# Indonesian Millennial Generations' Financial Literacy in Relation to its Behavior in Investment Decision

# Dewi Tamara<sup>1,</sup> Silvia Suhardiman, Sherley Swissa Rustam, Basuki Kurniawan Master Program, Binus Business School Bina Nusantara University Jakarta, Indonesia Corresponding author: <sup>1</sup><u>dtamara@binus.edu</u>

# Abstract

This study aims to explain how the behavior of the millennial generation can have an impact on the financial literacy of that generation and how this literacy or knowledge then greatly affects the ability of the Indonesian millennial generation to manage and invest their funds. Data was collected using a questionnaire with a survey method. The population in this study are all millennials in Jakarta who have made investments. Using a random sampling method, questionnaires were distributed to 206 millennial respondents in several private banks in Jakarta. Partial Least Square-Structural Equation Modeling approach with Smart PLS program was used to perform data analysis. The results show that Financial Literacy has a positive and significant effect on Investment Decision, Financial Literacy has a positive and significant effect on Investment Decision.

#### Keywords

Financial, Financial Literacy, Financial Behavior, Investment Decision, Millennial Generation

### **1. Introduction**

Increasing financial literacy has become a global concern in recent decades, with an important role to play in encouraging economic progress. According to *Otoritas Jasa Keuangan* (OJK) (2007), empowering consumers through financial literacy will help to stabilize the financial system, increase people's welfare, reduce poverty and income disparity, and promote more inclusive development. On November 19, 2013, Joko Widodo, the 7th President of the Republic of Indonesia, introduced the National Strategy for Indonesian Financial Literacy (SNLKI). The SNKLI is one of three policy instruments designed to boost market confidence, consumer equality, and the financial services industry.

Financial literacy is defined by *Otoritas Jasa Keuangan* (2017) as knowledge, beliefs, and skills possessed by the community that can affect attitudes and behavior in enhancing the quality of decision-making and financial management to promote public welfare. According to the definition, financial service business actors, financial product consumers, and society are expected to know and understand financial services as well as increase their ability to make financial decisions. Furthermore, it alters their financial management views in order to improve public welfare.

Financial literacy has become a necessity for the Indonesian people. As a result, financial literacy knowledge becomes a life skill that each individual owns in order to live a long life. People with a high level of financial literacy (well literate) will have an easier time understanding the financial services industry's products, services, and procedures. They will also have full knowledge, allowing them to access financial services industry products and services as needed in their daily lives.

People with high financial literacy (well literate) find it easier to choose and determine financial products or services that are appropriate for their requirements and talents, allowing them to improve their overall well-being. Furthermore, those with high financial literacy (highly literate) have stronger financial management abilities, which helps them maintain their financial well-being. As a result, creating a well-literate and financially inclusive society will ultimately encourage economic growth.

Despite an uptick from the two previous polls, particularly in 2013 and 2016, the 2019 National Financial Literacy and Inclusion Survey (SNLIK) performed by the Financial Services Authority shows that Indonesia's financial literacy remains poor. Financial literacy in Indonesia has improved from 21.84 percent in 2013 to 29.66 percent in 2016, and to 38.03 percent in 2019. Research results according to Welly et al (2016), Ikhsan and Wardhana (2020) Safryani et al (2020), Mega (2018), Yolanda (2020) research results show that financial literacy has a positive influence on investment decision making. This is different from the results of research conducted by Viana et al. (2021) who examined the investment interest of Generation Y in Jabotabek found that financial literacy had no effect on investment interest.

Given the fact that millennial generations are now dominating the work force, both in Indonesia and globally, it is only fair to state that currently Indonesian economy backbone lies with the millennial generations. Elam et al. (2007) argues that millennial generations include to all individuals being born in the span period of 1982 to 2002 (30 years). In more general terms, millennial generations are born after 1980 until late 21st century (late 1990's and early 2000's). It is critical to comprehend the span of when millennials were born as there are certain factors that leads to their investment decisions and knowledge about financial risks. These factors include the following: education, demographic, culture and social behaviour. The millennial generations, unlike their predecessors, clearly have more access to advanced educations and now are one of the early consumers or users of the modern technology. Beyond those assumptions, some of the early generations of the millennials are even considered as the pioneers in strategic industries (e.g. computer science, information technology, financial industry and many more).

Apriliana & Utomo, (2019), in a study conducted by the IDN Research Institute found that the Indonesian millennial generation has consumptive behaviour and tends to make monthly expenses for things that are not important and only 10% of them decide to save while only 2% of them decide to allocate their income for investment. This is the basis for this research to re-examine how the millennial generation's financial knowledge in deciding to invest. In managing or investing certain allocated funds, it is important to first understand the level of financial literacy of a certain individual. This study focuses on the Indonesian millennial generations' financial literacy and knowledge which are needed to invest funds safely, effectively and profitably. In his study, Xia et al. (2014), underline that financial knowledge or literacy and access to information has been affecting the millennial generations in making investment. The decision of undertaking an investment is very much related to the following questions (i) How much funds to be allocated (ii) which investment portfolio to be focused on (iii) which type of investment to be undertaken (low risk-moderate or high risk) (iv) what the expected return on the investment is being made. These basic questions (Xia et al. 2014) are indeed the most fundamental questions to be asked when making investments.

### **1.1 Objectives**

This paper aims to explain how the behaviour in the millennial generations can have an impact on the generations' financial literacy and how such literacy, or knowledge, then very much affects the Indonesian millennials' capabilities in managing and investing their funds.

