Relationship of financial literacy to stock market participation

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ABSTRACT
The research objective aimed to understand and analyze stock market participation among the millennial population in Indonesia. Specifically, this study tested stock market participation against the financial literacy variable. It employed a causality research type with a quantitative analysis approach using path analysis method. The sampling technique was purposive sampling, targeting the millennial and Generation Z populations. The model used was Structural Equation Modeling (SEM) Partial Least Square (PLS) through the Smart PLS software. The research variables included Financial Literacy (LF) with indicators (basic financial knowledge, saving and borrowing, protection, investment) and Stock Market Participation (SMP) with indicators (intention to invest in the stock market, motivational, income, reference to social interaction). The results showed that Financial Literacy significantly affects stock market participation. The final recommendation of this study related to investments in the capital market, especially stocks, is that relevant institutions, particularly the Indonesia Stock Exchange and organizations within it, together with the Financial Services Authority, should continue to provide well-organized education to improve investment understanding among millennials and Generation Z, considering the significant potential of these two generations as technology advances rapidly.

KEYWORDS
literacy finance; stock market participation

1. Introduction

The Indonesian capital market industry has experienced rapid growth, as indicated by statistical data on the number of capital market investors who have a Single Investor Identification (SID) issued by PT Kustodion Sentral Efek Indonesia (KSEI) in December 2021. As a basis for the significant demand-side perspective, the Financial Services Authority (OJK) also recorded a significant increase in the number of capital market investors throughout 2021. As of December 29, 2021, the number of investors reached 7.48 million, an increase of 92.70 percent compared to the end of 2020, which was only 3.88 million. This number has increased almost sevenfold compared to the end of 2017. According to KSEI data, this increase in the number of investors is dominated by domestic investors under 30 years of age, accounting for about 59.98 percent of the total investors. Millennials (born 1981-1996) and Generation Z (born 1997-2012) dominate the investor landscape in the Indonesian capital market (Meiryani et al., 2023). The surge of millennials and Generation Z has specifically impacted the dominance of

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retail investors in daily trading activities on the Indonesia Stock Exchange. These two generations represent a productive age group that could accelerate economic growth. Despite positive growth, the level of literacy and financial inclusion in Indonesia, including the capital market sector, remains relatively low compared to other sectors, at about 4.9 percent for literacy and 1.55 percent for inclusion in the capital market (Hoesen, 2021).

To address this challenge, the Indonesia Stock Exchange continues to promote the capital market across all layers of society, and currently, it has 30 representative offices in provinces and hundreds of investment galleries on campuses. Stock market participation has always been an important topic. Investors' willingness to participate in the market directly influences their investment decisions on how to allocate their assets to the stock market (Fahlevi, Vional, & Pramesti, 2022). High market participation willingness means more investors participating in the stock market and more capital flow to the stock market (Chu, Li, & Zhang, 2020). Stock market participation illustrates the percentage of people actively investing in the stock market, varying from one country to another and among households due to many factors influencing the decision to hold publicly traded stocks or steer clear of these risky assets (Dillen & Lille, 2018). Furthermore, F Fernández-López, Rey-Ares, and Vivel-Búa (2018) explained there is a broad theoretical and empirical literature related to stock market participation (SMP). It is well recognized that the level of participation in the stock market, especially at the SMP level, is much lower than projections generated by traditional financial models, often referred to as the "stock market participation puzzle." Many studies have attempted to uncover the determinants of stock market participation and potential barriers. Empirical evidence from industrial countries documents that stock market participation depends on various factors, such as household financial wealth, age and education, risk, trust, financial institutions, social interaction, home ownership, and social capital. Research by Ingale and Paluri (2020) using bibliometric analysis explains, both conceptually and empirically, about literacy. Studies in various countries show that an individual's financial literacy affects decision-making and financial behavior (Ouachani, Belhassine, & Kammoun, 2021).

Good financial literacy motivates individuals to invest in many assets, thus planning their investments. Financial literacy is essential for every individual to avoid financial problems because individuals often face trade-offs, situations where one must sacrifice one interest for another. According to Robb and Woodyard (2011), adequate financial literacy positively influences a person's financial behavior. Mason and Wilson (2000) linked to stock market participation, financial literacy is an individual's ability to acquire, understand, and evaluate relevant information in the context of financial decision-making, understanding the financial implications that may arise as a result. Low financial knowledge can lead to losses for society due to declining economic conditions or developing economic systems that, in turn, drive society to become more consumptive. In relation to market participation, financial literacy is not intended to restrict individuals in pursuing happiness and using their financial resources. Instead, its purpose is to help individuals or families manage their financial resources wisely, so they can enjoy life and achieve personal financial goals better (Warsono, 2010). Financial literacy becomes very important for proper financial management supported by good financial literacy, which can improve living standards as expected. Financial literacy, in the form of stock market knowledge, is a primary driver of individual participation in the stock market and stock ownership (Raut, 2020). Further research by Rasool and Ullah (2020) in Pakistan revealed that regarding the concept of financial literacy, most respondents had high financial literacy towards preferred stocks as their

investment.

