

THE INFLUENCE OF LITERACY, TOLERANCE, AND EXPERIENCE ON INVESTMENT DECISIONS OF GENERATION Z IN SURABAYA

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ABSTRACT

The increasing participation of Generation Z in the Indonesian capital market needs to be balanced with the ability to make rational investment decisions in accordance with their risk profile. This study aims to analyze the influence of financial literacy, risk tolerance, and investment experience on the investment decisions of Generation Z investors in Surabaya. The study used a quantitative explanatory approach with a purposive sampling technique. The study respondents consisted of 225 Generation Z investors aged 18–29 years, domiciled in Surabaya, owning shares in the capital market, and having a customer fund account. Data were collected through an online questionnaire and analyzed using Partial Least Squares–Structural Equation Modeling (PLS-SEM). The results showed that financial literacy had no significant effect on investment decisions. Risk tolerance had a positive and significant effect on investment decisions. Investment experience also had a positive and significant effect. These three variables explained 33.0% of the variation in investment decisions. These findings indicate that Generation Z investment decisions are more determined by readiness to face risks and direct experience in the capital market than by mastery of basic financial concepts. Therefore, investment education programs need to focus on fundamental analysis, technical analysis, investment simulations, and portfolio risk management.

Keywords: investment decisions, financial literacy, investment experience, risk tolerance.

INTRODUCTION

Along with Indonesia's continued economic growth, investment activity in the capital market has increased significantly. This is reflected in the significant growth of the Indonesian capital market, marked by a threefold increase in the number of capital market investors from 3.88 million in 2020 to 12.16 million by the end of December 2023, according to data from the Indonesian Central Securities Depository (KSEI, 2023). This growth is dominated by investors born between 1997 and 2008, who account for more than 56% of total investors in Indonesia (KSEI, 2023). This increase demonstrates the growing public interest, particularly among Generation Z, in participating in stock investment as a means of financial management and improving future well-being. A strong understanding of financial literacy, risk tolerance, and investment experience is crucial for making optimal and targeted investment decisions.

With the growth of investors in the Indonesian capital market, novice investors experience losses due to investing in shares without mature calculations (Gumelar, 2021). According to public documentation from The Daily Ketchup (2022), some investors experience losses of up to 70% of their investment capital because they invest without considering the risks. Based on research from Financial Conduct Authority (FCA) regarding the dangers of irrational decision making found that there was a negative impact on financial stability because it triggered high risk taking which made around 40% of investors regret the impulsive decisions of investors because the loss of investor capital was greater than the risk tolerance of the loss (Coatsworth, 2024).

Investment decisions are influenced by the interaction of three main variables: financial literacy, risk tolerance, and investment experience. In this context, financial literacy is the essential skill and knowledge needed to manage finances and make effective investment decisions for financial well-being (Huston, 2010; Yes, 2023). Furthermore, risk tolerance is an important aspect of investment decisions, guiding asset allocation toward risky instruments appropriate to the investor's tolerance level (Hanna & Lindamood, 2004; Roszkowski & Davey, 2010). Meanwhile, investment experience also influences investment decisions (Agnoli et al., 2025; Zhao & Zhang, 2021). This approach, prospect theory, explains these complex dynamics and behavioral factors in investment decision-making.

In light of this literature gap, this study aims to examine the influence of financial literacy, risk tolerance, and investment experience on stock investment decisions based on market capitalization levels among Generation Z investors in Surabaya. This is because most previous studies still focus on general investors in developed countries and have not specifically highlighted the characteristics of Generation Z investors in Indonesia (Zhao & Zhang, 2021; Alsuwaidi et al., 2024; Agnoli et al., 2025). Surabaya was chosen as the research location because the city contributes around 19 percent of total investors in East Java, and total stock transactions in Surabaya until August 2025 reached IDR 327.29 trillion (Satu, 2025). Based on the explanation above, the research objectives can be determined as follows: First, financial literacy influences investment decisions among Generation Z investors in Surabaya. Second, risk tolerance influences investment decisions among Generation Z investors in Surabaya. Finally, investment experience influences investment decisions among Generation Z investors in Surabaya.

