

The Effect of Financial Literacy on Generation Z's Stock Market Participation in Bandung City

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Abstract: *Investment is one of the most essential activities to be developed in young generations, especially among Generation Z. One of the most popular investment instruments in Indonesia is stock investment. Technology advancements in the current digital era have made it easier for Generation Z to actively participate in the stock market. As one of the most technologically savvy generations, people classified as Generation Z are expected to have access to a wealth of information, including on stock investing. However, several data showed that there are only a few numbers of investors from Generation Z in the Indonesian stock market compared to the total Generation Z population. Previous research showed that financial literacy is proven to be one of the factors that affect investor's participation on stock market. Therefore, the study aims to see the impact of financial literacy, particularly among Generation Z in Bandung City, on their stock market participation. This study used a quantitative approach to collect the necessary data by distributing questionnaires to 400 respondents in Bandung City. By using linear regression analysis, the researcher found that financial literacy has a significant effect on Generation Z's participation in the stock market.*

Keywords: *Financial Literacy, Generation Z, Stock Market Participation.*

I. Introduction

Our technological advancements have gotten us to where we are today - with the world at our fingertips. In the relation with stock investment, this technological advancement has made us to do stock investment anywhere, and anytime through several applications in their mobile phone. Nowadays, we could easily become actively participate in the stock market. As a supporting factors, previously, investors relied on newspapers, stockbrokers, financial analysts, and auditors to receive up-to-date news and value-relevant information about a stock (Bartov et al., 2015). Meanwhile, the internet currently has become a new way of retrieving information and provides easier access to stock market information as a result of the internet's explosion and technological advances.

Due its position as emerging market, Indonesia is chosen in this study. Based on the data from the Indonesia Stock Exchange (IDX), there are 709 listed companies in Indonesia until September 30th, 2020, when 6.48 percent of them are new listing companies in 2020. This large number of Indonesian listed companies is directly proportional to the increase in Indonesian stock investment.

According to IDX, the number of capital market investors increased by 22 percent to 3.02 million accounts as of July 2020, with stock investors accounting for 42 percent of the total.

The characteristics of the society can be used to categorize the total number of investors in Indonesia. One of them is the population, also known as a generation. A generation is defined as a group of people who lived during the same time period and were influenced by the same technologies and experiences (McCrindle et al., 2018). Specifically, this study will choose Generation Z as the research target, considering that they are widely regarded as the next consumer behemoth. In 2020, Generation Z will control nearly 40 percent of all consumer purchasing power, as most businesses begin to target Generation Z customers (Perlstein, 2017).

Furthermore, Indonesia receives a demographic dividend, also known as a demographic bonus, in which the population pyramid is dominated by productive ages, including Generation Z, the future generation. The population of Indonesia in 2020 will be shown in Table 1 below based on generation.

Table 1. Total Population of Indonesia in 2020

No.	Generation	Total Population	Percentage
1	Pre-Boomer	5,082,598	1.87%
2	Baby Boomer	31,419,699	11.56%
3	Generation X	59,469,119	21.88%
4	Millennial	70,313,808	25.87%
5	Generation Z	75,490,000	29.94%
6	Generation Alpha	29,571,481	10.88%
Total		271,347,005	100.00%

Source: Badan Pusat Statistik (2020)

Based on data from Badan Pusat Statistik for 2020, West Java has the largest population in Indonesia, with a population of at least 46 million people. In this case, the demographic advantage that Indonesia has comes indirectly from the West Java region, which is Indonesia's most populous province. Bandung, the capital city of West Java, is thought to have people who are living in the digital era, using the internet and technology, and have a better understanding of financial literacy. This is supported by a previous study, which found that people in urban areas have better financial knowledge than those in rural areas due to differences in technological development (Bharucha, 2017).

However, they have not utilized the convenience of these advantages and knowledge to become more actively participated in the stock market. When the Indonesian investor is compared to the population demographic, the result shows that the number of investors among Indonesians, including Generation Z, is still relatively low. According to IDX, only 4.15 percent of Indonesians have made the stock investment. Table 2 displays the number of stock investors and the estimated total population in Indonesia of National Development Planning) in 2019.