Sekita et al., (2022) examining the relationship between wealth, financial literacy in a survey in Japan on financial literacy, found that financial literacy has a significant and positive economic impact on wealth accumulation, also delineating financial literacy into 5 sub-categories and finding that deposit literacy, risk literacy, and debt literacy have a significant impact on wealth accumulation in Japan, while inflation literacy and insurance literacy do not. The importance of this research is to expand on the latest developments in financial literacy and Stock Market Participation. This study introduces the nature of object-related characteristics capable of predicting people's willingness to participate in the stock market in Indonesia. Findings from this study can also help inform policymakers when developing stock saving programs or encouraging public participation in the stock market, and capital market literacy can be developed and socialized effectively considering the vast territory and rapid development of information technology. By understanding how financial literacy impacts Stock market participation, we can design more effective programs and policies to support individuals' financial success and capital market growth. Thus, this study has significance in providing deep insights into factors influencing participation in the stock market, which in turn can help improve individual financial management and support sustainable economic growth. The primary goal of this research is to understand and analyze stock market participation among the millennial population in Indonesia. Specifically, this study tests stock market participation as a dependent variable against the independent variable of financial literacy.

2. Literature Review

Stock Market Participation

An investor with low equity ownership will not achieve significant gains when investing in stocks (Sivaramakrishnan, Srivastava, & Rastogi, 2017). There is a broad theoretical and empirical literature related to Stock Market Participation (SMP) decisions. It is well acknowledged that the level of stock market participation is far lower than traditional financial models, often referred to as the "stock market participation puzzle". The advent of the internet is considered an opportunity to explain this puzzle (López et al., 2018). Furthermore, the cost of stock market participation comprises both explicit and implicit elements, such as acquiring information about investment opportunities, more complex taxation, and time spent learning how to trade and rebalance portfolios. A common finding in the literature is that wealth and educational attainment have a statistically significant positive impact on stock market participation, consistent with the argument on participation costs (Zhou, 2020). Research conducted by Gardini and Magi (2007) in Italy illustrates that stock market participation rates have increased over time, with risk asset participation rising in wealth enhancement, showing an age profile that increases with education. Participation depends on background risks (labor income uncertainty, entrepreneurial risk), and participation costs act as barriers, implying that participation increases wealth.

Thomas and Spataro (2018b) explain that stock market participation correlates with characteristics such as investor cognitive skills, financial literacy, and education. The research also reveals that participation levels vary between countries, possibly due to differences in risk attitudes, culture, capital market functions, fiscal policies, investor protection levels, and other unobserved institutional factors. Finally, it shows that higher education effectiveness also correlates positively with stock market participation.

Thomas & Spataro (2018b) found in their study across nine European countries that household stock market participation has a significant effect on savings and financial development performance. However, participation in capital markets is limited and quite heterogeneous both among and within some countries. Additionally, socio-demographic variables find that financial literacy significantly and positively affects stock market participation, along with human capital. Country-level differences are explained by institutional factors such as the effectiveness of the education system, student-teacher ratios, and by the attractiveness of the stock market, proxied by patterns of Sharpe ratios.

Gomes and Smirnova (2021), in their empirical findings, explain stock market participation costs, risk reduction, and human capital correlate with stock returns but remain closer substitutes for bonds than stocks. Smith, Brown, C, and I (2008) provide evidence of the causal effect of community influences in the context of stock market participation, where economic behavior has significant implications for individual welfare and various public policy outcomes. Dominko and Verbič (2020) analyze the relationship between various aspects of quality of life and stock market participation in several European countries, explaining differences in individual portfolio allocations. Further, by providing empirical evidence that a higher quality of life has a positive impact on stock market participation, this study offers a new perspective on regional financial development, broader stock market participation, and market efficiency.

Bai, Fan, Wu, and Zhang (2022) discuss many literatures supporting the impact of education on stock market participation. Firstly, higher levels of education lead to higher stock market participation. Secondly, financial literacy developed in school rarely impacts investors' saving and investment behavior, yet the main view still considers financial literacy as one of the factors influencing financial market participation.