LITERATURE REVIEW

Behavioral finance theory has several principles, one of which is prospect theory, which is used in this study. Behavioral finance is a discipline that seeks to explain and improve understanding of investor reasoning patterns, including the emotional processes involved and the extent to which they influence decision-making. This field specifically investigates psychological and sociological issues that impact investor decisions, with the goal of explaining the "what, why, and how" aspects of investing through a human perspective that is not always rational (Ricciardi & Simon, 2000).

The behavioral finance framework identifies prospect theory as one of the dominant psychological factors explaining decision deviations. This theory serves as the foundation for explaining the relationship between risk tolerance variables and investment decisions through the concept of subjective assessment of outcome probabilities, where investors tend to evaluate potential gains and losses asymmetrically. This theory explains that the psychological impact of losses is much stronger than equivalent gains, making it a key predictor of the risk tolerance threshold among investors (Nguyen et al., 2016).

The application of prospect theory in investment decision-making is influenced by investment experience and financial literacy. Comprehensive financial literacy serves as a self-regulatory tool that helps investors avoid cognitive biases through more structured investment decision-making strategies (Paudel et al., 2026). Furthermore, prospect theory is strengthened by investment experience, where a theoretical understanding of prospect theory alone does not influence investment decisions without experience in practicing the theory, so that investment experience becomes a crucial factor that acts as a filter in forming subjective sensitivity to potential profits and losses, so that experienced investors tend to have a more mature way of processing risk compared to novice investors (Dam & Kulkarni, 2025).

Financial Literacy

Financial literacy is the ability of investors to process economic information and make informed choices regarding financial planning, wealth accumulation, debt, and retirement, viewing this knowledge as a form of investment in human capital (Lusardi & Mitchell, 2014). Conceptually, financial literacy is broadly understood as mastery of a set of knowledge, attitudes, and behaviors that are crucial for making responsible decisions and achieving financial well-being (Potrich et al., 2016). The consistency of this ability is reflected in the research of Rai et al. (2025), who found that financial literacy is defined as an investor's ability to make wise financial decisions that stem from an understanding of various financial concepts and principles. Rai et al. (2025) further break this construct down into three essential components: financial awareness, financial experience, and financial skills.

Meanwhile, in the context of rapidly developing technology, the concept of financial literacy has expanded to include financial knowledge, awareness of financial services, practical transaction skills, and the ability to protect oneself against fraud (Zhou et al., 2025). This understanding is crucial for

managing finances effectively, avoiding unnecessary risks, and achieving future financial stability, making it vital to investor well-being. Therefore, financial literacy is not merely theoretical knowledge but also a crucial prerequisite for strengthening investors' confidence and ability to make investment decisions.

Risk Tolerance

Risk tolerance is a central concept in the study of financial behavior, measured by the degree to which investors are willing to tolerate uncertainty in financial decisions (Grable & Lytton, 1999). This definition is reinforced by Grable and Joo (2004), who identify Risk Tolerance as the ability to accept investment risks and returns, which is one of the factors that is directly or indirectly related to investor financial satisfaction. Risk Tolerance is important in predicting investor actions; an empirical study by Pooja Chaturvedi Sharma (2024) shows that it has a direct and significant impact on investor behavior, indicating how much financial risk an investor can handle.

Risk tolerance is a crucial factor in investment decisions because understanding the level of risk tolerance is essential for determining the right portfolio allocation and making optimal investment decisions (Hanna & Lindamood, 2004). Hanna and Lindamood (2004) state that risk tolerance influences investment decisions, and its measurement becomes increasingly vital as investors face a growing number of investment options. Therefore, accurately measuring and understanding risk tolerance is a crucial first step in the investment process, helping to determine the strategy and asset allocation that best suits the investor's risk profile and financial goals.

Investment Experience

Investment Experience includes learning and confidence in investing from past successes and failures (Awais et al., 2016). Cherry (2018) found that investment experience not only makes investors more able and willing to study financial statement information with reasonable diligence, but also significantly improves the quality of investors' judgments regarding investments. Papadovasilaki et al. (2015) found that the timing of market cycles in initial investment experiences is crucial, with subjects who experienced losses in the initial period tending to retain fewer risky assets in subsequent portfolio allocations. Fushiya et al. (2021) observed that investor experience makes experienced investors react differently from inexperienced investors in assessing an investment. According to research by Zhao & Zhang (2021) investment experience has an influence in driving investment decisions on high-risk assets.

