

GEN Z'S ADOPTION OF INVESTMENT PLATFORMS: THE ROLES OF AWARENESS, LITERACY AND RISK PERCEPTIONS

*Adopsi Platform Investasi oleh Generasi Z:
Peran Kesadaran, Literasi, dan Persepsi Risiko*

Kurnadi Gularso^{1)*}, and Nicola Nicola²⁾

^{1,2)} Graduate Management Program / Faculty of Social Sciences and Humanities, Bunda Mulia University

^{1,2)} Jl. Lodan Raya No.2, Ancol, Kec. Pademangan, Jakarta 14430

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Abstract

The rapid proliferation of stock investment applications in Indonesia has not been matched by consistent adoption among Generation Z, revealing a research gap in understanding how psychological and risk-related factors shape the transition from awareness to actual usage. This study aims to examine the effects of awareness, financial literacy, and perceptions of reliability, security, and risk on Gen Z's adoption of stock applications in urban contexts. A quantitative approach was employed through a survey of 130 Gen Z respondents and analyzed using the PLS-SEM method. Results show that awareness enhances financial literacy and perceptions of reliability and risk but does not directly influence adoption. Reliability, security, and risk factors significantly affect adoption behavior and mediate the awareness–adoption link, while financial literacy does not function as a mediator. Theoretically, this study advances the UTAUT framework by integrating risk perception as a critical determinant of financial technology adoption. Managerially, the findings highlight that FinTech providers should enhance transparency of security features, foster trust-based communities, and design targeted digital education to encourage sustained adoption. Regulators may leverage these insights to implement consumer protection policies that strengthen trust and risk management, thereby accelerating the shift from awareness toward consistent usage of investment platforms.

Keywords: Stock Application; Digital Trust; Financial Technology Adoption; Financial Literacy; Investment Decision-Making

Abstrak

Pertumbuhan pesat aplikasi investasi saham di Indonesia belum diikuti oleh perilaku adopsi konsisten di kalangan Generasi Z, sehingga menciptakan kesenjangan penelitian mengenai faktor-faktor psikologis dan risiko yang memengaruhi transisi dari kesadaran menuju tindakan nyata. Penelitian ini bertujuan untuk menguji pengaruh kesadaran, literasi keuangan, serta persepsi keandalan, keamanan, dan risiko terhadap perilaku adopsi aplikasi saham pada Gen Z perkotaan. Metode kuantitatif digunakan melalui survei terhadap 130 responden pengguna aplikasi saham dan dianalisis dengan pendekatan PLS-SEM. Hasil menunjukkan bahwa kesadaran meningkatkan literasi keuangan serta persepsi keandalan dan risiko, namun tidak berpengaruh langsung pada adopsi. Faktor keandalan, keamanan, dan risiko terbukti signifikan memengaruhi perilaku adopsi sekaligus memediasi hubungan kesadaran–adopsi, sedangkan literasi keuangan tidak berperan sebagai mediator. Kontribusi teoretis penelitian ini adalah memperluas kerangka UTAUT dengan memasukkan persepsi risiko sebagai determinan penting dalam adopsi teknologi finansial. Dari sisi manajerial, temuan menekankan perlunya penyedia Teknologi Finansial menampilkan fitur keamanan yang transparan, membangun komunitas berbasis kepercayaan, serta mengembangkan edukasi digital yang kontekstual. Regulator dapat memanfaatkan hasil ini untuk merancang kebijakan perlindungan konsumen yang memperkuat persepsi keamanan, sehingga mempercepat transformasi dari sekadar kesadaran menjadi penggunaan aktif aplikasi investasi.

Kata Kunci: Aplikasi Saham; Kepercayaan Digital; Adopsi Teknologi Finansial; Literasi Keuangan; Keputusan Berinvestasi

*Author Correspondence:

E-mail: L1101@lecturer.ubm.ac.id

Introduction

Recently, the proliferation of stock investment applications in Indonesia has surged in tandem with advancements in digital financial technology. Platforms like Ajaib, Bibit, Stockbit, and Bareksa have effectively engaged millions of retail investors, particularly among urban youth because of their intuitive interfaces, low capital requirements, and compatibility with identity systems and digital wallets. The proportion of investors from Generation Z (Gen Z) has considerably increased and now predominates among new investors. The traits of the generation itself contribute to this growing trend. Numerous prior studies indicate that this generation possesses traits such as openness to technology, proficiency in information literacy, and adeptness in utilizing technology, particularly regarding the internet and applications (Annisa et al., 2023; Christian et al., 2022; Christian, Yulita, Girsang, et al., 2023; Indriyarti et al., 2022; Sukmaratna et al., 2024).

As demonstrated in construct-level importance-performance map analysis of factors shaping the adoption of mobile stock investment apps (see Figure 1), in line with previous research findings (Sembel et al., 2024), attitudes toward promotion greatly affect user satisfaction; however, the aspect of switching decisions holds higher significance, albeit exhibiting slightly poorer performance. This research indicates that improving Gen Z user satisfaction with mobile stock applications is more effectively accomplished by promoting decisive switching behaviors rather than relying just on marketing efforts. In the context of stock applications in Indonesia, especially for Gen Z, the findings indicate that factors affecting authentic decision-making—such as trust in the system, transactional ease, and the perception of long-term advantages—should be prioritized over superficial promotional incentives, as this generation prefers a secure, reliable, and sustainable digital experience.