### 2. Literature Review

#### 2.1. Investment Decision

Material and human resources are used in addition to financial resources. Investment is affected by economic and financial situation, so the predicted outcome is uncertain (Virlics, 2013) After a thorough examination of the investment project, investment selection is taken. The element of investment risk is one of the most important aspects that influence decisions. From two perspectives, investment, investment decisions, and investment behavior can be examined. Investments can be examined and evaluated experimentally and intellectually. Theoretical and empirical approaches to investment behavior have nothing in common.

Finance for the Young Generation, Wednesday (2/12) (Masyrafina & Zuraya, 2020). Financial Literacy is a series of processes or activities to increase the knowledge, beliefs and skills of consumers and the wider community so that they are able to manage finances well (OJK, n.d.). Financial literacy is about the whole process of how individuals can manage their finances by using their knowledge of finance itself (Kumar et al. 2017). The relationship between financial literacy and investment decisions has previously been investigated by Adil et al. (2021) which shows that

financial literacy has a significant effect on investment decisions among male and female investors. Hamza & Arif (2019: 52) state that financial literacy has a positive and significant influence on investment decisions. In contrast to the results of research by Ademola et al. (2019: 41) which shows that financial literacy does not have a significant influence on investment decisions. Ruggeri et al. (2020) explained the prospect theory, which is about making decisions under risk. It is explained that decision making under risk is influenced by other considerations such as ambiguity and ambiguity. When an individual makes a risky decision, he or she does not always act according to standard financial theory. Akims & Jagongo (2017) explain that investor behavior is much more disturbed by the possibility of losses compared to the potential profits to be obtained.

Making the right decisions requires adequate knowledge, information, and understanding of finances and other things that go with it. Cole and Fernando (2008) define financial literacy as the ability to read, analyze, manage, and write finances that affect a person's life. According to Abreu and Mendes (2010), few are aware of the impact of this concept on investment diversification and its ability to explain problems with investor behavior. A study conducted (eg, Aryeetey, 2004; Kim, 2004; Akims & Jagongo, 2017; Ahunov & van Hove, 2019; Gil, 2015) found the effect of financial literacy on financial decision making. Referring to the description, the following hypotheses are proposed in this study:

H1: Financial Literacy has a positive effect on Investment Decision

#### 2.2. Financial Literacy

Financial literacy is the ability and financial knowledge possessed by individuals to be able to manage financial problems in order to improve their standard of living and achieve prosperity. Thus, financial literacy includes the knowledge and skills possessed by individuals to use their income wisely, both for spending, saving, and investing (Yukaristia, 2019; Andarsari, & Ningtyas, 2019; Arofah et al.2018).

According to Otoritas Jasa Keuangan Regulation Number 76/POJK.07/2016, Otoritas Jasa Keuangan (2017) establishes a definition of financial literacy. Financial literacy, according to the law, is "the community's knowledge, belief, and abilities that can impact the community's attitudes and behavior in improving the quality of decision-making and financial management in order to promote public welfare." In the SNLKI, Otoritas Jasa Keuangan (2017) presents a more thorough definition. Financial literacy, according to the document, is "public knowledge and understanding of the concepts and risks of financial services industry products or services," as well as "community skills, motivations, and beliefs to adapt their understanding and knowledge in effective action to improve financial welfare of individuals and groups and can increase community citizens to participate economic activities." According to research by Sumtoro and Anastasia, (2015) stated that "Behavioral finance is an approach that explains how humans make an investment or activity related to finance which is influenced by psychological factors". According to Sari, (2015), the factors that influence financial behavior are as follows: 1) Learning in college, learning in college directly affects a person's level of financial literacy.

In this study, the theory of planned behavior (TPB) is used as a grand theory. Based on the TPB, behavior itself is an observable action to describe how individuals act under certain conditions (Schmeiser and Seligman, 2013). The concept of financial literacy according to The Organization for Economic Co-operation and Development is a complex phenomenon consisting of a combination of awareness, knowledge, abilities, attitudes, and behaviors needed to make financial decisions (Governor, 2012). Therefore, financial literacy involves the financial knowledge, behavior, and attitudes of individuals (Potrich et al., 2016). TPB also explains that a person's actions are influenced by intentions and convenience. Intentions are influenced by attitudes, subjective norms, and ease of behavior (Riadini and Bari, 2018). Humans consider all information and the impact of their actions. This theory shows that individual attitudes influence behavior through a careful and reasoned decision-making process (Fishbein and Ajzen, 2011). Referring to the description, the following hypotheses are proposed in this study:

H2: Financial Literacy has a positive effect on Financial Behavior

#### 2.3. Financial Behavior

Financial behavior is usually divided into activities being undertaken by a certain individual that can be classified as positive and negative behavior (Woodyard et al. 2017). Negative financial behavior usually includes extravagant spending, no financial planning, relying on pensions or bonuses, no investments and avoiding any financial discussions. Meanwhile, positive financial behavior includes better cash management, conducting credit management, investing for a long-term return, risk management (insurance), and purchasing non-movable assets (Xiao, 2008).

Practically, based on the above examples, financial behavior could be defined as a person's behavior, perception, and action towards money management.

The millennial generation is distinct, having distinguishing traits, particularly in terms of behavior, as a result of the influence of information and communication technologies in their daily lives (ICT). Their characterization can be looked at from several angles. The growing consumptive attitude of consumers towards consumer goods is a phenomenon that has recently been apparent in plain sight. The advancement of technology and information causes individuals to believe they require all of the products produced by producers; the community's expanding consumerism is aided by the convenience of payment transactions provided by financial institutions such as banks (Parmariza and Juniarti, 2017). This has grown into the perspective of millennials are well-known for spending generation rather than investing generation.