Rooij et al. (2011a) conducted research using data from the De Nederlandsche Bank (DNB) 2005 from the household survey (DHS), DHS population in the Netherlands, more than 2,000 households to measure financial literacy and study its relationship with stock market participation. The results show that the majority of respondents exhibit basic financial knowledge and understand concepts such as compound interest, inflation, and the time value of money. However, very few go beyond these basic concepts; many respondents are unaware of the differences between bonds and stocks, the relationship between bond prices and interest rates, and the basics of risk diversification. Most importantly, this research indicates that financial literacy influences financial decision-making.

Zou & Deng (2019) conducted a study on American households with the panel study of income dynamics (PSID) 2007 and 2009. The survey covers the years before and after the 2008 stock market crash, showing that stock market participation rates significantly dropped after the crash. Households that exited in the 2007 survey found that less educated, poorer, and non-white households were more likely to exit the market.

Gao et al. (2019) examined the determinants of household stock market participation behavior in China. The results explain that per capita disposable income is the most crucial factor affecting the overall participation rate, total market participation changes, monthly provincial market return rates weighted by historical participation patterns, used to represent return information from social communication, provide one of the most significant impacts on new participation rates. The effect is more pronounced among high-income groups, highly educated individuals, high population density, and during bull market periods.

Kara (2014) developed a model using income data concludes in initial human

capital and learning ability as conceptualized in the classical approach show differences to match income, a complete household portfolio choice model providing aggregate stock market participation without invoking transaction costs, loan constraints, or a positive correlation between stock markets and human resources.

Abudy, Wiener, and Z (2021) research findings document a significant social phenomenon with profound effects on the stock market, particularly on the quality of the information environment, and therefore warrant further attention. Hermansson, Jonsson, and Liu (2021) conducted research on the effects of learning channels on stock market participation. Results reveal that the media is the only learning channel that increases the likelihood of owning stocks and invested stock portfolios. Furthermore, it also explains that financial literacy has a significant moderating effect. The interaction shows the importance of learning from the media and financial literacy for stock market participation, indicating implications for policymakers when designing financial education programs.

BBucher-Koenen, Alessie, Lusardi, and Rooij (2021) explain their research findings that women know less about financial literacy than men, but they know more than they think. More than a third of the gender gap in financial knowledge can be attributed to differences in confidence, and the rest is due to knowledge differences. Stock market participation shows that financial literacy and confidence are important for financial decision-making and to distinguish these two effects.

Merkoulova and Veld (2021) state that traditional equity risk premiums are irrelevant for individuals for two reasons. The first reason is that individuals' stock market expectations are highly heterogeneous. The second is that the risk-free rate is not the real opportunity cost of individual capital. Most individuals borrow at higher interest rates or lend at lower rates than the risk-free rate. Therefore, this research introduces a new concept, the personal equity risk premium (PERP). The decomposition of PERP shows that both expected return factors and capital costs are important in determining the level of stock market participation.

P Maseda, Fernández-López, and Rey-Ares (2020) conducted research, the first empirical evidence confirming that individual risk preferences are important drivers of stock market participation (SMP). Furthermore, this study explains that the influence of individual risk preferences on stock market participation (SMP) decisions will be shaped by the regional context, leading to analyze the relationship between regional risk preferences and stock market participation (SMP) decisions at the micro or individual level. Financial literacy affects financial decision-making. Those with lower literacy are less likely to invest in stocks (Rooij, Lusardi, & Alessie, 2011).

Niu, Wang, Li, and Zhou (2020) conducted research in China that siblings are an important source of support. Brothers, in particular, are a significant and valuable family resource in patriarchal societies like China. Gao et al. (2019) evaluated the determinants of new investor participation decisions using monthly account opening data. Unlike literature focusing on one or a few dimensions, evaluating from dimensions: disposable income, demographics, macroeconomic conditions, stock market conditions, and social communication measures and participation decision changes. Thomas & Spataro (2018a) household stock market participation has a significant influence on savings and the financial performance of an economy. S Sivaramakrishnan et al. (2017) stock market participation is an important economic outcome.

Financial Literacy

Lusardi and Mitchell (2011) explain financial literacy as knowledge of financial facts, concepts, principles, and technology so that each individual is smart or intelligent in using money. Individuals with financial literacy can enhance one's ability to tackle daily

financial problems and help in making financial decisions. Hailwoord (2007) Financial literacy affects how people save, borrow, invest, and manage finances. Financial proficiency emphasizes the ability to understand basic concepts of economics and finance, up to how to apply them accurately and correctly. Chen (2008) also categorizes financial literacy based on the median to analyze financial behavior based on the level of financial literacy possessed by respondents. Respondents with financial literacy levels below the median fall into the category of respondents with relatively low financial literacy levels, while respondents with financial literacy levels above the median fall into the category of respondents with relatively high financial literacy levels.