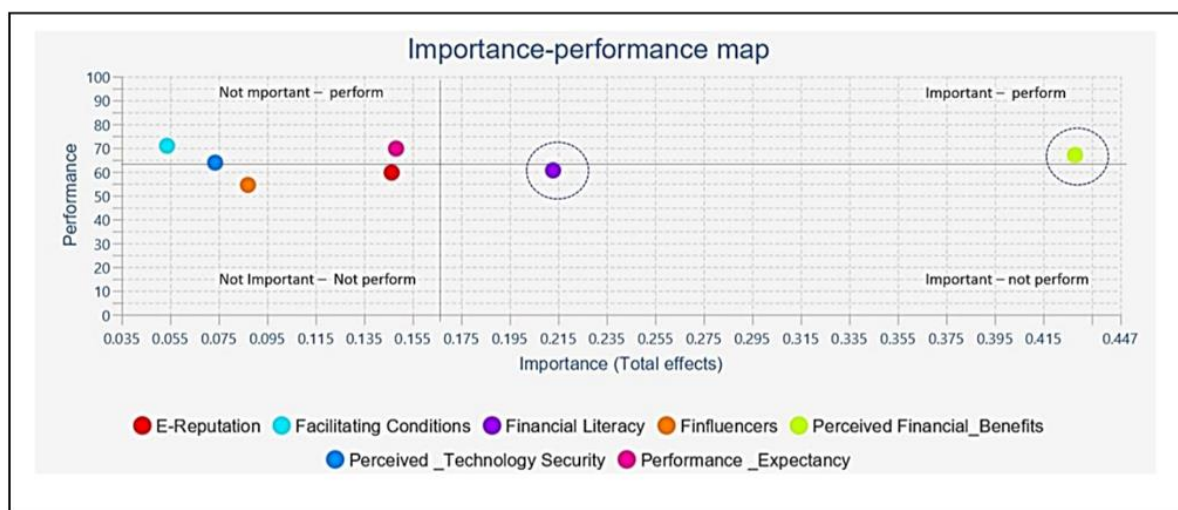


Figure 1. Construct-level importance-performance map analysis

Source: (Sembel et al., 2024)

Despite the growing understanding of the significance of investing via applications, a disparity persists between the level of awareness and consistent adoption behavior, highlighting a transitional barrier from information to actionable steps. Previous research has largely emphasized determinants such as perceived utility, trust, and ease of use (Kim et al., 2007; Venkatesh et al., 2003). However, relatively few studies have investigated how contextual variables such as awareness, financial literacy, and perceptions of reliability, safety, and risk jointly influence digital investment adoption, especially among Gen Z in Indonesia (Alalwan et al., 2017; Chong et al., 2021). Moreover, prior research has seldom examined the interplay among these variables in

shaping adoption behavior for high-risk financial applications. This indicates a theoretical and practical gap that needs to be addressed with a more focused multidimensional approach.

In light of this gap, the present study aims to examine the effect of awareness, financial literacy, and perceptions of reliability, security, and risk on Gen Z's adoption of stock investment applications in Indonesia. Specifically, this study seeks to answer the following research questions: (1) How does awareness influence financial literacy and perceptions of reliability, security, and risk? (2) To what extent do financial literacy and risk-related perceptions affect adoption behavior? and (3) Do these factors mediate the relationship between awareness and adoption? By addressing these questions, this study contributes theoretically by extending the application of digital adoption frameworks in the context of financial technology through the integration of risk perception as a critical determinant. Practically, the findings are expected to provide insights for FinTech firms and regulators in developing strategies that strengthen trust, security, and financial education to accelerate Gen Z's active participation in stock investment platforms.

Literature Review and Hypothesis Development

Unified Theory of Acceptance and Use of Technology

The Unified Theory of Acceptance and Use of Technology (UTAUT) posits that technology usage intention and behavior are shaped by four primary constructs: performance expectancy, effort expectancy, social influence, and facilitating factors (Venkatesh et al., 2003). In this respect, awareness can be viewed as a preliminary manifestation of performance expectancy; the greater Gen Z's awareness of the presence and advantages of stock applications, the higher their expectations that the technology will enhance investment returns (Chan et al., 2022). Financial literacy serves as a facilitating factor that enhances users' skills to access, comprehend, and efficiently utilize investment program features. (Lyons & Kass-Hanna, 2021). Perceptions of reliability, safety, and risk considerations are intricately linked to effort expectancy and enabling conditions, since a system deemed safe and reliable can mitigate psychological and technical obstacles in the adoption process (Kaabachi et al., 2019). This research used the UTAUT framework to elucidate how Gen Z, as digital natives, makes decisions regarding the adoption of application-based financial technology, influenced by performance expectations, risk perceptions, and cognitive capacities in financial literacy.

Users' Adoption Behavior

User adoption behavior refers to the acceptance and utilization of online stock investment applications, influenced by elements including awareness, benefits, reliability, security, financial knowledge, technical attributes, and reliance on the application (Johri et al., 2023). Another perspective offers a comparable elucidation, positing that users' adoption behavior regarding a stock investment application is shaped by multiple factors, including performance expectancy, perceived financial advantages, perceived technological security, financial literacy, and e-reputation (Sembel et al., 2024). In addition to the current definition, other research elucidates users' adoption behavior regarding stock trading applications as influenced by perceived ease of use, perceived usefulness, trust, and social influence (Chong et al., 2021). In addition to the current definition, other research incorporates knowledge of online applications and risk-related features to elucidate users' adoption behaviors (Kishan & Venugopal, 2024).

