"Financial literacy, technological progress, financial attitudes and investment decisions of Gen Z Indonesian investors"

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FINANCIAL LITERACY, TECHNOLOGICAL PROGRESS, FINANCIAL ATTITUDES AND INVESTMENT DECISIONS OF GEN Z INDONESIAN INVESTORS

Abstract

Rapid technological advances have made financial markets more accessible and en-couraged individual investors to engage in investment decision-making actively. Generation Z, or Gen Z, characterized by higher levels of digital literacy, a high sense of curiosity, and acceptance of innovation, tends to make investment decisions quickly. This study aimed to analyze the effect of technological progress, financial literacy, and financial attitudes on investors' investment decisions. There are 125 Gen Z investors in Jakarta, Indonesia, selected as research samples using the non-probability sampling method. The survey method was employed to collect data, and the study instrument was a questionnaire. For data analysis, Partial Least Squares version 4.0 was used. The study's findings revealed that financial literacy and financial attitude positively influ-ence Gen Z investment decisions. Technological progress does not affect Gen Z in de-termining investment in the financial market. Financial literacy and financial attitude are more dominant for Gen Z investors than technological progress in determining investment allocation. This finding implies that Gen Z must improve their understand-ing of correct financial literacy and financial attitudes that align with individual inves-tors' character. Further investigation needs to reveal the insignificance of technological progress in determining investment decisions. Technological progress and financial literacy likely have the same factor characteristics related to three dimensions: knowl-edge, skills, and attitudes. The attitude of Gen Z investors towards the progress of fi-nancial technology by investors is preceded by good financial literacy. Therefore, it is necessary to test the relationship between variables, both mediation and moderation, in investment decisions.

Keywords	technological progress, financial attitudes, knowledge, skills, attitudes, financial markets
JEL Classification	G11, G41, G53

INTRODUCTION

A generation is the composition of the population based on birth year, and it is an essential aspect of a country. In the same period, a group of this population composition experiences the same vital events (Parry & Urwin, 2021). Generation Z, or Gen Z, is a population composition with a birth span of 1995–2010, which, in the next few years, will become a generation that is at a productive age and is expected to contribute to driving the country's economic growth. Bencsik et al. (2016) said that Gen Z emerged simultaneously with the digital era, quickly gaining access to information while being sensitive to the wave of information around them. Gen Z is growing up intelligent, skilled at using technol-ogy, creative, responsive, and the first truly global generation.

Gen Z needs better financial management skills due to a lifestyle that tends to be more consumptive, challenging to save, and not too con-

cerned about investing for future needs. One factor that makes Gen Z more wasteful and difficult to save is the advancement of technology, such as the Internet, which allows this generation to be curious about the wider world and e-commerce as a platform that provides the purchase of goods nationally and internationally. Gen Z has tech-savvy characteristics, interacts with social media, is expressive, and tends to be tolerant and versatile. Also, Gen Z lives in a digital era that can provide information for their every problem easily (Katz et al., 2022)

The 2020 Indonesian Internet Service Providers Association survey reported that the highest number of internet users were in the 15-19 age range at 91 percent, followed by the second highest number in the 20-24 age range at 88.50 percent, and internet users in the 25-29 age range at 82.70 percent. This gives an understanding that Gen Z is the group that uses the Internet the most in their lives. The Internet is a technological development that requires people to enter the digital economy era and impacts a country's economy. The financial sector is one of the sectors that has the potential to develop along with the development of the digital economy (Najib et al., 2021). Investment and the capital market in this digital era are strongly influenced by technological developments that positively affect the increase in the Indonesian capital market because existing technological developments can be used efficiently. With the development of this technology, people can manage their finances online. The general population uses technology to manage their finances, such as savings, buying and selling transactions, money loans, and online investing (Fatmawatie & Endri, 2022).

Financial literacy is a person's understanding of financial instruments (Abdullah & Chong, 2014). Savings, insurance, investment, and other financial instruments are all examples of financial instruments (Endri et al., 2022). Financial literacy can also be interpreted as a person's knowledge or understanding of finance to achieve prosperity. When an individual has an investment plan, he must have good financial knowledge to make the financial decisions transparent and directed. Financial literacy is a basic understanding that helps a person avoid financial problems. Individuals with sound financial literacy skills will be wiser in making decisions about managing daily finances and making investments. Individuals with high financial literacy make investment decisions in risky assets and allocate investment portfolios with careful consideration (Abreu & Mendes, 2010).

