financial literacy influences investment decisions. *Experienced regret* influences investment decisions. *Framing effect* influences investment decisions. *Mental accounting* no effect on investment decisions. *Risk Tolerance* influences investment decisions.

Based on the findings in this study, the suggestions made by the researcher are: This research is expected to be considered by the public in managing finances for investing. With the hope that the public has high financial literacy, low experience regret, the right framing effect, high mental accounting and risk tolerance can provide the right investment decisions in the future. For further research is expected to expand the population and the number of samples in the study so that they can better know the ability of millennial generation in making an investment decision. Future studies are expected to be carried out on different research objects, further research is also expected to be carried out by adding other variables that have not been examined in this study.

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## AUTHOR CONTRIBUTION STATEMENT

The research had done by Monica Dewi, Hamidah, Agung Dharmawan Buchdadi. They finished processing the finding, evaluation of research, and finishing review process.

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