Awareness

Financial literacy, particularly about stock investments, is a crucial factor for investors and traders alike. Financial awareness often denotes an individual's preparedness to confront intricate financial decisions, such as stock investment. High financial awareness enhances individuals' confidence and efficacy in managing investment portfolios (Lyons & Kass-Hanna, 2021). From another viewpoint, it is established that awareness of digital financial services, such as stock investment applications, is a crucial factor affecting the intention and behavior of adopting financial technology. This awareness encompasses an understanding of the benefits, risks, and operational mechanisms of these services (Chan et al., 2022). Investment awareness is characterized as the degree of individual comprehension of investment goods and methods, which significantly influences participation decisions in the stock market. This research demonstrates that heightened investing awareness substantially affects household investment choices in the stock market (Mishra, 2018).

Financial Literacy

Comparable to awareness, financial literacy, particularly in comprehending stocks, is a crucial element in decision-making for both investing and stock trading. Financial literacy is characterized by an individual's comprehension and capability to administer personal resources and utilize financial instruments, such as stock investments, to attain financial well-being (Parsai & Chandok, 2025). Individuals with high financial literacy are generally more adept at managing investment portfolios and adapting to fluctuations in the financial market. In this context, financial literacy significantly impacts individual engagement in the stock market and investment behavior (Khan et al., 2020). The evidence indicates that elevated financial literacy correlates with enhanced stock market involvement and more prudent investment decision-making. Financial literacy is described as the capacity to identify, assess, and manage the risks involved with stock investments. Individuals possessing strong financial literacy are more inclined to diversify their portfolios and evade high-risk investing choices (Thomas & Spataro, 2018).

Reliability, Safety, and Risk-related Factors

Reliability, safety, and risk factors are defined as user views of information credibility, system security, and the hazards associated with utilizing stock investment programs (Johri et al., 2023). Moreover, reliability pertains to the degree of user confidence in the precision and consistency of information offered by investment applications. Information deemed accurate and pertinent by investors can induce fluctuations in stock prices, as it is perceived to represent the true market value. Safety pertains to the perception of the security of application technology, encompassing the safeguarding of personal and financial information, as well as the use of technologies like firewalls and encryption to mitigate the risks of hacking or data exploitation (Al-Khalaf & and Choe, 2020). Risk-related aspects pertain to the perception of investment risk, wherein investors evaluate the degree to which the application can assist in managing market uncertainty and mitigating losses (Trang & Tho, 2017). These three components collectively establish the foundation for user assessment of the viability and their confidence in embracing digital stock investment solutions.

Relationship between Variables

Comparable to awareness, financial literacy, particularly in comprehending stocks, is a crucial Awareness substantially impacts Gen Z's behavior regarding the adoption of stock investment applications. Information from digital platforms, particularly social media, significantly influences Gen Z's adoption behaviors as digital natives (Dabas & Nagvanshi, 2024). Perceived

utility, ease of use, social impact, and security are significant determinants of sustained app usage among Gen Z in Malaysia (Tan et al., 2023). In Indonesia, despite Gen Z students demonstrating substantial financial acumen, their utilization of financial applications remains constrained (Akibun et al., 2025). Thus, hypothesis one of this study is:

H1 : Awareness affects Gen Z adoption in utilizing stock applications.

Awareness affects the adoption behavior of Gen Z users in utilizing stock applications. Awareness is also crucial in developing financial literacy within Gen Z, particularly with the utilization of stock investment software. As digital natives, Gen Z frequently acquires financial literacy via social media and digital platforms, which shape their financial perspectives and investing goals (Utami et al., 2025). Nonetheless, despite elevated awareness and interest, financial literacy alone does not invariably result in prudent investment choices regarding high-risk assets (Yusup & Gunawan, 2024). Therefore, we must reinforce awareness through extensive financial education. Thus, hypothesis two of this study is:

H2 : Awareness affects financial literacy among Gen Z in utilizing stock applications.

In another perspective, awareness significantly affects Gen Z's perception of reliability, safety, and risk in stock investment applications. Digital exposure, particularly via social media, augments their comprehension of security and trust in these sites (Chong et al., 2021). Research indicates that awareness of cybersecurity dangers influences user views and promotes the adoption of secure features such as two-factor authentication (Apau & Lallie, 2022), while understanding of risks fosters more prudent behavior and application selection (Bruin & Mersinas, 2024). Consequently, understanding significantly impacts Gen Z's decision-making over secure investing options. Thus, hypothesis three of this study is:

H3 : Awareness affects the reliability, safety, and risk factors associated with stock applications for Gen Z.

Next, financial literacy significantly impacts Gen Z's utilization of stock investment applications. Access to financial information through digital platforms empowers Gen Z to make informed investment decisions and utilize financial technologies proficiently (Ratnawati, 2024). Financial literacy enhances decision-making, reduces reliance on others, and helps users evaluate the functionalities of investment applications. Research indicates it affects financial behavior, frequently serving as a mediator in investing decisions. A robust financial foundation enhances Gen Z's propensity to independently and tactically utilize stock applications (Johri et al., 2023). Thus, hypothesis four of this study is:

H4 : Financial literacy affects Gen Z's adoption behavior for stock applications.