The phenomenon of trading game investment, popular and followed by many people, has caused losses of up to billions of rupiah to investors. Game trading investment is also said to be an illegal investment because it is proven to be an unlicensed and unlawful investment management activity. Many young people are still trapped in this illegal investment because they are attracted by the enormous profits offered. The Investment Alert Task Force recorded losses due to illicit investment in the last ten years, or from 2011–2021, have reached 117.5 trillion (IDX Channel, 2022). This proves that people's financial knowledge and understanding regarding investment is relatively low, but the desire to improve economic conditions is high. Indonesia's financial inclusion has reached 76.19 percent based on the 2019 National Survey of Financial Literacy and Inclusion (SNLIK) published by the Financial Services Authority, while LK is only 38.03 percent. With a reasonably large gap in the percentage of LK and financial inclusion, the public needs to be encouraged to increase their understanding of the financial products financial institutions offer.

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Investment decisions relate to allocating funds or investor capital to various investment instruments expected to provide future benefits (Hidayat et al., 2022). Investment is a commitment of a certain amount of funds investors invest to improve welfare. Another investment objective is anticipating rising inflation and future economic uncertainty, which could decrease income and purchasing power (Kafuku et al., 2015). Nurhayati et al. (2021) stated that in making investment decisions, much knowledge is needed, which is a factor

that determines investment decisions for investors. Standard financial theory assumes that investors are rational and can identify and process information appropriately to obtain optimal portfolio choices. In reality, each individual has different psychological behavior, which causes investors to take specific actions toward an event. This behavior also influences how investors use and interpret information in making decisions (Pompian, 2012).

Investment decisions are processes carried out in stages to get returns according to expectations (Riyani et al., 2023). In determining a decision, each individual has their state of mind, views, and financial arguments, which is called financial attitude. Kadoya and Khan (2020) proved that financial attitudes relate to young people's economic difficulties. They find it challenging to manage their finances due to their dynamic lifestyle and the need for knowledge about proper financial planning. Gen Z, who tend to be more consumptive, must understand the short-term and long-term financial planning process. The growth of Fintech services gives everyone hope to invest, especially in the financial market, easily and quickly (Najib et al., 2021). Therefore, in this case, each individual must have good financial literacy and attitudes regarding their use for consumption or investment to be wiser and more intelligent in using their funds or resources and prioritizing needs, not wants.

Technology allows everyone to obtain and access various types of information, including investment (Setiawati et al., 2022). With the technological advances, stock trading can be performed with digital technology. Technology connects humans with the rest of the world and becomes a basis for financial digitization, especially in the investment sector. The level of socialization accompanied by technological advances makes information more accessible to obtain and becomes the basis for forming intentions, which will then become the basis for investor behavior. Technological advances were created to provide convenience in human activities. The development of technology that is increasingly advancing into digital technology today influences most human activities that offer easy access to information on knowledge and understanding to manage finances, one of which is investing with digital technology. The development of digital technology makes it easier to make

the right decisions when choosing and managing finances using financial institution instruments. Technological progress is a situation humans cannot avoid because technology will align with scientific progress. Technological progress is in line with the development of science, which brings various innovations that make human life easier (Flor & Hansen, 2013). Technological progress is a technological innovation along with the times that continues to evolve with scientific advances to provide convenience in the lives of humans who increasingly want everything to be obtained easily, quickly, and reliably. The convenience offered by technology is to help humans obtain, understand, and practice the information obtained in their activities, especially in managing finances, both for the needs of today's life and investing in financial institutions to benefit by making the right decisions supported by technology.

Technological advances are a consideration for investors when making investment decisions. Fatmaningrum and Utami (2022) show a positive relationship between technological progress and investment interest. Jonathan and Sumani (2021) also prove that technological advances positively influence millennial investors' investment interests. Aisa (2021) revealed that automatic investment technology positively influences investment decisions by providing broad and easy access to the capital market. Harahap et al. (2022) state that technological advances can increase the desire to invest.

Financial literacy is essential to understanding economic concepts and tools to help make appropriate and profitable financial decisions (Philippas & Avdoulas, 2020). Pang (2010) stated that financial literacy is conscious personal knowledge of good financial concepts and management. A knowledgeable person can manage finances properly, prioritize needs over wants, and set aside money for future consumption. Meanwhile, Chen and Volpe (1998) stated that financial literacy is about managing personal finances and living more prosperously. Financial difficulties can arise if there is an error in financial management because regardless of a person's income level, financial well-being will be easier to achieve with proper financial management (Diener & Seligman, 2004). Lusardi (2019) stated that financial literacy is knowledge and understanding related to risk, motivation,

confidence, and skills to make the right decisions in various economic contexts to maximize individual and social financial well-being.

Financial literacy influences economic behavior because it is easier for individuals with financial understanding to use their knowledge to achieve specific goals (Hidajat, 2018). Financial literacy is financial management and appropriate decision-making with the knowledge, understanding, and skills a person must have about various financial contexts to avoid financial problems and gain future prosperity. Financial literacy can lead to mistakes in financial management, which may make it easier to achieve financial well-being.