3. Research Methodology

Research Design

The type of research conducted is causality, which explains the cause-and-effect relationship between financial literacy and stock market participation variables. The data type for this research is primary, collected through the distribution of structured questionnaires to respondents using Google Forms, with answers in the form of closed questions using a Likert scale from 1 to 5.

Table 1. Operational Definition of Variables

Variable	Dimensions & Indicators	Measurement Scale
Financial Literacy (LF)	1. Basic financial knowledge, 2. Saving and borrowing, 3. Protection, 4. Investment (Chen and Volpe, 1998)	Likert Scale 1-5
Stock Market Participation (SMP)	1. Intention to invest in the stock market, 2. Motivational, 3. Income, 4. Reference to social interaction (Brown, Zoran, Smith, and Weisbenner, 2008)	Likert Scale 1-5

The population in this study includes millennials and Generation Z. The sampling technique used is purposive sampling, selecting respondents who meet the research criteria, specifically millennials and Generation Z who have a Securities Account (RDN), participated in the Capital Market School, and have conducted transactions/trading on the Indonesia Stock Exchange. The sample size is five times the number of variables or indicators analyzed, as Hair (2006) suggests that the sample size be calculated between (5-10) x the number of indicators. With 25 indicators, the total sample size obtained is 250.

Validity Test

The validity testing in this research is conducted by examining the loading factor of each statement item. An indicator meets the validity test criteria if the loading factor of each indicator (statement item) is≥0.70, according to Hair (2021). The validity test results for each statement are as follows:

Reliability

Test Reliability is assessed using Cronbach's alpha and composite reliability methods, with a variable considered reliable if it has a Cronbach's alpha and composite reliability value > 0.7 (Ghozali and Latan, 2015; Abdillah et al. 2020). The results are presented in the table below:

Data analysis is performed using the Partial Least Square (PLS) software Smart PLS version 4. Hypothesis testing is conducted in two stages: significance testing and testing the dominance of independent variables over dependent variables. This research model aims to identify the correlation of Financial Literacy to Stock Market Participation

Table 2. Measurement Model Validity Test

Latent Variable	Indicator	Loading Factor	Validity
Financial Literacy (LF)	X2.30	0.766	Valid
	X2.31	0.717	Valid
	X2.32	0.794	Valid
	X2.33	0.802	Valid
	X2.34	0.749	Valid
	X2.35	0.824	Valid
	X2.36	0.794	Valid
	X2.37	0.824	Valid
	X2.38	0.748	Valid
	X2.39	0.783	Valid
	X2.40	0.745	Valid
	X2.41	0.783	Valid
	X2.42	0.751	Valid
	X2.43	0.782	Valid
Stock Market Participation (SMP)	Y.65	0.746	Valid
	Y.66	0.791	Valid
	Y.67	0.778	Valid
	Y.68	0.838	Valid
	Y.69	0.823	Valid
	Y.70	0.807	Valid
	Y.71	0.817	Valid
	Y.72	0.754	Valid
	Y.73	0.773	Valid

Table 3. Measurement Model Reliability Test

Latent Variable	Indicators	Cronbach's Alpha	Composite Reliability	Reliability
Financial Literacy (LF)	X2.30 - X2.43	0.949	0.955	Reliable
Stock Market Participation (SMP)	Y.65 - Y.73	0.926	0.938	Reliable

with the following model:

$$YSMP = \alpha 0 + \beta\ 1XLF$$

4. Research Results and Discussion

Based on the respondents' feedback obtained from the basic financial knowledge indicators, the average indicator score was 4.1. Basic financial knowledge involves understanding interest, inflation, the time value of money, risk, and returns. Basic financial knowledge in stocks includes understanding concepts, terms, and mechanisms associated with investing in the stock market. Knowledge of these indicators will assist individuals in making more informed investment decisions, understanding the risks and opportunities associated with stocks. This will help the millennial and Gen Z generations view stock investment as part of a broader financial strategy and manage their portfolios wisely. Improving financial literacy in the context of stocks can help millennials and Gen Z make smarter investment decisions, minimize risks, and optimize potential profits in the stock market.