Reliability, safety, and risk concerns are crucial in Gen Z's acceptance of stock investment applications. Reliability and security substantially impact the intention to utilize financial technology (Johri et al., 2023), with opinions of these elements significantly affecting the ongoing use of trading applications (Tan et al., 2023). Concerns over data privacy can diminish confidence and impede adoption, similar to trends observed in digital wallet utilization (Gómez-Hurtado et al., 2024). Furthermore, usability and performance expectations influence adoption behavior among Gen Z (Nair et al., 2023). Thus, hypothesis five of this study is:

H5 : Reliability, safety, and risk-related factors affect Gen Z's adoption behavior for stock applications.

Financial awareness denotes an individual's comprehension of financial management and investment; yet insufficient financial literacy may hinder active investment through stock applications. Financial literacy equips individuals with the essential skills to evaluate risks and advantages, thereby increasing confidence in financial decision-making. Research indicates that financial literacy and attitudes affect the impact of knowledge and social influence on Gen Z's investing intentions (Utami et al., 2025), and that robust financial literacy fosters favorable financial behavior and application adoption (Ratnawati, 2024). Thus, hypothesis six of this study is:

H6 : Financial literacy mediates the impact of awareness on the adoption behavior of Gen Z consumers of stock applications.

Reliability, safety, and risk-related characteristics mediate the relationship between awareness and Gen Z's adoption of stock applications. Although knowledge can enhance the intention to adopt it, it may not result in actual behavior without confidence in the system's security and reliability (Johri et al., 2023). Research indicates that while possessing substantial investment knowledge, Gen Z may be reluctant to utilize applications lacking robust beliefs about safety and reliability (Nair et al., 2023). Trust serves as a conduit between awareness and conduct, underscoring the necessity for safe and dependable platforms (Tan et al., 2023). Thus, hypothesis seven of this study is:

H7 : Reliability, Safety, and risk-related factors mediate the impact of awareness on the adoption behavior of Gen Z consumers concerning stock applications.

In addition to the aforementioned comprehension, reliability, safety, and risk considerations could affect the impact of awareness on Gen Z's adoption of stock applications. Although awareness can facilitate adoption, perceptions of system reliability and security may affect the degree of this impact. Nonetheless, awareness alone may be sufficient for initial acceptance, as Gen Z frequently relies on digital platforms and bases decisions on expediency and social impact rather than technical risk evaluations (Stålnacke, 2019). Acquaintance with reliable applications might diminish perceptions of hazards (Chong et al., 2021). This connection notion then informs hypothesis eight of this study:

H8 : Reliability, safety, and risk-related factors moderate the impact of awareness on Gen Z users' adoption behavior regarding stock applications.

Methods

This research employs a quantitative methodology utilizing a survey method for data collection. The research instrument is a closed questionnaire developed using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The employed sampling technique is purposive sampling, with inclusion criteria specifying that respondents must be individuals from Gen Z (born between 1997 and 2012) (Christian, Yulita, Girsang, et al., 2023; Christian, Yulita, Yuniarto, et al., 2023; Indriyarti et al., 2023), over 18 years of age—consistent with the minimum age requirement for users of stock investment applications in Indonesia—and must have owned and utilized at least one stock investment application. A total of 130 respondents were sampled, determined by multiplying the number of items (13 items, as indicated in Table 1) by 5 for the minimum threshold and 10 for the maximum threshold of the sample size (Adam, 2020; Hair et al., 2022; Sarstedt et al., 2021). This research examined one endogenous variable, specifically users' adoption behavior, with three exogenous variables: awareness, dependability, safety, and risk-related aspects, as well as financial literacy.

Table 1. Respondent's Characteristics

Variable	Item
Users' Adoption Behavior (Nair et al., 2023; Johri et al., 2023)	<ol style="list-style-type: none"> 1. The application enhances engagement in stock investment. 2. Utilizing the program conserves time in stock investment. 3. Utilizing the program diminishes reliance on financial consultants or stockbrokers. 4. The application provides autonomy in stock investment. 5. Utilizing the stock investment application offers advantages in terms of cost-effectiveness and affordability. 6. The application enhances financial and technical comprehension of the stock market.
Reliability, Safety, and Risk-related Factors (Johri et al., 2023; Sheila Pinasti et al., 2022)	<ol style="list-style-type: none"> 1. Online platforms provide security for stock investments. 2. Stock investment applications exhibit more reliability. 3. The risk associated with investing in equities through applications is comparatively minimal. 4. Acknowledging that utilizing stock investment programs entails internet security threats, including phishing, hacking, and cyberattacks. 5. Investing in equities related to apps fosters sustainable financing and encourages green investment.
Financial Literacy (Johri et al., 2023; Mishra, 2018; Potrich et al., 2016)	<ol style="list-style-type: none"> 1. Possessing financial literacy and confidence to select a stock investment portfolio. 2. Believing they possess the knowledge to select appropriate stocks utilizing the application. 3. Believing they possess comprehensive knowledge of the technical and financial dimensions of stock investment. 4. Acquire comprehensive knowledge of the stock trading procedure via the program.
Awareness (Johri et al., 2023; Prabu & Gajendran, 2021)	<ol style="list-style-type: none"> 1. Familiarize yourself with diverse stock investment applications. 2. Understand the distinctions among various stock investment applications. 3. Familiarize yourself with the protocols or prerequisites for establishing an account in the stock investment application. 4. Acquire knowledge regarding the use of the stock investment application.

Source: Data Processed by Researchers, 2025

This research tests five hypotheses with direct effects, two mediation hypotheses, and one moderation hypothesis. The items and impact pathways in the hypotheses of this research are represented in the research framework depicted in Figure 2.