Financial attitude is an investor's mind, opinions, and judgments. People build an attitude towards money based on their experiences and circumstances (Kautsar & Asandimitra, 2019; Oemar et al., 2023). Financial attitude is a factor that determines the attitude and behavior of investors in making financial decisions. The better the financial attitude, the more appropriate and profitable the financial management ability and the ability to distinguish between needs and wants (Endri et al., 2020).

Financial attitudes are guidelines for applying financial principles to increase value based on correct decision-making and resource management (Moko et al., 2022). According to Robbins et al. (2015), attitude has three main concepts: cognitive (opinions), affective (feelings), and conative (behavior). Cognitive is an opinion regarding an attitude investors express in their confidence in making investment decisions. Affective is an emotion that resides in a person, a statement of attitudes taken and determines a person's behavior. Behavior is a reflection of how an individual acts towards something or someone.

This study estimates and analyzes the impact of financial literacy, financial attitude, and technology advancement on Gen Z investment decisions in the Indonesian capital market. In line with the literature review and research objectives, the research hypothesis is formulated as follows:

H1: *Financial literacy has a positive impact on investment decisions.*

H2: *Financial attitude has a positive impact on investment decisions.*

H3: *Technology advancement has a positive impact on investment decisions.*

2. METHODS

The study uses a quantitative approach to examine a specific population or sample. The population of this study is all Gen Z investors in Jakarta whose birth years are 1995–2010. The population of the study is all Gen Z investors in the Jakarta area, and the sample is selected to represent the population. Researchers need help with the large and complex population of Gen-Z who make investments. Therefore, the sampling method determines the selected population based on specific criteria (considerations). The Non-Probability Sampling Method is a non-random and subjective sampling technique, namely that each member of the population does not have an equal opportunity to be sampled. The sample based on the unknown population size must be at least five times the variable or indicator of the analyzed questions.

The sample calculation is based on the number of indicators and latent variables, with the formula $5a \leq x \leq 10a$. A is the number of indicators plus latent variables, and x is the number of respondents. With 25 indicators and 5 latent variables, a = 25. So, the sample calculation becomes: $5a \leq x \leq 10a \approx 5 \times 25 \leq x \leq 10 \times 25 = 125 \leq x \leq 250$. According to the guidelines, the sample size required is a minimum of 125 respondents and a maximum of 250 respondents (Hair et al., 2019).

From the calculation results above, the number of samples from the population was 125 people who were used as respondents. To meet the requirements for using SEM so that as much as possible, a decent goodness-of-fit is obtained. Data were obtained from questionnaires distributed online via Google Forms. Data analysis techniques include descriptive statistical analysis and SEM analysis. Partial Least Square (PLS) is a Variance-based SEM analysis method. The Smart-PLS version 4.0 program, as an alternative to the covariance-based SEM model, is used for data processing. PLS is designed for causal predictive analysis in very complex situations and limited theoretical support.

3. RESULTS

The outer model analysis aims to describe the relationship between the indicator block and its latent variables. This model is also used to test the construct validity and reliability of the instrument. Table 1 shows that all statements in each variable and indicator are declared valid and have met the requirements of the research model loading factor score parameters (rule of number > 0.7). Therefore, the testing can proceed to the next stage: discriminant validity.

Table 1. Convergent validity test results (outer loading)

Source: SmartPLS (2023).

Variable	Indicator	Loading Value	Description
Technology Advancement (X1)	KT1	0.833	Valid
	KT2	0.773	Valid
	KT3	0.795	Valid
	KT4	0.830	Valid
Financial Literacy (X2)	LK1	0.723	Valid
	LK2	0.771	Valid
	LK3	0.718	Valid
	LK4	0.796	Valid
	LK5	0.807	Valid
	LK6	0.740	Valid
	LK7	0.742	Valid
	LK8	0.782	Valid
	LK9	0.768	Valid
Financial Attitude (X3)	SK1	0.828	Valid
	SK2	0.790	Valid
	SK3	0.716	Valid
	SK4	0.827	Valid
Investment Decision (Y)	KI1	0.776	Valid
	KI2	0.768	Valid
	KI3	0.747	Valid
	KI4	0.789	Valid
	KI5	0.714	Valid
	KI6	0.754	Valid
	KI7	0.722	Valid
	KI8	0.772	Valid

All indicators meet the validity category with a loading factor value above 0.7 (Table 2). Another discriminant validity method is to measure each construct's root mean Variance Extracted (AVE) value with the correlation between constructs in the model, which is said to have an excellent discriminant validity value.

Table 2. Discriminant validity results (cross loading)

Source: SmartPLS (2023).