In contrast, behavioral finance researchers argue that investors tend to behave irrationally in the investment decisionmaking process due to the influence of several psychological factors (Kiyilar & Acar, 2013; López-Gutiérrez et al., 2015; Chen & Guariglia, 2013). Financial behavior refers to human behavior that is relevant to financial decisionmaking and money management, such as developing and controlling an appropriate budget program, paying bills quickly, and saving regularly (Bhushan & Medury, 2014; Kalekye & Memba, 2015). Financial behavior is an important and fundamental component of financial literacy, according to the OECD (2013). According to Atkinson and Messy (2012), positive financial behavior such as proper budgeting and maintaining financial stability improves financial literacy, whereas negative financial behavior such as relying heavily on credit and loans degrades financial well-being. According to Banerjee, Kumar, and Philip (2017), the favorable influence of financial literacy on financial awareness improves financial inclusion behavior. Referring to the description, the following hypotheses are proposed in this study:

H3: Financial literacy has a positive effect on Investment Decision through Financial Behavior as Mediating factor

# 3. Methods

This research is a type of research that uses a quantitative approach. Ezmir (2009) states a quantitative approach as a research approach that primarily uses the post-positivist paradigm in developing science (such as thinking about cause and effect, reduction to variables, hypotheses, and specific questions, using measurement and observation, or testing theory) and use research strategies such as experiments and surveys that require statistical data. In quantitative research, according to its name many are required to use numbers, starting from data collection, interpretation of the data, and the appearance of the results (Arikunto, 2006). The research design is used to measure the relationship between the influence of financial literacy on investment decisions mediated by financial behavior in Jakarta. Meanwhile, descriptive research design is used to describe or explain the variables studied and to see the relationship and dependence of variables on their sub-variables.

### 4. Data Collection

To assess the severity of the parameters set based on the literature analysis, baseline data were collected through a standardized questionnaire covering various parameters. The population of this research are all millennials in Jakarta who have made an investment. Using random sampling method, questionnaires were distributed to 300 millennial respondents in several private banks in Jakarta, and data from 206 respondents was finally received. After discarding some bad answers, the 206 questionnaires were used for the final analysis. The research hypothesis was tested using a Structural Equation Model (SEM) approach based on Partial Least Square (PLS). PLS is a component or variant-based structural equation model (SEM). Structural Equation Model (SEM) is one of the fields of statistical study that can test a series of relationships that are relatively difficult to measure simultaneously.

# 5. Results and Discussion

### 5.1. Demographic respondent

Respondents from the distribution of questionnaires obtained 206 respondents who meet the requirements in Jakarta. A total of 206 respondents whose profiles are described in Table 1. From the 206 respondents who took this survey, most of them were male, 109 respondents (52.9%), had a bachelor's degree (60.1%) which indicated that the respondents were considered young people. and educated S1. With unmarried marital status as many as (66.5%). And

income per month Rp. 5 - 15 million by 63.6%. This respondent's profile is relevant to the purpose of this study to analyses the correlation of Financial Literacy on Financial Behavior and Investment Decision.

Demographic Profile		Sample (n)	Percentage
Gender	Female	97	47,1%
Gender	Male	109	52,9%
	D1/D3	28	13,6%
Education	S1	159	60,1%
	S2	19	9,2%
Marital status	Marry	69	33,5%
Waritai status	Single	137	66,5%
	Rp. 5 - 15 million	131	63,6%
T	Rp. 15 - 25 million	47	22,8%
Income per month	Rp. 25 - 35 million	15	7,3%
	above Rp. 35 million	13	6,4%

#### Table 1. Respondent Profile

In this study, the outer reflective model used is an indicator of reliability (outer loading), construct reliability (Cronbach's alpha and composite reliability), construct validity (Average Variance Extracted-AVE), and discriminant validity (Heterotrait-Monotrait Ratio). In the outer model output test, 51 indicators meet the outer loading requirements. Of the 66 reflective indicators in the research survey, fifteen indicators, FB4, FB5, FB6, FB7, FB8, FL3, ID13, ID14, ID15, ID19, ID20, ID21,ID22,ID2, and ID9, were excluded from the quality care variable. The outer model test results in Table 2 show that all reliable indicators in the research model are in accordance with the required outer loading value.

#### Table 2. Construct Reliability and Validity

Variable & Indicators		Outer Loading	CA	CR	AVE	
FINANCIAL LITERACY						
FL1	:	I understand the concept of financial literacy related to financial management	0,525			
FL2	:	I understand how to manage, manage, and respond to risks from existing financial resources to reach good financial decisions	0,674			
FL4	:	I know how to set short-, medium- and long-term financial goals	0,727			
FL5	:	I know how to prepare a financial and expenditure budget	0,680			
FL6	:	I know different sources of income	0,743			
FL7	:	I know the factors that affect income	0,668			
FL8	:	I noticed an unexpected expense	0,662	0,96	0,96	0,511
FL9	:	I understand knowledge about the liquidity of an asset	0,726	4	7	0,511
FL10	:	I understand knowledge of net assets	0,712			
FL11	:	I know the terms in interest rates	0,749			
FL12	:	I know the interest rate calculation	0,688			
FL13	:	I know the aspects that need to be considered in taking credit	0,691			
FL14	:	I know the calculation of interest rates in loans	0,738			
FL15	:	I know the insurance benefits	0,646	]		
FL16	:	I know how to open an insurance policy	0,760	]		
FL17	:	I have knowledge of premiums in insurance	0,785	]		
FL18	:	I know the factors to consider in choosing the type of insurance	0,760			