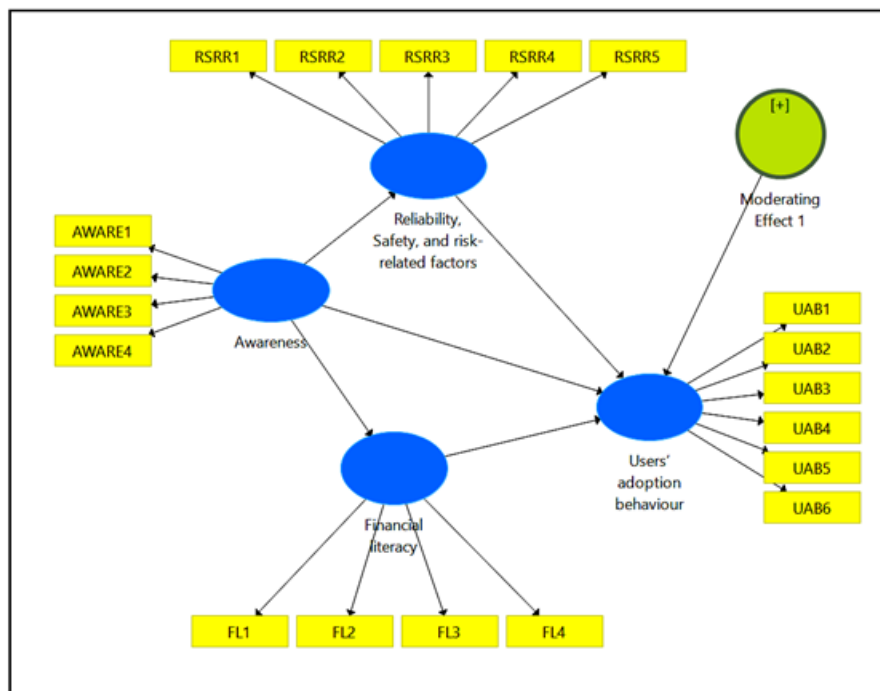


Figure 1. Research Framework (adapted from Johri et al., 2023)

Source: Data Processed by Researchers, 2025

Data analysis was conducted utilizing the Partial Least Squares – Structural Equation Modeling (PLS-SEM) methodology via SmartPLS 3.0 software, which facilitates the examination of structural models characterized by intricate interactions and constrained sample sizes (Hair et al., 2022; Hair et al., 2019). The analytical process commences with the PLS method to evaluate the reliability and validity of the construct, wherein an indicator is deemed reliable if the Composite Reliability (CR) and Cronbach's Alpha (CA) values are above 0.70. Construct validity is assessed via outer loading ($OL > 0.70$) and average variance extracted ($AVE > 0.50$) (Christian et al., 2022; Ekaimi et al., 2024). Additionally, we employ the R-square value to assess the extent of the structural model's determination coefficient. The analysis proceeds with bootstrapping to evaluate the significance of the model's route. A hypothesis is considered supported if the p-value is less than 0.05; otherwise, it is not supported.

Results and Discussion

Profile of Participants

The participants (see Table 2) exhibit a balanced gender mix, with a slightly higher number of female participants compared to male participants. The participants are evenly distributed by age, with those aged 21-22 years comprising nearly 50%, followed by 18-20 years at approximately 45%, and the smallest group being participants aged 23-24 years. This survey is predominantly composed of students (over 65%), followed by employees (over 25%). Moreover, among the most often utilized investment applications today, Ajaib, Bibit, and Stockbit collectively account for 30 percent of usage. From the perspective of investment application users, about 60% of research participants identify themselves as traders rather than investors.

Table 1. Profile of the Participants

Profile	Freq	%
Gender		
Female	66	50.77%
Male	64	49.23%
Age		
19-20	58	44.62%
21-22	64	49.23%
23-24	8	6.15%
Job		
Student	89	68.46%
Employee	34	26.15%
Entrepreneur	4	3.08%
Freelance	3	2.31%
Most Used Investment Applications Currently		
Ajaib	41	31.54%
Bareksa	2	1.54%
Bibit	43	33.08%
IPOT	2	1.54%
KB Valbury	1	0.77%
Motiontrade	2	1.54%
Stockbit	39	30.00%
Main Purpose of Using Investment Applications		
Investment	54	41.54%
Trading	76	58.46%

Source: Data Processed by Researchers, 2025

PLS-algorithm

The preliminary testing protocol in this work involved executing the PLS-algorithm method, with the findings presented in Table 3. The test results indicate that all items and variables in this research comply with the criteria for reliability and validity. Additionally, the R-square results in this research indicate values of 0.696 (users' adoption behavior), 0.545 (financial literacy), and 0.436 (reliability, safety, and risk-related factors), demonstrating that the variables awareness, financial literacy, and reliability, safety, and risk-related factors collectively account for 69.6% of the variance in users' adoption behavior. Moreover, the incorporation of awareness as an exogenous variable elucidates its impact on financial literacy, accounting for 54.5% of the variance. The incorporation of awareness as an exogenous variable in elucidating its impact on reliability, safety, and risk-related parameters accounts for 43.6%.