Based on the respondents' feedback obtained from the savings and loans indicators, the average indicator score was 4.1. Saving in stocks can be a long-term investment strategy intended to generate profit through the appreciation of stock value or dividends received from companies. Long-term investment in stocks requires a good understanding of the companies being invested in, market conditions, and fundamental analysis that can assist in selecting the right stocks. Knowledge of these indicators will help millennials and Gen Z make good investment decisions by understanding the risks of

a broader financial strategy to manage their portfolios wisely. Good financial literacy will contribute to a better understanding of savings and loans in the context of stocks. Good financial literacy can help millennials and Gen Z manage their savings wisely and understand the implications of loans associated with stock investments.

Based on the respondents' feedback obtained from the protection indicators, the average indicator score was 4.1. Financial literacy includes an individual's understanding of financial protection concepts in the context of stock investments. Protection refers to measures taken to reduce risk and implement effective strategies to help protect investment values and maintain financial stability. Understanding and implementing protection indicators related to stocks are essential parts of strong financial literacy, which can help millennials and Gen Z make wiser investment decisions in the long run. Additionally, stock diversification is an investment strategy involving allocating funds to different groups of stocks, and the primary purpose of diversification is to reduce investment risk by spreading risk among different sectors.

Based on the respondents' feedback obtained from the investment dimension indicators, the average indicator score was 4.1. Financial literacy in the context of stock investments includes an individual's understanding of concepts, strategies, and basic principles related to investing in the stock market. Awareness of good financial literacy in stock investments helps millennials and Gen Z make smart investment decisions, understand the associated risks, and optimize potential returns. Understanding investment indicators related to stocks in financial literacy helps millennials and Gen Z make informational and wise decisions in selecting stocks that match their financial goals, as understanding the various types of investments, long-term financial planning, and having additional funds require millennials and Gen Z to continuously understand and study what will be the financial goals of investing in the stock market.

Respondents' feedback on the stock market participation variable with the indicator Intention to Invest in the Stock Market

Based on the respondents' feedback obtained from the stock market participation variable with the indicator intention to invest in the stock market, the average indicator score was 4.1. Knowledge and understanding of the intention to invest in the stock market, millennials and Gen Z need to acquire sufficient knowledge and understanding about stock market developments, basic principles of stock investment, and factors affecting stock performance. Good education and understanding can help overcome the fears and uncertainties associated with stock investments. Before investing in the stock market, millennials and Gen Z need to evaluate the risks and rewards associated with stock investments. Millennials and Gen Z should consider market volatility, potential losses, and risk compatibility with their investment profile. If they feel comfortable with the potential risks and believe that the long-term profit potential can offset these risks, they are likely to have a stronger intention to invest in the stock market. Intention to invest in the stock market is an important initial step in stock market participation, but it's important to remember that this intention must be followed by appropriate actions, such as continuous learning, a structured investment plan, and portfolio diversification. Understanding risks and conducting careful assessment before investing are also important in achieving long-term investment goals.

Based on the respondents' feedback obtained from the motivational dimension, the average indicator score was 4.1. Stock market participation with the motivation indicator in stocks refers to the factors that motivate individuals to engage and participate in the stock market. Motivation is the force that influences an individual's decisions and actions related to stock investments. The main motivation for participating in the stock market is the potential to achieve better profits in the future. The stock mar-

ket is known as one of the investment instruments that can provide long-term profits. Individuals motivated by the potential for profit will view stock investment as a way to generate passive income, capital growth, or achieve long-term financial goals. The motivation of millennials and Gen Z in stock market participation can vary, with the interest and involvement of millennials and Gen Z motivated by an interest in the financial and investment world. This motivation encourages continuous learning, following financial news, and active involvement in stock trading as a form of saving for the future. It's important to understand that better experiences for millennials and Gen Z ensure that investment decisions in stocks as a form of financial goals and comfort levels, even though the risks faced are also high.

Based on the respondents' feedback obtained from the income dimension, the average indicator score was 4.1. Stock market participation with the income indicator in stocks refers to the relationship between an individual's income level and their participation in the stock market. Income level can influence a person's ability to invest in the stock market. Millennials and Gen Z, by setting aside some of their money, naturally hope to achieve a high rate of return as a result of their investment in stocks. Furthermore, individuals with higher incomes tend to have more funds available to allocate to stocks. Higher income provides flexibility in various stock options. Although income can influence stock market participation, it's important to remember that participation in the stock market is not limited to individuals with high incomes. In some cases, individuals with low or medium incomes can also invest in the stock market through investment strategies suitable for their financial situation.