FL19	:	I know about short term investments	0,765			
FL20	:	I know about long term investment	0,767			
FL21	:	I know the investment risk	0,647			
FL22	:	I know the characteristics of deposits	0,707			
FL23	:	I know the investment strategy on deposits	0,703			
FL24	:	I know the characteristics of the stock	0,699			
FL25	:	I understand the knowledge of dividends	0,703			
FL26	:	I know the characteristics of bonds	0,733			
FL27	:	I know the investment strategy in bonds	0,707			
FL28	:	I know the characteristics of properties that can be invested	0,752			
FL29	:	I know the investment strategy in property	0,733			
Financia	al B					
FB1	:	Having a budget is an important strategy in finance	0,698			
FB2	:	It's important to think/plan about finances	0,739			
FB3	:	Keeping financial records is important for finance	0,745			
FB9	:	Learning about finance is my priority	0,711			
FB10	:	I believe that I can manage my finances	0,745	1		
FB11	:	I am optimistic that I can succeed in managing my business finances	0,727	0,90 6	0,92 2	0,542
FB12	:	I dare to take risks in making financial decisions	0,740			
FB13	:	The great risk will be proportional to the results obtained in my efforts	0,754	_		
FB14	:	A business must have a clear goal in the future	0,730	-		
FB15	:		0,770	1		
Investn	nent	Decision				
ID1	:	Setting financial goals (short term, medium term, long term)	0,706			
ID3	:	Prepare a budget for expenses and expenditures (daily, monthly, or yearly)	0,691			
ID4	:	Determine the maximum budget in financial allocation	0,687			
ID5	:	Put the most important needs first in the budget	0,722			
ID6	:	Thinking about the risks of taking debt/credit before making a decision	0,678			
ID7	:	Saving periodically or regularly	0,697	0.01	0.00	
ID8	:	Save money immediately leftovers or unexpected income	0,668	0,91 9	0,93 0	0,506
ID10	:	Provide funds specifically for unexpected expenses	0,739	1		
ID11	:	Saving assets for future investment	0,727	1		
ID12	:	Be careful in taking credit/investment debt	0,792	1		
ID16	:	Comparing income and expenses	0,703	1		
ID17	:	Evaluating expenses with financial planning that has been prepared	0,699	_		
ID18	:	Comparing the rate of return from one investment to another	0,731			

Table 2. shows that all indicators have outer loading > 0.70 as required, with Cronbach alpha and composite reliability greater than 0.7 which indicates that the internal consistency of the construct is reliable. The AVE measures convergent validity checks, where all values have an AVE of 0.50, indicating that all constructs explain at least 50 percent of item variance and therefore establish validity (Hair et al., 2019).

Heterotrait-Monotrait Ratio (HTMT) is used to test the discriminant validity because this method is known to have a more precise value (Hair et al., 2019). Referring to Henseller et al., (2014) the recommended threshold value is 0.85 to set each construct indicator conceptually different. Table 3 (HTMT Ratio) shows that all HTMT values are well

below the 0.85 thresholds for all variables. Thus, it is concluded that all indicators used in this research model have adequate discrimination to measure their respective constructs.

Variables	Financial Behavior	Financial Literacy	Investment Decision	
Financial Behavior	0,736			
Financial Literacy	0,725	0,715		
Investment Decision	0,834	0,710	0,712	

Table 3. Discriminant Validity: HT/MT Ratio

It can be concluded that all indicators in this research model have been well discriminated against and can measure their respective constructs. Each indicator can accurately and specifically measure its construct. There are three parameters to test the reliability and validity of the outer model above, namely the reliability indicator (outer loading), construct reliability (Cronbach's alpha and composite reliability), construct validity (average variance extract), and discriminant validity (Heterotrait-Monotrait ratio). (Table 3)

Since goodness of fit is not used in PLS-SEM as suggested by Hair et al., (2019) this study performed R<sup>2</sup> to measure predictive accuracy and the value of the Q<sup>2</sup> cross redundancy to measure predictive relevance of the test model. As a rule of thumb, R<sup>2</sup> values of 0.75, 0.50, and 0.25 can be considered substantial, moderate, and weak (Henseler et al. 2009; Hair et al. 2019). Positive Financial Behavior has R<sup>2</sup> = 0.525 and Q<sup>2</sup> = 0.475,) and Investment Decision (R<sup>2</sup> = 0.719; Q<sup>2</sup> = 0.281). Both, Financial Behavior and Investment Decisions have moderate predictive accuracy (Hair et al., 2019). These results may indicate that Financial Behavior can encourage positive Investment Decisions.

Hypothesis testing with the bootstrap procedure was carried out to determine the effect of the variables and determine whether the hypothesis proposed by this study was supported. The bootstrap approach was used to determine the significance of the data (Memon et al., 2021). The cut-off value of the T-statistic > 1.645 (one-sided) with an alpha of 0.05 was used as a criterion to determine whether the hypothesis was supported or not. The results are shown in Table 4. In addition, mediation analysis was also carried out to determine the significance of mediation, through specific indirect effects as recommended by Nitzl et al., (2016).

Hypothesis	Relationship	Path	Standard	Τ-	P Value	Result
		Coefficient	Deviation	Statistic		
H1	Financial Literacy $\rightarrow$ Investment	0.674	0.086	7.850	0.000	Supported
	Decision					
H2	Financial Literacy $\rightarrow$ Financial	0.725	0.043	16.804	0.000	Supported
	Behavior					
H3	Financial Literacy $\rightarrow$ Financial	0.489	0.066	7.426	0.000	Supported
	Behavior $\rightarrow$ Investment Decision					

It can be seen in Table 4, that from the 4 proposed hypotheses, all hypotheses are supported. For H1, T-statistic 7.850 > 1.645 and P-value < 0.05, it can be concluded that Financial Behavior has a strong influence on positive Investment Decision. For H2, the T-statistic is 16.804, P-value < 0.05, with a positive coefficient of 0.043 so it can be concluded that the hypothesis is supported. For H3, the T-statistic is 2.332, P-value < 0.05, with a positive coefficient of 0.095 so it can be concluded that the hypothesis is supported.