Table 2. PLS-algorithm

Variable	Item Code	OL	CA	CR	AVE
Awareness	AWARE1	0.873	0.894	0.926	0.758
	AWARE2	0.859			
	AWARE3	0.888			
	AWARE4	0.863			
Financial Literacy	FL1	0.821	0.853	0.901	0.694
	FL2	0.840			
	FL3	0.850			
	FL4	0.821			
Reliability, Safety, and Risk-related Factors	RSRR1	0.890	0.837	0.902	0.755
	RSRR2	0.876			
	RSRR5	0.839			
Users' Adoption Behavior	UAB1	0.877	0.934	0.948	0.752
	UAB2	0.876			
	UAB3	0.776			
	UAB4	0.873			
	UAB5	0.918			
	UAB6	0.878			

*R-Square = 0.696 (users' adoption behavior), 0.545 (financial literacy), and 0.436 (reliability, safety, and risk-related factors)

Source: Data Processed by Researchers, 2025

Hypothesis Examination

The path coefficients presented in Table 4 illustrate the hypothesis testing in this research. The results show that out of the 5 direct effects hypotheses, 3 (H2, H3, and H5) receive support, while 2 (H1 and H4) do not. Moreover, these findings show that awareness affects financial literacy as well as characteristics linked to reliability, safety, and risk. Moreover, reliability, safety, and risk-related aspects affect users' adoption behavior. We can deduce that awareness and financial literacy do not significantly influence users' adoption behavior. In the mediation effect, the findings of this research indicate that financial literacy does not mediate the impact of awareness on users' adoption behavior (H6). Nonetheless, varying outcomes regarding the mediation effect are attributed to dependability, safety, and risk-related characteristics that effectively mediate the effect of awareness on users' adoption behavior (H7). This paper's findings indicate that reliability, safety, and risk-related characteristics do not moderate the impact of awareness on users' adoption behavior (H8).

Table 3. Path Coefficients

Path	STDEV	T Statistics	P value	Remark
Direct Effects				
Awareness → Users' Adoption Behavior	0.129	1.041	0.298	H1: not supported
Awareness → Financial Literacy	0.054	13.706	0.000	H2: supported
Awareness → Reliability, Safety, and Risk-related Factors	0.056	11.771	0.000	H3: supported
Financial Literacy → Users' Adoption Behavior	0.192	1.338	0.182	H4: not supported
Reliability, Safety, and Risk-related Factors → Users' Adoption Behavior	0.119	6.260	0.000	H5: supported
Mediating Effects				
Awareness → Financial Literacy → Users' Adoption Behavior	0.135	1.400	0.162	H6: not supported
Awareness → Reliability, Safety, and Risk-related Factors → Users' Adoption Behavior	0.089	5.518	0.000	H7: supported
Moderating Effect				
Moderating Effect 1 → Users' Adoption Behavior	0.069	1.213	0.226	H8: not supported
* STDEV = Standard Deviation				

Source: Data Processed by Researchers, 2025

Awareness Does Not Affect Users' Adoption Behavior

The first finding of this research indicates that awareness does not substantially affect Gen Z's utilization of stock investment applications. This contrasts with earlier studies (Johri et al., 2023; Khan et al., 2020; Sembel et al., 2024), which indicate that awareness facilitates adoption by imparting crucial knowledge regarding benefits, characteristics, and returns, thus cultivating confidence and diminishing doubt. In the Indonesian context, although Gen Z in metropolitan areas is extensively exposed to investment-related content through digital media, social platforms, and online brokers, such exposure often leads to passive rather than active participation. Elevated awareness may remain at the level of "information consumption" without progressing into investment actions due to lack of trust in financial systems and high sensitivity to perceived risks (Mishra, 2018).

A comparison with Malaysia shows that awareness strongly influences adoption because financial literacy programs and trust in regulatory oversight are more established (Chong et al., 2021; Tan et al., 2023). In India, Mishra (2018) also found that awareness directly drives household participation in stock markets. The divergence in Indonesia could be explained by the relatively nascent stage of capital market inclusion among Gen Z and the dominance of financial information obtained from social media influencers rather than formal education. The local context indicates that OJK (Indonesia's Financial Services Authority) has intensified campaigns for financial inclusion, yet these efforts have not fully bridged the gap between awareness and trust-based adoption. Thus, awareness alone is insufficient without a reliable regulatory framework and clear communication of investor protection mechanisms.

Awareness Affects Financial Literacy

The second finding shows that awareness influences financial literacy, consistent with prior studies that emphasize the role of awareness in stimulating financial knowledge acquisition (Lyons & Kass-Hanna, 2021; Potrich et al., 2016). In this instance, awareness serves as a catalyst that enhances financial literacy via a process of repetitive, reflective, and useful digital engagements. In Indonesia, awareness often begins with exposure to digital campaigns, online communities, and social media influencers who introduce Gen Z to investment terminology and practices (Utami et al., 2025). While this raises curiosity and drives self-learning, the depth of literacy acquired may vary depending on the quality of information. Compared with India, where structured financial education programs support the transition from awareness to literacy (Mishra, 2018), Indonesia's reliance on informal channels creates risks of misinformation. Nevertheless, this process aligns with the Technology Readiness Index (optimism and innovativeness dimensions), showing that Indonesian Gen Z is eager to explore new digital finance tools despite potential knowledge gaps. Thus, awareness acts as an entry point for literacy, but sustained improvement requires institutional interventions, particularly through OJK-led programs in schools and universities.