Table 2. Comparison Between Number of Investor and Total Population in Indonesia

No.	Age Range	Total Investor	Total Population	Percentage
1	30 years old or less	1,106,576	65,777,500	1.68%
2	31-40 years old	606,112	41,888,800	1.45%
3	40 years old or more	767,312	75,211,400	1.02%
Total		2,480,000	182,877,700	4.15%

Source: Indonesia Stock Exchange (2019) and Ministry of National Development Planning (2019)

Only 1.68 percent of Indonesians aged 30 and under have invested in stocks, according to estimates. They may have the highest percentage, but the outcome is very low and comparable to other age groups. In other words, it can be concluded that less than 1.68 percent of Indonesia's Generation Z has invested in stocks.

Despite the fact that they are expected to have better knowledge of financial literacy through the internet and a high level of technological readiness at such a young age, their participation and willingness to invest in stocks remains low. Some of the benefits of stock investment have not been utilized by generation Z. Whereas, in today's economy, they are under a lot of financial stress and pressure because they have a lot of student loan debt and fewer job opportunities (Larson et al., 2016).

Furthermore, another data point from the Indonesia Stock Exchange in 2020 shows that the number of investors or Single Investor Identification (SID) in West Java, including Bandung City, increased by 75,466 new investors between January and November 2020, with 35,832 of them identified as Generation Z. As a result, the total number of investors in Indonesia as of November 2020 is estimated to be approximately 250,466. It is

encouraging news, but a comparison of the total number of investors and the total population of West Java (which as of 2020 has a total population of 46,497,175) shows that only 0.54 percent of them have invested their money.

In line with this phenomenon, the Financial Service Authority (FSA) / Otoritas Jasa Keuangan (OJK) financial literacy and inclusion survey results from 2016 revealed that financial instruments in the stock market had the lowest index compared to other financial instruments such as banking, insurance, retirement funding, and other funding institutions. It revealed a lack of knowledge in Indonesian community inclusion toward stock market investment. According to the survey, respondents' understanding of stock market investment is relatively low. Therefore, financial literacy is an important factor that may affect someone's participation in the stock market.

Financial literacy has become one of the topics studied with various aspects over the last few decades. Personal to the government research has been conducted in various countries to measure the level of financial knowledge that people have in their research fields. Individuals will benefit from financial literacy not only in terms of understanding which investment instrument to use, but also in making simple daily financial decisions.

Financial literacy is a measure of one's ability to understand important financial concepts and manage personal money in terms of short-term and long-term financial planning while taking life's dynamism and changing economic situations into account (Fernandes et al., 2014). Another literature added that financial literacy is a person's ability to understand and utilize financial concepts (Servon & Kaestner, 2008).

There are four aspects in the financial literacy: financial knowledge, savings and credits, insurance and investment (Volpe et al., 1996). Financial knowledge is associated with making investment or financing decisions that have the potential to influence a person's money-management behavior. Moreover, savings are funds set aside for unforeseen future expense, while borrowing, also known as credit, is a facility that allows us to lend money and repay it with interest over a set period of time. The third aspect, insurance, includes any type of financial protection in terms of health insurance, education insurance, or life insurance. The last aspect, investment is in the form of investing activities or assets with the intention of profiting in the future, including stock investment.

Several studies have been conducted to examine the role of financial literacy when making financial decisions. Previous study implied people avoided investing for a variety of reasons, the most common of which was a lack of financial knowledge (Jureviciene & Jermakova, 2012). People who are financially literate and can tell the difference between mutual funds and stocks, according to the study, are more willing to take risks when making investment decisions. An empirical study conducted in Karachi City also demonstrates that financial literacy and accounting knowledge help investors reduce information asymmetry and allow them to invest in risky instruments (Ahmad, 2017). In addition, another earlier study found that both subjective and objective financial literacy have a positive impact on stock market participation (van Rooij et al., 2011).

Moreover, it is believed that financial illiteracy has an impact on household behavior. One of the earliest study point out that most households cannot perform simple calculations and lack basic financial knowledge, but also that many households' saving behavior is dominated by crude rules of thumb (Mitchell & Schieber, n.d.). Similarly, another study found that those with low literacy are less likely to plan for retirement and, as a result, accumulate significantly less wealth (Lusardi & Mitchell, 2007).