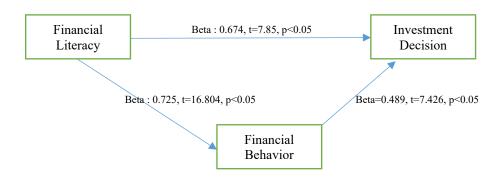


Figure 1. Result Model

Based on the coefficient value, the strongest predictor for Investment Decision is Financial Literacy followed by Financial Behavior. The higher the Financial Literacy, the higher the influence of Financial Literacy on Investment Decision. In the end, the existence of Financial Behavior is proven to strengthen the relationship of Financial Literacy to Investment Decision. (Figure 1)

#### **5.2 Discussion**

The result of testing the first hypothesis (H1) is that Financial Literacy has a positive effect on Investment Decision. Financial literacy has a positive and significant effect on investment decisions, meaning that the higher the knowledge about finances, the better individuals will tend to be in managing finances. Based on the results of the questionnaire, it was found that most of the respondents understand the concept of financial literacy related to financial management (Sundarasen et al. 2016), understand how to manage, and respond to risks from existing financial resources to achieve good financial decisions so that this can evaluate expenses with financial planning that has been prepared (Lusardi and Mitchell, (2017; Stolper and Walter, 2017). Respondents also know how to set short, medium and long-term financial goals, know how to prepare financial and expenditure budgets (Ho, 2018), In addition, respondents also know the factors that affect income, know aspects that need to be considered in taking credit (Ameliawati and Setiyani, 2018), know the terms interest rates and calculation of interest rates, this makes respondents be careful in taking credit and how to invest (Janor et al. 2016). In addition, respondents also know the benefits of insurance, know how to open an insurance policy and have knowledge about premiums in insurance so that respondents can compare rates of return from one investment to another (Agarwal et al.2015). Respondents also know about short-term investments and longterm investments, know investment risks, know the characteristics of deposits, and know investment strategies on deposits (Atkinson et al. 2015). Some respondents even know the characteristics of stocks, understand knowledge about dividends (Nawi et al. 2018), and know the characteristics of bonds so that they can decide on financial goals (short term, medium term, long term) (Henager and Cude, 2016).

The result of testing the first hypothesis (H2) is that Financial Literacy has a positive effect on Financial Behavior. Based on the results of the questionnaire, it was found that most of the respondents already had a budget, which is an important strategy in finance (Potrich dan Vieira, 2018; Potrich et al. 2018). Some also state that it is important to think about/plan finances by keeping financial records important for finances (Fisch et al. 2019). Respondents believe that with the ability to manage their own finances they will be able to determine their short-term and long-term investment priorities (Henager and Cude, 2016). Even some respondents stated that they dared to take risks in making financial decisions, this shows that the amount of risk will be proportional to the results obtained in my business (Awais et al. 2016). Respondents believe that by having clear goals for their business, they will be able to organize their future so that they are more likely to be successful in their business in the future (Stolper and Walter, 2017). The result of testing the first hypothesis (H3) is that Financial Behavior has a positive effect on Investment Decision.

Based on the results of the questionnaire, it was found that most of the respondents understood their own financial arrangements so that they could set financial goals (short term, medium term, long term) (Drever et al. 2015). In addition, respondents are also able to plan finances by keeping important financial records for their financial planning (Coaching et al. 2017). This shows that they have been able to manage the budget for expenditures and expenses (daily, monthly, or yearly) by determining the maximum budget in the financial allocation (Ameliawati and Setiyani,

2018). Respondents understand that debt is a risky investment, so they are always careful and think about the risks of taking debit/credit before making decisions in determining debt (Styles, 2018). For this reason, respondents believe that determining priorities is the most important need in the budget (Azman et al. 2015). In addition, respondents also understand that one of the investment decisions is to save regularly or periodically. For them, saving is a form of saving assets for future investment.

#### 6. Conclusion

Based on the test, it shows that Financial Literacy has a positive and significant effect on Investment Decision, Financial Literacy has a positive and significant effect on Financial Behavior, and Financial Behavior has a positive and significant effect on Investment Decision.

The limitations of this study include the sampling technique carried out with the convenience technique, namely the sampling is taken as simple as possible. Data is collected over a short period of time, so it is less likely to see consistency over a longer period.

The results of the study provide the benefit that financial literacy is a factor in the consideration of the millennial generation in making investment decisions. Researchers suggest for millennials to continue to improve their financial literacy skills. Having high financial literacy and good risk perception can help millennials to make wise and prudent financial decisions

Suggestions for future research are that researchers can focus on the millennial age group and gender as moderating or control variables in making research investment decisions. In addition, further research can also include cultural variables. Hofstede (1986:21) examines that culture is a variety of interactions of habitual characteristics that affect community groups in their environment, there are 5 (five) cultural dimensions, namely: Individualism, Collectivism, Power Distance, Avoidance of Uncertainty, and Masculinity.