Financial Literacy Does Not Mediate the Impact of Awareness on Users' Adoption Behavior

The third analysis reveals that financial literacy does not mediate the relationship between awareness and adoption behavior. This contradicts several prior studies (Johri et al., 2023; Khan et al., 2020), which highlight literacy as a bridge between knowledge and investment practice. In Indonesia, however, financial literacy acquired through informal means—particularly social media and peer influence—often remains superficial (Lyons & Kass-Hanna, 2021). Gen Z may understand concepts like diversification or risk tolerance but still refrain from using stock applications due to scepticism about security and lack of trust in digital platforms. In contrast, studies in Malaysia show that financial literacy mediates adoption more effectively because education systems incorporate financial subjects and regulators actively promote literacy campaigns (Chong et al., 2021). The Indonesian context underscores that while OJK and IDX have initiated programs such as “Yuk Nabung Saham,” participation levels among Gen Z remain modest. This gap highlights the importance of coupling literacy programs with confidence-building measures, ensuring that knowledge translates into behavior.

Awareness Affects the Reliability, Safety, and Risk-related Factors

The fourth finding indicates that awareness significantly influences Gen Z's perception of reliability, safety, and risk in stock applications. The more exposed they are to information, the better they evaluate security features, data protection mechanisms, and potential cyber threats (Chan et al., 2022). This aligns with Kaabachi et al. (2019), who emphasized that trust formation depends on awareness of safety mechanisms. Nevertheless, cultural and institutional contexts matter. In Indonesia, awareness often comes from viral cases of fraud or hacking reported on social media, which heightens Gen Z's sensitivity toward risk. Unlike in more mature markets such as Malaysia, where regulatory frameworks instil baseline trust (Chong et al., 2021), Indonesian Gen Z tends to overestimate risks, leading to cautious adoption behavior. OJK's continuous enforcement of data privacy standards and financial consumer protection regulations thus plays a critical role in transforming awareness into trust.

Reliability, Safety, and Risk-related Factors Mediate the Effect of Awareness on Users' Adoption Behavior

The fifth finding confirms that perceptions of reliability, safety, and risk act as mediators between awareness and adoption. This resonates with prior studies showing that technical trust and

platform security are decisive factors for Gen Z adoption (Kaabachi et al., 2019; Tan et al., 2023). In Indonesia, these perceptions are amplified by frequent exposure to discussions on cybersecurity threats through social media platforms, which serve both as sources of information and as amplifiers of fear. Compared to India, where institutional trust in government-regulated trading systems mitigates risk concerns (Mishra, 2018), Indonesian Gen Z often hesitates unless they are convinced of platform reliability. This highlights the importance of providers explicitly demonstrating security features, such as two-factor authentication, and building transparent reputations. The findings suggest that bridging awareness to adoption requires not only education but also institutional mechanisms that assure young investors of safety.

Financial Literacy Does Not Affect the Users' Adoption Behavior

The sixth conclusion contradicts earlier research (Johri et al., 2023) that emphasized the role of financial literacy in adoption behavior. In Indonesia, even financially literate Gen Z individuals often abstain from stock applications due to perceived complexity or lack of trust in app governance (Lyons & Kass-Hanna, 2021). This aligns with findings from (Stålnacke, 2019), which suggested that younger investors tend to base decisions on convenience and social influence rather than technical evaluations. By contrast, in Malaysia, financial literacy significantly shapes adoption because investors rely on structured learning and institutional trust (Chong et al., 2021). The Indonesian experience shows that literacy alone is not enough when trust deficits and usability issues persist. Hence, FinTech firms must combine literacy programs with simplified user experiences and transparent communication to encourage actual adoption.

Reliability, Safety, and Risk-related Factors Affect the Users' Adoption Behavior

The seventh finding corroborates earlier research emphasizing that users avoid platforms perceived as high-risk (Johri et al., 2023). Indonesian Gen Z exhibits strong caution when facing data privacy concerns and cyber risks, often prioritizing security over promotional benefits. While prior studies argue that Gen Z tends to exhibit optimism bias (Stålnacke, 2019), the Indonesian case shows that local investors are shaped by frequent reports of online fraud and limited experience with long-term financial products. In Malaysia, Tan et al. (2023) found that social influence and user interface sometimes outweigh security concerns. In contrast, Indonesian Gen Z prioritizes safety as their primary consideration, reflecting a context where trust in digital institutions remains fragile. This reinforces the importance of OJK regulations and FinTech compliance certifications as mechanisms to foster adoption through enhanced trust.

Reliability, Safety, and Risk-related Factors Do Not Moderate the Impact of Awareness on Users' Adoption Behavior

The eighth finding indicates that reliability, safety, and risk-related factors do not moderate the link between awareness and adoption. The simple slope analysis reveals that awareness alone can trigger initial exploration regardless of security perceptions. This aligns with Stålnacke (2019), who noted that Gen Z tends to act on digital convenience and peer influence rather than detailed security evaluations. This is supported by the simple slope analysis (see Figure 3), which shows that lines at low, medium, and high moderator levels are roughly parallel and statistically insignificant. However, the Indonesian context adds nuance: while awareness may suffice to encourage initial trial, long-term usage and sustained adoption still depend on strong regulatory frameworks and platform reliability. Social media-driven awareness campaigns may spark curiosity, but without reinforcement from OJK oversight and transparent security standards, awareness alone will not guarantee consistent behavior. Thus, although moderation effects were not significant statistically, risk-related factors remain crucial in ensuring continuity of adoption in Indonesia's dynamic digital.