People who are highly educated are believed to be more more likely to be active in the stock market and have better retirement plans for the future (Fedorova et al., 2015). It is important to note, however, that in order to participate in the financial market, they must have at least an advanced level of financial literacy, according to the data. This statement is also supported by another research which found that individuals with a higher level of financial literacy understand the time value of money and are more likely to participate in formal financial markets and stock markets (Agarwalla et al., 2015).

Therefore, with the independent variable of financial literacy, this study aims to see the impact of the independent variables towards stock market participation. Begin with a smaller scope - which is among generation Z as a generation that is familiar with the use of technological-based instruments and has a better understanding of financial literacy - and then conduct the study in a specific city - which is in Bandung City, to be specific.

Based on the aforementioned elucidation flow, the research hypothesis is developed as follows:

Hypothesis: Financial literacy has a significant positive effect on stock market participation.

II. Research Methodology

This research began with the identification of the problem. One of the most important aspects of early-stage research is problem identification. Following the successful identification of the problem, the researcher will define the research question, objective, scope, and limitations. The research objective is defined, in which is to find the impact of financial literacy towards stock market participation. Meanwhile, this research will have limitations on choosing only one independent variable and selecting respondents' target (Generation Z in Bandung City, Indonesia).

The following step will be to gather relevant literature to support the research. Following a review of the literature, the researcher collects primary and secondary data from questionnaires. Primary data is information gathered for the first time by a researcher for specific research purposes. The primary data is collected in term of the questionnaire that covers up the set of questions refer to the respondents' stock market participation and financial literacy. In order to find the relationship between variables, the targeted audience will be Generation Z (born between 1995 and 2010) in Bandung City.

The questionnaire is divided into three sections, each of which serves a different purpose. The first section is used to assess the respondents' demographic and social-graphic characteristics in order to determine whether the study's criteria are related to the respondents' characteristics as a target. The next section will be used to assess respondents' participation in stock market and their financial literacy.

The questionnaire's measurement and structure are based on the theoretical foundation and previous research related to the research objectives. All measurements are scored on a scale of one to five, with one indicating strong disagreement and five indicating strong agreement. For sorting the weak statement and interpreting the strong statement, survey questions with a scale of one to five will be most appropriate.

Based on the Slovin formula, the researcher must distribute a total of 400 valid responses. However, since the purpose of this study is stock investment, and securities' users must be at least 17 years old to open a securities account, the respondents in this study will cover up Generation Z members who have already reached the age of 17 and have a regular income in order to avoid bias.

In order to support the content of this research, relationships and trends in existing data must be established in addition to collecting primary data. As a result, secondary data is also required for this study. Secondary data sources for this study include textbooks, journals, and research publications that discuss all of the terms used in the study.

The researcher will employ a statistical approach in this study, beginning with a validity and reliability test. The degree to which the differences obtained within the scale scores describe the exact differences among the measured objects and characteristics is referred to as validity (Taherdoost, 2018). The researcher will use Pearson Correlation with a confidence level of 95% to conduct the validity test. In this study, a correlation coefficient of 0.4 will be used to determine whether the data is valid, as a coefficient between 0.4 and 0.6 is considered good or adequate.

Meanwhile, the reliability test was done by calculating the Cronbach's alpha, setting 0.6 as the minimum of the alpha to determine whether the data is reliable or not. Furthermore, a simple linear regression will be used in the statistical approach to determine the correlations between the independent variable (financial literacy) and dependent variable (stock market participation).

III. Results and Discussion

Before doing any analysis, the data were tested for their validity and reliability first. In this study, a validity test is required because it determines how accurate a method is at measuring what it is intended to measure. To conduct the test, the researcher used Pearson Correlation in SPSS, correlating the results of each question to their total score in each variable. If the validity correlation coefficient is greater than 0.4, the data is considered accurate and valid, and it is considered good and adequate (Fitzpatrick et al., 1998).

Meanwhile, the reliability test assesses the consistency of results when repeated measurements are performed. Cronbach's alpha is used by the researcher to assess the data's reliability. To be accepted, the coefficient must have a value of at least 0.6. The questionnaire received 400 responses in total, and the results will be shown in

Table 3. As additional informations, the term of ‘SMP reflects to the stock market participation variable, while ‘FIN’ refers to financial literacy variable.