Investment experience is the knowledge and skills an investor acquires through direct involvement in investment activities. Overall, investment experience plays a role in improving the effectiveness and quality of decision-making through an understanding of risk perception.

Investment Decisions

Investment decisions are defined as funding for the selection of financial assets with the expectation of obtaining profitable returns in the future (Virlics, 2013). Investment decision-making is often carried out under conditions of uncertainty; therefore, risk has a dual role: it is inherent in the investment itself and a subjective factor that influences the decision-making process (Virlics, 2013). Furthermore, investment decisions are seen as a financial decision-making process carried out by investors, groups, or organizations to allocate, invest, and manage capital by considering psychological and sociological factors (Ricciardi & Simon, 2000). In the framework of prospect theory, investment decision-making tends to be influenced by subjective sensitivity to expected losses and profits (Dam & Kulkarni, 2025). This subjective influence underscores decisions that reflect personal bias, as investment experience can influence investment decisions (Dam & Kulkarni, 2025). Investment decisions are the process of financial decision-making in selecting assets to generate profits, carried out under conditions of uncertainty. The quality of these investment decisions is greatly influenced by each investor's subjective risk tolerance.

Relationships Between Concepts

The Relationship between Financial Literacy and Investment Decisions

Financial literacy serves as a cognitive asset that equips investors to understand and analyze information, enabling them to make informed financial decisions (Yes, 2023). A key role of financial literacy is reducing bias in investing, helping investors manage and mitigate cognitive bias in decision-making (Ashfaq et al., 2023). Financial literacy must ultimately be effectively translated into real investment behaviors and actions to generate financial well-being (Bai, 2023).

This theoretical relationship is supported by a variety of empirical evidence. A study from Pakistan by Awais et al. (2016) shows that investors with high financial literacy can choose riskier assets with the potential to provide higher returns by managing investment effectively. Although financial literacy is often considered a primary factor, some literature refutes this view, indicating that its influence can be mitigated by other situational factors. The study found that the influence of financial literacy can be outweighed by other factors, as Akhter & Hoque (2022) state, highlighting the effectiveness of investor behavior and financial planning in making investment decisions. Zhao & Zhang's study (2021) also does not support the above study, finding that investment experience plays a greater role in shaping behavior, suggesting that in a highly dynamic market, practical learning can be a stronger predictor than financial literacy. The study by Zhao and Zhang (2021) and Sadeeq (2025) shows that financial literacy has no influence on investment decisions but is influenced by overconfident investors. The research hypothesis can be determined as follows:

H₁: Financial literacy influences investment decisions of the younger generation of investors.

The Relationship Between Risk Tolerance and Investment Decisions

Risk tolerance is one of the main factors influencing an investor's investment decisions. Conceptually, risk tolerance describes the extent to which an individual is willing to accept potential financial loss to achieve higher returns (Grable & Lytton, 1999). Investors with a high risk tolerance tend to choose riskier investments with higher potential returns, while investors with a low risk tolerance tend to be more cautious and choose safer assets (Roszkowski & Davey, 2010). This shows that investment decisions are determined by the investor's willingness to face uncertainty (Nguyen et al., 2016).

Empirically, Hariharan et al. (2000) found that increasing risk tolerance directly reduces investors' propensity to purchase risk-free assets, indicating a relationship between risk tolerance and risky investment decisions. Similar results were also presented by Kübilay and Bayrakdaroğlu (2016), who state that investors need to understand their level of risk tolerance before making investment decisions. However, Yulianis & Sulistyowati (2021) found no significant effect of risk tolerance on investment decisions. This indicates that the influence of risk tolerance on investment decisions is still complex and may be influenced by other factors, such as overconfidence bias (Yulianis & Sulistyowati, 2021).

H₂: Risk tolerance influences investors' investment decisions.

The Relationship Between Investment Experience and Investment Decisions

Investment experience plays an important role in helping investors make investment decisions. Conceptually, Corter and Chen (2006) state that experienced investors tend to be more risk-tolerant and more willing to hold portfolios with higher levels of risk. In line with this, investment experience also influences how investors apply prospect theory in the investment decision-making process (Dam & Kulkarni, 2025). Empirically, Jaiyeoba & Haron (2016) found that investment experience is a basis for understanding stock market conditions and a country's economic framework, which ultimately influences the investment decision-making process.