#### References

- Abreu, Margarida, and Victor Mendes. "Financial literacy and portfolio diversification." *Quantitative finance* 10, no. 5,515-528, 2010.
- Ademola, S. A., Musa, A. S., & Innocent, I. O. Moderating effect of risk perception on financial knowledge, literacy, and investment decision. *American International Journal of Economics and Finance Research*, 1(1), 34-44, 2019.
- Adil, Mohd, Yogita Singh, and Mohd Shamim Ansari. "How financial literacy moderate the association between behaviour biases and investment decision?" *Asian Journal of Accounting Research*,2021.
- Ady, Sri Utami. "The Cognitive and Psychological Bias in Investment Decision-Making Behavior:(Evidence from Indonesian Investor's Behavior)." *Journal of Economics and Behavioral Studies* 10, no. 1,86-100, 2018.
- Agarwal, Sumit, Gene Amromin, Itzhak Ben-David, Souphala Chomsisengphet, and Douglas D. Evanoff. "Financial literacy and financial planning: Evidence from India." *Journal of Housing Economics* 27, 4-21, 2015.
- Ahunov, Muzaffarjon, and Leo Van Hove. "National culture and financial literacy: international evidence." *Applied Economics* 52, no. 21, 2261-2279, 2020.
- Akims, M. A. & Jagongo, A. Financial Literacy and Its Impact on Investment Decisions in Nigeria: A Theoretical Perspective. *International Journal of Scientific Research and Innovative Technology*, 4(11), 18-24, 2017.
- Akims, Malgit Amos, and Ambroe Jagongo. "Financial literacy and its impact on investment decisions in Nigeria: a theoretical perspective." *International Journal of Scientific Research and Innovative Technology* 4, no. 11, 18-24, 2017.
- Ameliawati, Meli, and Rediana Setiyani. "The influence of financial attitude, financial socialization, and financial experience to financial management behavior with financial literacy as the mediation variable." *KnE Social Sciences* 811-832, 2018.
- Andarsari, Pipit Rosita, and Mega Noerman Ningtyas. "The role of financial literacy on financial behavior." *Journal* of accounting and business education 4, no.1, 24-33, 2019.
- Anita Sari, Dian. Financial Literacy and Financial Behavior of Students. *Journals Studies Student Case STIE 'YPPI Rembang*, 6 (1), 171-174, 2015.
- Apriliana, Nia Sapma, and Endhar Priyo Utomo. "The effect of the intensity of viewing advertisements on Instagram on the knowledge and consumptive behavior of young women." *Jurnal Komunikasi* 13, no. 2, 179-190, 2019.
- Aprillianto, Bayu, Novi Wulandari, and Taufik Kurrohman. "The behavior of individual stock investors in investment decision making: a Hermeneutic-Critical Study." *E-Journal Ekonomi Bisnis dan Akuntansi* 1, no. 1, 16-31, 2014.

- Arianti, Baiq Fitri. "The influence of financial literacy, financial behavior and income on investment decision." *EAJ* (*Economic and Accounting Journal*) 1, no.1, 1-10, 2018.
- Arofah, Anastasia Anggarkusuma, Yunastiti Purwaningsih, and Mintasih Indriayu. "Financial literacy, materialism and financial behavior." *International Journal of Multicultural and Multireligious Understanding* 5, no.4, 370-378,2018.
- Aryeetey, Ernest. "Household asset choice among the rural poor in Ghana." Institute of Statistical, Social and Economic Research, University of Ghana ,2004.
- Atkinson, Adele, and Flore-Anne Messy. "Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study", 2012.
- Atkinson, Adele, Flore-Anne Messy, Lila Rabinovich, and Joanne Yoong. "Financial education for long-term savings and investments: Review of research and literature," 2015.
- Awais, Mustabsar, M. Fahad Laber, Nilofer Rasheed, and Aisha Khursheed. "Impact of financial literacy and investment experience on risk tolerance and investment decisions: Empirical evidence from Pakistan." *International Journal of Economics and Financial Issues* 6, no. 1, 73-79, 2016.
- Azman, Nur Shahirah, Aminah Shari, Haneffa Muchlis Gazali, Mohamad Azmi Abdullah, and Najwa Mohd Khalil. "Urban household credit card debt behaviour in east Malaysia: A conceptual framework." *Prosiding Persidangan Kebangsaan Ekonomi Malaysia Ke10*, 519-528, 2015.
- Banerjee, Anurag, Kamlesh Kumar, and Dennis Philip. "Financial literacy, awareness and inclusion." ISI Working Paper, https://www.isid.ac.in/~epu/acegd2017/papers/KamleshKumar.pdf,2017.
- Bhushan, Puneet, and Yajulu Medury. "An empirical analysis of inter linkages between financial attitudes, financial behaviour and financial knowledge of salaried individuals." *Indian Journal of Commerce and Management Studies* 5, no. 3, 58-64, 2014.
- Chen, Minjia, and Alessandra Guariglia. "Internal financial constraints and firm productivity in China: Do liquidity and export behavior make a difference?" *Journal of Comparative Economics* 41, no. 4, 1123-1140, 2013.
- Coaching, Carson, Business Insights, F. P. A. SmartBrief, Money Matters, Advocacy Day, FPA Public Policy Council, Pro Bono et al. "Integrating behavioral finance, financial psychology, and financial therapy into the 6-step financial planning process." *Journal of Financial Planning*, 2017.
- Cole, Shawn, and Nilesh Fernando. "Assessing the importance of financial literacy." *ADB Finance for the Poor* 9, no. 2, 1-6, 2008.
- Drever, Anita I., Elizabeth Odders-White, Charles W. Kalish, Nicole M. Else-Quest, Emily M. Hoagland, and Emory N. Nelms. "Foundations of financial well-being: Insights into the role of executive function, financial socialization, and experience-based learning in childhood and youth." *Journal of Consumer Affairs* 49, no. 1, 13-38, 2015.
- Drexler, Alejandro, Greg Fischer, and Antoinette Schoar. "Keeping it simple: Financial literacy and rules of thumb." *American Economic Journal: Applied Economics* 6, no. 2,1-31, 2014.
- Elam, Carol, Terry Stratton, and Denise D. Gibson. "Welcoming a new generation to college: The millennial students." *Journal of College admission* 195,20-25, 2007.
- Fisch, Jill E., Annamaria Lusardi, and Andrea Hasler. "Defined contribution plans and the challenge of financial illiteracy." *Cornell L. Rev.* 105, 741, 2019.
- Fishbein, Martin, and Icek Ajzen. Predicting and changing behavior: The reasoned action approach. Psychology press, 2011.
- Fitriarianti, Baiq. "Effect of financial literacy, financial behavior and income on investment decisions." In Proceedings of the National Seminar on Accounting, vol. 1, no. 1,2018.
- Gil, Esther L. "Leading the way for financial literacy education: A case study on collaboration." *Journal of Business & Finance Librarianship* 20, no. 1-2, 27-53, 2015.
- Hair, Joseph F., Jeffrey J. Risher, Marko Sarstedt, and Christian M. Ringle. "When to use and how to report the results of PLS-SEM." *European business review* 31, no. 1,2-24, 2019.
- Hamza, N., & Arif, I. Impact of financial literacy on investment decisions: The mediating effect of big-five personality traits model. *Market Forces*, 14(1), 2019.
- Henager, Robin, and Brenda J. Cude. "Financial Literacy and Long-and Short-Term Financial Behavior in Different Age Groups." *Journal of Financial Counseling and Planning* 27, no. 1,3-19, 2016.
- Henseler, Jörg, Theo K. Dijkstra, Marko Sarstedt, Christian M. Ringle, Adamantios Diamantopoulos, Detmar W. Straub, David J. Ketchen Jr, Joseph F. Hair, G. Tomas M. Hult, and Roger J. Calantone. "Common beliefs and reality about PLS: Comments on Rönkkö and Evermann" *Organizational research methods* 17, no. 2, 182-209, 2014.