Based on the respondents' feedback obtained from the dimension reference to social interaction, the average indicator score was 4.2. Stock market participation with the indicator reference to social interaction in stocks refers to the influence that social interaction has on an individual's participation in the stock market. This can occur through the influence of friends, family, or the social environment in shaping perceptions, knowledge, and individual decisions related to stock investments. Here are some considerations regarding the relationship between stock market participation and reference to social interaction. Social interaction can be a source of information and knowledge about stock investments. Through conversations with friends, family, or community members experienced in stock investments, individuals can gain better insights and understanding of the stock market. This information can influence an individual's perception and interest in participating in the stock market. Group influence when individuals see people around them involved in stock investments, they may feel inclined to participate. Emotional support social interaction can also provide emotional support for individuals wanting to engage in the stock market. Through activities like SPM (capital market school) discussions, sharing experiences, and support from friends or family who also invest in the stock market, individuals can feel more confident and motivated to take steps in stock investments. It's important to remember that although reference to social interaction can influence stock market participation, investment decisions should still be based on careful research, fundamental analysis, and individual financial goals. Social interaction can provide additional information and perspectives, but the final decision should still be adjusted to each individual's financial situation and risk tolerance.

Measurement Model Evaluation

The measurement model (outer model) test was conducted to determine the validity and reliability of indicators associated with their latent variables. The test was guided by the following: a) Convergent validity is the loading factor value of latent variables with their indicators, expected to be > 0.7. b) Discriminant validity is the cross-loading

factor value to determine construct differentiation by comparing the loading value of the targeted construct to be larger than the loading value of other constructs. c) Composite reliability. Data with composite reliability > 0.7 have high reliability. d) Average Variance Extracted (AVE), expected value > 0.5. e) Cronbach alpha. Reliability test with expected value > 0.6 for all constructs.

The outer model analysis was conducted to ensure that the measurements used are suitable for measuring (valid and reliable). The outer model analysis can be seen from several indicators.

Table 4. Validity Test of Research Variable Constructs

Variable	Construct	Outer Loadings
Financial Literacy (LF)	X2.30 <- LF	0.766
	X2.31 <- LF	0.717
	X2.32 <- LF	0.794
	X2.33 <- LF	0.802
	X2.34 <- LF	0.749
	X2.35 <- LF	0.824
	X2.36 <- LF	0.794
	X2.37 <- LF	0.824
	X2.38 <- LF	0.748
	X2.39 <- LF	0.783
	X2.40 <- LF	0.745
	X2.41 <- LF	0.783
	X2.42 <- LF	0.751
	X2.43 <- LF	0.782
Stock Market Participation (SMP)	Y.65 <- SMP	0.746
	Y.66 <- SMP	0.791
	Y.67 <- SMP	0.778
	Y.68 <- SMP	0.838
	Y.69 <- SMP	0.823
	Y.70 <- SMP	0.807
	Y.71 <- SMP	0.817
	Y.72 <- SMP	0.754
	Y.73 <- SMP	0.773

It can be concluded from the above that overall, the research variables financial behavior (BF), financial literacy (LF), financial technology (FT), financial advice (FA), and stock market participation (SMP) with the existing indicators all show Outer Loadings≥ 0.70 (valid), meaning that the indicator items validly measure all variables in this research and indicate that any change in variables will be reflected in the variation of indicator values. Validity testing was also conducted using the discriminant validity method of cross-loading comparison. The results are presented in Table 5 below.

Due to space constraints, the cross-loading table is summarized to highlight that each indicator of latent variables is distinct from indicators of other variables, indicated by higher loading scores in their own construct. For example, each measurement item for financial behavior (BF) correlates higher compared to other variables. Overall, each item correlates higher with the variable it measures, thus fulfilling the discriminant validity evaluation.

Reliability

Reliability testing in this study was conducted by looking at the output of Smart PLS for composite reliability and Cronbach's alpha. The results are presented in the table below.

Variables financial literacy (LF) and stock market participation (SMP) have a Cronbach's alpha > 0.70, indicating the reliability level of each variable is accepted. This means that overall, the items measuring the variables in this research are consistent/reliable. The Composite Reliability > 0.70, similarly for the variables financial literacy (LF), and stock market participation (SMP) above 0.70 (reliable). The Aver-