Although much literature supports the role of investment experience, empirical findings also show contradictory results regarding its direct relationship with investment decisions. Research by

Fachrudin & Fachrudin (2016) specifically concluded that investment experience has no significant relationship to investment decisions.

H₃: Investment experience influences investment decisions.

Based on the explanation above, the research conceptual framework is presented in Figure 1.

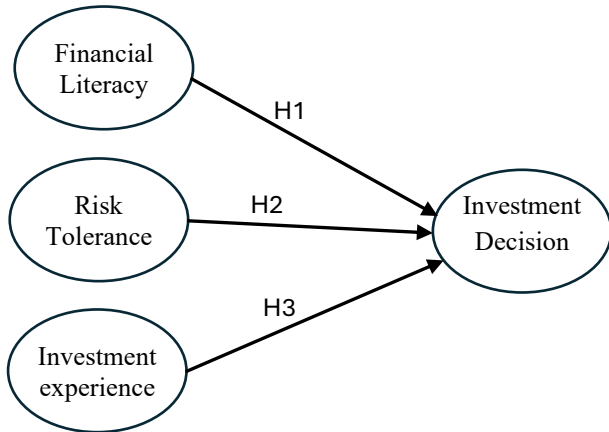


Figure 1. Research conceptual framework

METHODOLOGY

This study uses a quantitative approach with an explanatory design to objectively test the causal relationship between the independent variables and the dependent variable. The explanatory approach is very appropriate because it allows researchers to analyze and explain how the independent variables affect the dependent variable, with a focus on testing the relationship between the variables (Creswell & Creswell, 2017).

The population in this study was all Generation Z residents residing in the city of Surabaya. The location was chosen based on the largest number of investors in East Java province (Satu, 2025). Furthermore, the research focuses specifically on Generation Z because this age group dominates and contributes the largest number of investors in the Indonesian capital market (KSEI, 2023). Based on data from the Central Statistics Agency of Surabaya City (2025), there are 707,871 people in Surabaya who are in the Generation Z range. The research sample will be taken from the population using the technique of purposive sampling. The purpose of this study was to select a sample based on specific criteria deemed relevant to the research objectives. The sampling criteria were Generation Z investors aged 18 to 29, who owned shares in the capital market and had a Customer Fund Account. The sample size was determined using the Slovin formula to obtain a desired accuracy level of 100 respondents.

The study utilized primary data collected through an online questionnaire (Google Forms), which measured respondents' financial literacy, risk tolerance, experience, and investment decisions. Secondary data, including KSEI statistics and various related literature, were used as supporting data. The research questionnaire was structured with questions using a Likert scale to measure all research variables. The questionnaire link was distributed through social media (Instagram, LINE, WhatsApp) and various investment community groups. The measurement items for each variable were determined using the research's operational definition. Financial literacy is the level of investor understanding and knowledge of basic financial concepts (Nemoto & Beglar, 2014). Measurement items are adopted from Rasool & Ullah (2020), namely understanding the concept of compound interest and long-term investment growth, understanding the concept of portfolio diversification, understanding inflation and deflation and their impact on investment purchasing power, understanding the relationship between risk and return, and understanding debt management.

Risk tolerance is the potential loss in an investment that an investor accepts. The measurement items are adopted from Nemoto & Beglar (2014), these include self-perceptions of financial risk-

taking tendencies, decision preferences between financial certainty and greater financial potential, consumer behavior responses and spending flexibility when facing unexpected financial shocks, the level of maximum loss tolerance for potential profits, and investors' psychological and emotional associations when responding to or defining the concept of risk. Investment experience, as the third variable, is defined by the experience and learning gained by investors while investing in stocks. The variable measurement items for investment experience are financial management knowledge, investment ability, investment opportunities, successful investment experiences, and failed investment experiences. The investment decision variable is the investor's asset allocation priority for stock instruments. The measurement items are adopted from Nemoto & Beglar (2014), which is determined by the allocation of the main investment assets (investors invest in first liner/second liner/third liner stock instruments).