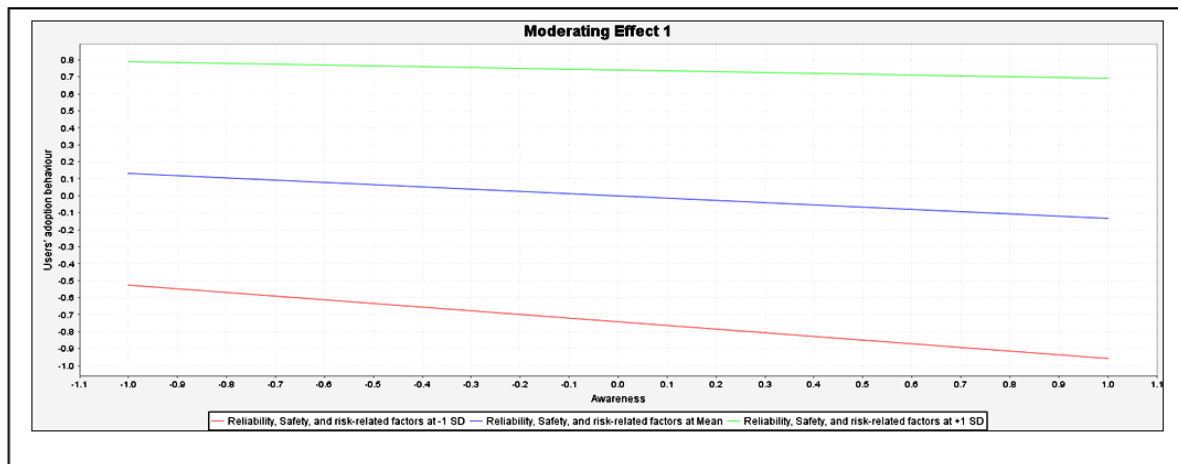


Figure 2. Simple Slope Analysis: Moderating Effect of Reliability, Safety, and Risk-related Factors
 Source: Finance Ecosystem (Chong et al., 2021)

Conclusion

This research concludes that Gen Z's utilization of stock investment applications in metropolitan Indonesia is not merely motivated by awareness or financial literacy but is profoundly affected by perceptions of dependability, safety, and risk-related considerations. While knowledge aids in the development of financial literacy and perceptions of app security, it does not directly result in adoption without the presence of trust in system reliability, transaction transparency, and platform dependability. The findings indicate that reliability, safety, and risk-related criteria influence adoption behavior and regulate the relationship between awareness and adoption, serving as critical evaluative elements in Gen Z's decision-making process. Conversely, financial literacy does not adequately moderate this link, highlighting a disparity between financial understanding and its actual implementation in digital investing. The originality is in emphasizing the crucial mediating function of dependability, safety, and risk perceptions—an aspect seldom investigated in previous research, particularly concerning Gen Z in urban Indonesia. The results underscore the necessity for a multifaceted strategy to enhance financial technology adoption, concentrating on fostering trust, guaranteeing security, and mitigating risk perception to engage a well-informed and discerning young digital demographic.

Implications

This research underscores the necessity of enhancing digital financial education tailored to Gen Z's characteristics and emphasizes the imperative to strengthen the perception of reliability and security in stock applications as a fundamental strategy for increasing adoption. From a managerial perspective, FinTech providers should go beyond general promotion and explicitly highlight security features such as two-factor authentication, biometric login, encryption technologies, and transaction monitoring. These features need to be communicated visibly within the user interface, not only embedded in the back-end system. In addition, providers can develop digital literacy campaigns that use gamification, interactive tutorials, or influencer-based education to make financial concepts more accessible to Gen Z. Building trust-based communities through online forums, peer testimonials, and transparent disclosure of regulatory compliance can further bridge the gap between awareness and consistent adoption. Regulators such as OJK can leverage these findings by designing consumer protection campaigns that not only inform but also simulate real investment scenarios, thereby reducing the psychological distance between awareness and action. From a theoretical perspective, this study extends the Unified Theory of Acceptance and Use of Technology (UTAUT) by integrating perceptions of risk, reliability, and safety as critical

determinants in the adoption of financial technology. While awareness reflects performance expectancy and financial literacy serves as a facilitating condition, this research demonstrates that risk perception operates as both a mediating and contextual variable that shapes adoption behavior. This extension enriches the theoretical framework of UTAUT in the domain of high-risk financial technologies and provides a basis for future research to further examine the intersection of trust, risk, and digital readiness in technology adoption.

Limitations and Recommendations

This research presents three primary limitations that warrant consideration. First, from a methodological standpoint, the study adopts a cross-sectional design, which restricts the ability to capture changes in adoption behavior over time. The reliance on self-reported data through questionnaires may also introduce bias, as respondents might overestimate their awareness or financial literacy while underreporting risk concerns. Future studies are encouraged to employ longitudinal designs or experimental methods to track behavioral change across different time horizons and reduce common method bias. Second, in terms of sample characteristics, the respondents were limited to Gen Z in metropolitan regions of Indonesia. While this segment is highly relevant given their dominance among new investors, the findings cannot be generalized to rural populations or older generations who may exhibit different financial behaviors and levels of technology readiness. Comparative studies involving diverse demographic and geographic groups could enrich the understanding of adoption behavior in broader contexts. Third, the scope of this research was confined to awareness, financial literacy, and risk-related factors. Other influential variables, such as social influence, perceived ease of use, user interface quality, and behavioral intention, were not included. Prior studies emphasize these constructs as central to technology adoption, suggesting the need for their integration into future models. Based on these limitations, future research should explore the adoption of stock investment applications using longitudinal approaches, incorporate comparative analysis across demographic groups, and extend theoretical models by integrating additional constructs such as social influence, trust, and perceived ease of use. Such directions would provide a more comprehensive perspective on how Gen Z and other cohorts transition from awareness to sustained financial technology adoption.

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