Table 5. Cross Loading of Research Variables

Indicator	BF	FA	FT	LF	SMP	Information
X2.30	0.409	0.613	0.521	0.766	0.493	Valid
X2.31	0.488	0.798	0.561	0.717	0.645	Valid
X2.32	0.493	0.762	0.617	0.794	0.589	Valid
X2.33	0.698	0.714	0.698	0.802	0.656	Valid
X2.34	0.389	0.611	0.521	0.749	0.474	Valid
X2.35	0.536	0.649	0.615	0.824	0.608	Valid
X2.36	0.493	0.662	0.617	0.794	0.589	Valid
X2.37	0.536	0.649	0.615	0.824	0.608	Valid
X2.38	0.616	0.528	0.529	0.748	0.599	Valid
X2.39	0.640	0.642	0.625	0.783	0.606	Valid
X2.40	0.499	0.635	0.604	0.745	0.608	Valid
X2.41	0.640	0.636	0.609	0.783	0.626	Valid
X2.42	0.475	0.668	0.581	0.751	0.508	Valid
X2.43	0.540	0.635	0.579	0.782	0.582	Valid
Y.65	0.600	0.643	0.613	0.616	0.746	Valid
Y.66	0.588	0.709	0.660	0.759	0.691	Valid
Y.67	0.377	0.630	0.640	0.751	0.578	Valid
Y.68	0.582	0.731	0.708	0.861	0.638	Valid
Y.69	0.534	0.680	0.681	0.809	0.623	Valid
Y.70	0.675	0.704	0.698	0.892	0.607	Valid
Y.71	0.534	0.639	0.674	0.875	0.517	Valid
Y.72	0.598	0.624	0.660	0.774	0.654	Valid
Y.73	0.467	0.633	0.666	0.713	0.673	Valid

Table 6. Composite Reliability and Average Variance Extracted

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Financial Literacy (LF)	0.949	0.955	0.603
Stock Market Participation (SMP)	0.926	0.938	0.628

age Variance Extracted (AVE) for variables financial literacy (LF), and stock market participation (SMP) > 0.5 means the variance of measurement items for all variables in this research is well met (reliable).

Table 7. HTMT (Heterotrait Monotrait)

Variable	BF	FA	FT	LF	SMP
Financial Literacy (LF)	0.707	0.748	0.850	-	-
Stock Market Participation (SMP)	0.722	0.800	0.809	0.822	-

Due to space constraints and to maintain focus, the detailed HTMT table is summarized to highlight that the HTMT ratio for each pair of variables is less than 0.90, thus fulfilling the discriminant validity evaluation with HTMT. The HTMT results show values < 0.90, indicating that discriminant validity with HTMT is met.

Fornell Larcker

The Fornell Larcker criterion is a construct considered valid by comparing the square root of AVE with the correlation among latent variables. The square root of AVE must be larger than the correlation among latent variables. From the table above, all square roots of AVE (Fornell Larcker) for each construct are larger than the correlation with other variables. Financial literacy (LF) 0.779, and Stock Market Participation (SMP) 0.792. Thus, the discriminant validity correlation is met. Similarly, for other variables where the square root of AVE > correlation among variables, and overall, the discriminant validity evaluation is met.

Evaluation of Inner VIF (Variance Inflated Factor)

Before structural model testing, it is necessary to check multicollinearity between variables with Inner VIF (variance inflated factor). The VIF value of 3.257, less than

5, indicates no multicollinearity between variables affecting stock market participation (SMP) or financial advice (FA).

Structural Model Evaluation (Inner Model) and Hypothesis Testing

Financial Literacy (LF) has a significant influence on stock market participation (SMP) of 0.209 with a t-statistic (2.385 > 1.96) or p-value (0.017 < 0.05). Every change in financial literacy affects stock market participation (SMP). Within a 95% confidence interval, the influence of financial behavior (BF) on financial advice (FA) lies between 0.186 and 0.481. When financial behavior is enhanced with various activities, its influence on financial advice will increase up to 0.481.

Model Fit and Goodness Evaluation

A variable in the structural model can be influenced by the magnitude of several inter-variable effects. This analysis is conducted to determine the model's goodness. According to Hair (2021), f square values of (0.02 low), (0.15 moderate), (0.35 high). Financial literacy (LF) has a low influence on structural level stock market participation (SMP) with an f square value = 0.065. The Standardized Root Mean Square Residual (SRMR) is a difference between observed correlations and the implied model correlation, allowing for the assessment of the average difference between observed and expected correlations as an absolute measure of model fit criterion. An SRMR value < 0.10 refers to Karin et al. (2003) et al., if this value is less than 0.10, it is still acceptable. From the table above, the estimated model value of 0.080 < 0.10 means the proposed model fits with empirical data. The estimated correlation matrix of the model is close to the empirical data correlation matrix.