This study uses the PLS-SEM method to evaluate the research model and estimate the relationships between variables. This method was used because the variables studied are non-observable and cannot be measured directly (Hair et al., 2011). Therefore, each construct, such as financial literacy, risk tolerance, investment experience, and investment decisions, is measured through several indicators in the form of a questionnaire, so PLS-SEM is considered suitable for analyzing the relationships between latent constructs and testing the measurement and structural models. In PLS-SEM, ordinal data such as the Likert scale can be used as long as the researcher can justify equal intervals between scale points, or by using alternative approaches such as nonmetric PLS, ordinal PLS, or binary variables (Ringle et al., 2023).

The instrument evaluation begins with the outer model, which includes a convergent validity test (Average Variance Extracted exceeding 0.50) and an indicator reliability test (outer loadings greater than 0.70). Discriminant validity is tested using the heterotrait-monotrait ratio with a value below 0.90, and the instrument's internal consistency test is proven through the acquisition of Composite Reliability, Cronbach's Alpha, and rho_A values exceeding 0.70. The next stage is the evaluation of the inner model, which reviews the model's predictive ability. The strength of the independent variable in explaining Investment Decisions is represented by the percentage of the R-square value. The test is carried out by comparing the p-value to test the influence between the independent and dependent variables, with a significance level set at 5%.

ANALYSIS AND DISCUSSION

The subjects of this study were Generation Z students or workers who are currently investing in stocks in the capital market and are domiciled in Surabaya. This study aims to analyze the influence of financial literacy, risk tolerance, and investment experience on investment decisions of Generation Z investors in Surabaya. The sampling process was conducted using a questionnaire via Google Forms. The processed questionnaire data included 225 respondents, the majority of whom were male (140) and female (85). Viewed from age groups, the largest number of respondents was in the 21–23 year age range with a total of 129 people, aged 24– 26 years amounted to 43 people, 27–19 years amounted to 28 people, and the fewest were respondents aged 18– 20 years, amounting to 25 people. Respondents' income was obtained with a large amount of less than IDR 5,000,000 totaling 58 people, IDR 5,000,000–10,000,000 totaling 79 people, IDR 10,000,000–20,000,000 totaling 58 people, IDR 20,000,000–35,000,000 totaling 22 people and income above IDR 35,000,000 totaling 8 people. The results of the questionnaire distribution were processed using PLS by producing loading factor values for the four variables: Financial Literacy (LK), Risk Tolerance (TR), Investment Experience (PI), and Investment Decisions (KI). Based on Figure 2, it shows that there is a loading factor above 0.500 after elimination. The outer loading value for each indicator must be above 0.500 to be declared valid in representing its latent construct.

The AVE (Average Variance Extracted) values for all variables have met the eligibility criteria. The Investment Experience (PI) variable recorded the highest AVE value of 0.837, followed by the Financial Literacy (LK) variable at 0.719, and the Risk Tolerance (TR) variable at 0.612. These figures prove that the convergent validity of the measurement model is met. Internal consistency reliability was assessed using three metrics, namely Cronbach's Alpha and Composite Reliability,

with the criterion that values must exceed 0.70. The test results showed that all constructs were above the minimum limit. For the TR variable, Cronbach's Alpha value was 0.843, rho_a was 0.857, and rho_c was 0.887. The LK variable recorded a Cronbach's Alpha value of 0.832, rho_a was 1.153, and rho_c was 0.884. Meanwhile, the PI variable has a Cronbach's Alpha value of 0.805, rho_a of 0.805, and rho_c of 0.911. This assessment confirms that the instrument's reliability and internal consistency have been met. The next step is to test the research hypotheses (Table 1).

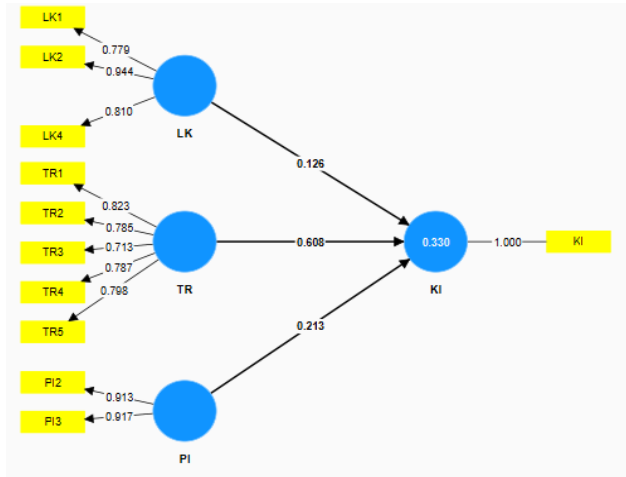


Figure 2. Full model structural PLS

Table 1. Research hypothesis testing

Hypothesis	Path Coefficient	T-statistics	P-values	Results
LK -> KI	0,126	1,235	0,217	Rejected
MORE -> WHO	0,213	2,462	0,014	Accepted
TR -> KI	0,608	13,228	0,000	Accepted