Ho, Alfred Tat-Kei. "From performance budgeting to performance budget management: theory and practice." *Public Administration Review* 78, no. 5, 748-758, 2018.

Huston, Sandra J. "Measuring financial literacy." Journal of consumer affairs 44, no. 2,296-316, 2010.

- Ikhsan, Ikhsan, and Aditya Wardhana. "Influence Of Financial Literacy Of Telkom University Students On Investment Decisions In Peer To Peer Lending ApplicationS." eProceedings of Management 7, no. 2,2020.
- Janor, Hawati, Rubayah Yakob, Noor Azuan Hashim, Zanariah Zanariah, and Che Aniza Che Wel. "Financial literacy and investment decisions in Malaysia and United Kingdom: A comparative analysis." *Geografia* 12, no. 2, 2016.
- Kahneman, Daniel, and Amos Tversky. "Prospect theory: An analysis of decision under risk." In Handbook of the fundamentals of financial decision making: Part I, pp. 99-127, 2013.
- Kahneman, Daniel, and Vernon Smith. "Foundations of behavioral and experimental economics." *Nobel Prize in Economics Documents* 1, no. 7, 2002.
- Kalekye, P., and Florence Memba. "The role of financial literacy on the profitability of women owned enterprises in Kitui town, Kitui County, Kenya." *International Journal of Science & Research* 4, no. 6, 2360-2365, 2015.
- Kim, Jinhee. "Impact of a workplace financial education program on financial attitude, financial behavior, financial well-being, and financial knowledge." In *Proceedings of the association for Financial Counseling and Planning Education*, vol. 22, no. 1, pp. 82-89, 2004.
- Kiyilar, Murat, and Okan Acar. "Behavioural finance and the study of the irrational financial choices of credit card users." *Annales Universitatis Apulensis series Oeconomica*, 1454-9409, 2013.
- Kumar, Suresh, Christalita Watung, Josephine Eunike, and Lusianna Liunata. "The Influence of financial literacy towards financial behavior and its implication on financial decisions: A survey of President University students in Cikarang-Bekasi." *Firm Journal of Management Studies* 2, no. 1, 2017.
- López-Gutiérrez, Carlos, Sergio Sanfilippo-Azofra, and Begona Torre-Olmo. "Investment decisions of companies in financial distress." *BRQ Business Research Quarterly* 18, no. 3, 174-187, 2015.
- Lusardi, Annamaria, and Olivia S. Mitchell. "How ordinary consumers make complex economic decisions: Financial literacy and retirement readiness." *Quarterly Journal of Finance* 7, no. 03, 1750008, 2017.
- Masyrafina, I., & Zuraya, N. OJK: Millennial Financial Literacy is Still Low. republic. Co. id., 2020.
- Mega, Mega Mutiara. "The Influence of Finance Literacy and Demographic Factors on Student Investment Decisions." *Thesis. Indonesian Islamic University*, Yogyakarta, 2018.
- Memon, M. A., T. Ramayah, J. H. Cheah, H. Ting, F. Chuah, and T. H. Cham. "PLS-SEM statistical programs: a review." *Journal of Applied Structural Equation Modeling* 5, no. 1,1-14, 2021.
- Mittal, Manish. "Study of Differences in Behavioral Biases in Investment Decision-Making Between the Salaried and Business Class Investors." *IUP Journal of Behavioral Finance* 7, no. 4, 2010.
- Nawi, Farah Amalina Md, W. M. N. W. Daud, Puspa Liza Ghazali, Ahmad Shukri Yazid, and Zelhuda Shamsuddin. "Islamic financial literacy: a conceptualization and proposed measurement." *International Journal of Academic Research in Business and Social Sciences* 8, no. 12, 629-641, 2018.
- Parmariza, Yennida, and Septiani Juniarti. "Influence Of Risk Perceptions, Perceptions Of Usefulness And Lifestyle Addressed On Credit Card Use Behavior." *Scientific Journal of Management and Business* 3, no. 01, 2017.
- Potrich, Ani Caroline Grigion, Kelmara Mendes Vieira, and Guilherme Kirch. "How well do women do when it comes to financial literacy? Proposition of an indicator and analysis of gender differences." *Journal of Behavioral and Experimental Finance* 17, 28-41, 2018.
- Potrich, Ani Caroline Grigion, Kelmara Mendes Vieira, and Wesley Mendes-Da-Silva. "Development of a financial literacy model for university students." *Management Research Review*, 2016.
- Riadini, Betty, and Abdul Bari. Succession Planning: Urgency, Model, and Implementation. Depublish, 2018.
- Ruggeri, K., Alí, S., Berge, M. L., Bertoldo, G., Bjørndal, L. D., Cortijos-Bernabeu, A., & Folke, T. Replicating patterns of prospect theory for decision under risk. *Nature human behaviour*, 4(6), 622-633, 2020.
- Ruggeri, Kai, Sonia Alí, Mari Louise Berge, Giulia Bertoldo, Ludvig D. Bjørndal, Anna Cortijos-Bernabeu, Clair Davison et al. "Replicating patterns of prospect theory for decision under risk." *Nature human behaviour* 4, no.6,622-633,2020.
- Safryani, Ulfy, Alfida Aziz, and Nunuk Triwahyuningtyas. "Analysis of Financial Literacy, Financial Behavior, and Income on Investment Decisions." *Scientific Journal of Accounting Unity* 8, no. 3,319-332, 2020.
- Schmeiser, Maximilian D., and Jason S. Seligman. "Using the right yardstick: Assessing financial literacy measures by way of financial well-being." *Journal of Consumer Affairs* 47, no. 2, 243-262, 2013.
- Sholeh, Badrus. "The influence of financial literacy on student financial behavior in the Economics Education Study Program of Panulang University." *Journal of Education, Economics and Business* 4, no. 2,57-67, 2019.
- Stolper, Oscar A., and Andreas Walter. "Financial literacy, financial advice, and financial behavior." Journal of business economics 87, no. 5, 581-643, 2017.