Table 3. Result of Validity and Reliability Test

Variables	Pearson Correlation (Validity)	Cronbach Alpha (Reliability)
Stock Market Participation		
SMP 1	0.846	0.863
SMP 2	0.829	
SMP 3	0.859	
SMP 4	0.839	
Financial Literacy		
FIN 1	0.431	0.911
FIN 2	0.641	
FIN 3	0.694	
FIN 4	0.620	
FIN 5	0.623	
FIN 6	0.710	
FIN 7	0.723	
FIN 8	0.809	
FIN 9	0.796	
FIN 10	0.843	
FIN 11	0.838	
FIN 12	0.723	

Based on table 3, it is possible to conclude that all of the variables pass both the validity and reliability tests, as the Pearson Correlation and Cronbach's Alpha values are all above the cutoff values (0.4 for validity test and 0.6 for reliability test).

The data revealed that the correlation value between each variable is greater than 0.4, indicating that they are appropriate for use in the research. In terms of reliability testing, the study used Cronbach's alpha with a minimum value of 0.6 to be considered acceptable for further analysis. Cronbach's alpha test results for this study's data are 0.863 for the dependent variable (stock market participation) and 0.911 for the independent variable (financial literacy), both of which meet the requirement for passing the reliability test. As a result, the data are valid and reliable enough to be used in the analysis process of this research.

The next step of the data analysis is done using SPSS by analyzing the relationship of stock market participation and financial literacy through simple linear regression. However, in order to be analyzed with linear regression, the set of data must pass the test of classical assumptions. The normality test, multicollinearity test, and heteroscedasticity test are the three tests used in this classical assumption test. The results from each test shows that all variables have passed the classical assumption test. Therefore, the data will be analyzed further using simple linear regression.

As this study uses a 95 percent level of confidence, all of the analyses in this linear regression method use an alpha of 0.05. The result from the regression will be shown in the form of equation below.

$$SMP = 3.098 + 0.254 FIN$$

The equation is interpreted as the stock market participation (SMP) would have a value of 3.098 except for constant when independent variable has zero value (there are no other factors included). The financial literacy variable (FIN) has a value of 0.254, means if the financial literacy's value increases by one unit, the stock market participation will increase by 0.254 units. The equation was also tested for their significance by looking

at their p-value that requires to be below 0.05 as the research's alpha. The test showed that the equation has 0.000 as its p-value, so it can be concluded that financial literacy has a significant effect on stock market participation.

This finding is consistent with previous research that found that Germans with low levels of financial literacy tend to avoid investing in the stock market (Bucher-Koenen & Lusardi, 2011). Another study conducted in the Netherlands discovered that having a higher level of financial literacy can lead to greater participation in the stock market for stock investment and ownership (van Rooij et al., 2011).

Recommendations are made based on the study's findings and analysis. Instead of emphasizing the ease of investing or the potential return on investment, the government and related institutions should focus on improving people's financial literacy first, as this is an early and critical factor in making them aware of the importance of investment. Socialization must be applied evenly to all Indonesians, particularly Generation Z, who are thought to be more likely to achieve financial independence in the future. They will be more likely to participate in the stock market as their level of financial literacy rises.

This recommendation is supported by the data from Master Card's research which conducted in 2015. The index questions are divided into three categories: basic money management, financial planning, and investment. According to the survey, the average overall financial literacy score is 65. While Indonesia has a score of 62, it is below the average. Indonesia improves the most in the component 'Financial Planning,' rising from 70 to 78 points. It does, however, have the greatest drop in the 'Investment' component, dropping from 55 to 47 points.

Based on the current research, this study could be re-conducted in the coming years to investigate the extent of stock market participation and to see if there are any changes from the results of this study, as respondents' circumstances can change at any time. Furthermore, this study can be conducted on a larger scale with a broader population. Aside from the fact that it can be done without being limited to one generation in a specific city, future research may be applied to several generations in a larger area, as it may produce different results. It is also recommended to use a combination of different data collection methods, including both qualitative and quantitative methods to get more accurate analysis.

IV. Conclusion

The research findings have explained the effect of financial literacy towards stock market participation among Generation Z in Bandung City. The result shows that financial literacy has a significant positive effect towards the participation on the stock market. The financial literacy variable (FIN) has a value of 0.254, means if the financial literacy's value increases by one unit, the stock market participation will increase by 0.254 units.

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