5. Discussion

The hypothesis testing results indicate that financial literacy (LF) significantly affects stock market participation (SMP). Financial literacy refers to the ability to use knowledge and skills to effectively manage one's financial resources for lifetime financial security. It encompasses an individual's knowledge and understanding of financial concepts, including investments, savings, loans, and risk management, demonstrating that the level of financial literacy has a significant influence on stock market participation. Research findings supporting this relationship explain that individuals with higher levels of financial literacy tend to have a better understanding of investments, including the stock market. Millennials and Gen Z possess better knowledge about the risks and returns associated with investing in the stock market, making them more confident in making investment decisions.

Financial literacy can enhance individuals' awareness of the long-term benefits of investing in the stock market. Millennials and Gen Z understand that long-term investments in stocks can yield better returns than other investment options, such as savings or deposits. This knowledge can encourage individuals to engage in the stock market and make better decisions. High financial literacy levels can also help individuals make better decisions about investing in the stock market. Millennials and Gen Z are likely to have a better understanding of how to analyze stocks, understand company financial statements, and identify profitable investment opportunities. Thus, investors can make more informed investment decisions and potentially achieve better outcomes.

Regarding risk management, financial literacy also relates to an individual's ability to manage investment risks. Financially literate individuals are more likely to understand the risks of investing in the stock market and can take appropriate steps to mitigate those risks. Investors use portfolio diversification, conduct in-depth research

before investing, and set realistic expectations. Supporting this argument, several studies can be referenced. L Lusardi and Mitchell (2011) showed that low financial literacy correlates negatively with participation in stock market investments in the US. Another study by Rooij, Lusardi, and Alessie (2011) indicated that individuals with better financial knowledge are more likely to participate in the stock market.

Miller et al. (2017) explained that individuals with low financial knowledge tend to have financial problems. Chen (2008) categorized financial literacy based on respondents' median, with those below the median falling into the category of relatively low financial literacy, whereas respondents above the median fall into the high financial literacy category. B Bucher-Koenen, Alessie, Lusardi, and Rooij (2021) found that financial knowledge and confidence explain stock market participation. They observed some gender differences in financial literacy, the gender effect on stock market participation, and the effects of financial literacy and lack of confidence, each differently affecting stock market participation. Hermansson et al. (2021) found that the media is the only learning channel that increases stock ownership, and financial literacy has a significant moderating effect, highlighting the importance of learning from the media and financial literacy for individual stock market participation. These findings suggest implications for policymakers when designing financial education programs.

Nyakurukwa and Seetharam (2022) revealed that increased financial literacy enhances the likelihood of respondents participating in the stock market. Among control variables, age, race, and education level were significantly associated with stock market participation. Regarding social interaction, it belonged significantly to male association with stock market participation. Other proxies for social interaction were not significantly related to stock market participation. Liao (2022) showed that self-assessed financial literacy (FL) has a greater influence on stock investment return (SIR) compared to the influence mediated by risk preference. Moreover, competent and overconfident respondents have higher stock investment returns, while underconfident respondents cannot profit from the stock market. Furthermore, risk preference has a positive mediating effect in the relationship between competence and overconfidence and stock investment return (SIR), and a negative mediating effect in the relationship between underconfidence and stock investment return (SIR). Confident investors can gain more stock holding returns through taking more risks regardless of their actual financial literacy (FL) level. High financial literacy has a positive influence on stock market participation. Good knowledge and understanding of investments and risk management can provide individuals with the confidence and skills needed to engage in stock market activities.

6. Conclusion

The research on stock market participation has concluded that financial literacy (LF) significantly influences stock market participation (SMP). Financial literacy refers to an individual's knowledge and understanding of financial concepts, including investments, savings, loans, and risk management. The research findings indicate that better knowledge about the risks and returns associated with investing in the stock market makes investors more confident in making investment decisions. Risk management also relates to an individual's ability to manage investment risks.

Financial literacy, especially related to investments in the capital market and stocks, requires efforts from relevant institutions, particularly the Indonesia Stock Exchange (BEI) and its organizations, along with the Financial Services Authority (OJK), to

continuously provide well-structured education. This effort aims to enhance investment understanding among millennials and Gen Z, considering the significant potential of these two generations that continues to grow with the rapid advancement of technology. More millennials and Gen Z participating in structured capital market school activities will prevent them from falling into fraudulent investments.

The respondents of this study are limited to millennials and Gen Z, thus the findings of this study could change in the future. Given that this research examines the perceptions of millennials and Gen Z, changes in their views and experiences may occur over time, and the results may also change. Another limitation is the application of the research model, as this study only discusses the cause-and-effect relationship of the intention to participate in stocks. The factors influencing the intention to participate in stocks may differ, as well as the choice towards exchange members offering platforms for transactions or investments in the Indonesian capital market, specifically stocks.

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