The test results in Table 1 show that the Financial Literacy variable has a p-value of 0.225. This value is above the specified significance limit ($p < .05$), so the research hypothesis is rejected. Financial literacy does not have a significant effect on investment decisions. The analysis results of the risk tolerance variable show a p-value of 0.000. This value meets the significance criteria, namely $p\text{-value} < 0.05$, so the research hypothesis is declared accepted. The analysis results for the Investment Experience variable show a p-value of 0.013. This value meets the significance criteria ($p\text{-value} < .05$), so the research hypothesis is accepted.

Based on the results of this study, respondents have a high level of financial literacy, with a literacy rate of 82.83%. Although many respondents work in non-financial sectors, this high level of financial literacy is due to their membership in investment groups. Although respondents have high financial literacy, based on cross-tabulation, respondents with high financial literacy choose both stocks and investments first-liner, second-liner, and third-liner randomly. However, the test results indicate that financial literacy does not have a significant influence on Investment Decisions. This is because the questionnaire still covers the topic of basic financial literacy (Understanding the concept of compound interest, portfolio diversification, inflation, risk-return, and debt management), which is still insufficient to equip respondents to determine asset allocation decisively and strategically, and they haven't focused on investment techniques, such as fundamental or technical analysis. As a result, their financial knowledge is more passive and has less significant impact on making concrete investment decisions. These findings align with research conducted by Sadeeq (2025), which also confirms that financial literacy does not always influence investment decision-making behavior.

Respondents have a low risk tolerance level of 34%, and the majority choose first-liner (57.33%). The test results indicate that Risk Tolerance has a significant influence on Investment Decisions.

Risk tolerance is one of the main drivers of investment decisions, particularly in selecting stock categories. Based on a research questionnaire that assessed investor behavior regarding risk tolerance levels when facing investment decisions under various scenarios, the results of this study specifically explain that investors with lower risk tolerance will choose less risky stocks. This aligns with the view that financial risk tolerance is a fundamental factor underlying investment decisions and asset selection (Grable & Lytton, 1999; Roszkowski & Davey, 2010).

Respondents' investment experience has a high investment experience value, with an investment experience level of 83.3%, and the majority choose shares as their first choice by 57.33%. The test results indicate that investment experience has a significant influence on investment decisions. This result confirms that investment experience acts as the best teacher in investing in financial markets. Based on the results of this study, investors with more investment experience are more likely to avoid investing in risky assets. This condition is supported by empirical findings showing that investment experience is a basis for understanding stock market conditions, which ultimately influences the investment decision-making process (Jaiyeoba & Haron, 2016). Furthermore, as experience increases, investors have been shown to calibrate the composition of their portfolios well so that they remain aligned with their risk propensity (Corter & Chen, 2006).

CONCLUSIONS

Financial literacy did not significantly influence investment decisions in this study. This is because the questionnaire questions still addressed basic financial literacy topics, namely understanding the concepts of compound interest, portfolio diversification, inflation, risk-return, and debt management. They did not focus on investment techniques, such as fundamental or technical analysis. Consequently, financial knowledge is more passive and has less significant impact on making concrete investment decisions. Risk tolerance significantly influenced investment decisions in this study and was the primary driver. Investors with low risk tolerance invest in low-risk assets, while investors with high risk tolerance invest in riskier assets. Investment experience significantly influences investment decisions. Investors with more investment experience will avoid investing in risky assets. Investors are advised to go beyond mastering conventional financial theory by improving practical financial literacy specific to investment instruments, such as technical analysis methodologies (demand-supply, Fibonacci retracement, support-resistance) and fundamental analysis methodologies (financial ratios, intrinsic value, business valuation) online. Capital market education programs need to shift their paradigm from conventional materials to more practical ones. Interactive portfolio risk management simulations (live investment simulations) are needed to prepare Generation Z investors for more robust and measured investment decisions.

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