- Styles, Mikala. "A Financial Epidemic: How Financial Literacy Affects College Students' Financial Management Practices and the Debt Crisis in America," 2018.
- Sumtoro, A., & Anastasia, N. Financial behavior in making decisions to invest in residential property in Surabaya. *Finesta*, 3(1), 41-45, 2015.
- Sundarasen, Sheela Devi D., Muhammad Sabbir Rahman, Noor Shahaliza Othman, and Jennifer Danaraj. "Impact of financial literacy, financial socialization agents, and parental norms on money management." *Journal of Business Studies Quarterly* 8, no. 1, 137, 2016.
- Upadana, I. Wayan Yasa Adi, and Nyoman Trisna Herawati. "The influence of financial literacy and financial behavior on student investment decisions." *Scientific Journal of Accounting and Humanika* 10, no. 2, 126-135, 2020.
- Viana, Eka Darsa, Firdha Febrianti, and Farida Ratna Dewi. "Financial Literacy, Financial Inclusion and Generation Z's Investment Interest in Jabodetabek." *Journal of Management and Organization* 12, no. 3, 252-264, 2021.
- Virlics, Agnes. "Investment decision making and risk." Procedia Economics and Finance 6, 169-177, 2013.
- Welly, Cardinal, & Juwita, R. Analysis of the Effect of Financial Literacy on Investment Decisions at STIE Multi Data Palembang. Project Reports. STIE Multi Data Palembang, 2016.
- Woodyard, Ann Sanders, Cliff Robb, Patryk Babiarz, and Ji-young Jung. "Knowledge and practice: Implications for cash and credit management behaviors." *Family and Consumer Sciences Research Journal* 45, no. 3, 300-314, 2017.
- Xia, Tian, Zhengwei Wang, and Kunpeng Li. "Financial literacy overconfidence and stock market participation." *Social indicators research* 119, no. 3, 1233-1245, 2014.
- Yolanda, Yola, and Abel Tasman. "The Influence of Financial Literacy and Risk Perception on Investment Decisions for the Millennial Generation of Padang City." *Jurnal Ecogen* 3, no. 1, 144-154, 2020.
- Yundari, Tri, and Dwi Artati. "Analysis of the Effect of Financial Literacy, Financial Behavior and Income on Investment Decisions." Scientific Journal of Management, Business and Accounting Students (JIMMBA) 3, no. 3, 609-622, 2021.

### **Biography**

**Dewi Tamara**, is currently a faculty member at Binus Business School. Her research interests are finance, strategic management, and entrepreneurship. Her work varies in case studies and books and international journals concerning fintech and its relation to strategic management and entrepreneurship.

**Silvia Suhardiman** is a post-graduate student at Bina Nusantara University under Blended Learning Program majoring in Strategy and Execution. She graduated bachelor's degree in Accountancy from Tarumanagara University in 2002 for 7 semesters as top 10 highest GPA graduation. She was an assistant lecturer in the university for Intermediate and Advanced Accounting. Of her 18 years of banking career, she has been working in treasury business as finance, operations, business management and now as Deputy Head of Markets in PT Bank ANZ Indonesia. Her work focuses specifically on managing treasury business to align with the Bank's strategy and understand the treasury business requirement and appetite to offer to clients.

**Sherley Swissa Rustam**, graduated from Universitas Prof. Dr. Moestopo (Beragama) majoring in Communications, is currently a post-graduate student of Bina Nusantara University under Blended Learning Program. Her career path started in 2002, and her current role is Head of Balance Sheet Trading in PT Bank ANZ Indonesia.

**Basuki Kurniawan**, graduated from Gadjah Mada University in 2001 with his undergraduate title majoring in Business Management, and is currently enrolled as a post-graduate student at Bina Nusantara University under Blended Learning Program. Starting his banking career in 2003, his current role is Rates Trader in PT Bank ANZ Indonesia.