Indicator	Investment Decision	Technology Advancement	Financial Literacy	Financial Attitude
KI1	0.776	0.561	0.694	0.615
KI2	0.768	0.481	0.587	0.576
KI3	0.747	0.538	0.579	0.492
KI4	0.789	0.401	0.599	0.469
KI5	0.714	0.347	0.480	0.468
KI6	0.754	0.411	0.547	0.562
KI7	0.722	0.394	0.530	0.409
KI8	0.772	0.520	0.640	0.565
KT1	0.526	0.833	0.662	0.532
KT2	0.447	0.773	0.593	0.522
KT3	0.462	0.795	0.569	0.491
KT4	0.533	0.830	0.641	0.498
LK1	0.529	0.551	0.723	0.518
LK2	0.543	0.629	0.771	0.573
LK3	0.574	0.535	0.718	0.439
LK4	0.708	0.584	0.796	0.643
LK5	0.605	0.661	0.807	0.489
LK6	0.517	0.520	0.740	0.375
LK7	0.637	0.495	0.742	0.493
LK8	0.626	0.662	0.782	0.573
LK9	0.533	0.599	0.768	0.527
SK1	0.648	0.519	0.543	0.828
SK2	0.544	0.499	0.562	0.790
SK3	0.424	0.368	0.443	0.716
SK4	0.547	0.590	0.598	0.827

Table 3 presents the AVE root value for each construct, which is more significant than the correlation between constructs. This happens because the AVE value is above the 0.50 threshold. From the AVE value, it is also known that the average is 0.608, so the construct in the estimation model meets discriminant validity criteria 08 and the discriminant validity criteria.

Table 3. AVE test results

Source: SmartPLS (2023).

Variable	AVE	Description
Technological Advancement	0.654	Valid
Investment Decision	0.571	Valid
Financial Literacy	0.580	Valid
Financial Attitude	0.627	Valid

Table 4 presents the Fornell-Larcker criterion value for each construct, which is greater than the correlation between constructs in the model. Based on this value, the construct in the estimation model meets the discriminant validity criteria.

Table 4. Discriminant validity test results (Fornell-Lacker criterion)

Variable	Technological Advancement	Financial Literacy	Financial Attitude	Investment Decision
Technological Advancement	0.808			
Investment Decision	0.611			0.756
Financial Literacy	0.764	0.761		0.777
Financial Attitude	0.631	0.681	0.792	0.694

Table 5 shows that the composite reliability test results meet the criteria because all latent variable values have a composite reliability value ≥ 0.70. This means that the statement instruments are declared capable of measuring each variable. Thus, it can be concluded that all construct variables are reliable.

Table 5. Composite reliability test results

Variable	Composite reliability	Description
Technological Advancement (X1)	0.883	Reliable
Investment Decision (Y)	0.914	Reliable
Financial Literacy (X2)	0.925	Reliable
Financial Attitude (X3)	0.870	Reliable

Based on Table 6, Cronbach's alpha testing results show a value that meets the criteria because all latent variable values are ≥ 0.70, meaning there are no problems measuring internal consistency in the model.

Table 6. Cronbach's Alpha test results

Variable	Cronbach's alpha	Description
Technological Advancement (X1)	0.823	Reliable
Investment Decision (Y)	0.893	Reliable
Financial Literacy (X2)	0.909	Reliable
Financial Attitude (X3)	0.802	Reliable

The stages of testing the structural (inner) model follow the following steps: Table 7 shows that the R-square value for the Investment Decision variable is 0.654; 65.4% of investment decisions are influenced by technological progress, financial literacy, and financial attitudes, while other causes explain the remaining 34.6%. Based on this, the results of the R2 calculation show that it is moderate.

Table 7. R-squared coefficients

Variable	R-square
Investment Decision (Y)	0.654

The magnitude of Q2 had a range value of 0 < Q2 < 1, where the closer to 1 means the better the model. The magnitude of Q2 was equivalent to the coefficient of total determination in path analysis. A value of Q2> 0 indicates that the model had predictive relevance. Otherwise, the value of Q2 ≤ 0 suggests that the model lacks predictive relevance.

$$Q\text{-}Square = 1-\left(1-R^2\right) \qquad (1)$$

$$=1-\left(1-0,654\right)$$
$$=1-\left(0,346\right)$$
$$=0,654.$$

Based on the results of the above calculations, the Q-Square value was 0.654. This showed that this study could explain 65.4% of the research data diversity, and other factors outside this study explained the remaining 34.6%.

The Goodness of Fit Model (GoF) was obtained from the average communalities index multiplied by the R2 value of the model. The GoF value ranges from 0-1 with the following interpretation:

Small Goodness of Fit (GoF) = 0.1

Moderate or Medium Goodness of Fit (GoF) = 0.25

Large Goodness of Fit (GoF) = 0.38

Goodness of Fit (GoF) Formula:

$$GoF = \sqrt{\left(AVE \cdot R\text{-}Square\right)} \qquad (2)$$

$$GoF = \sqrt{\left(0.608 \cdot 0.654\right)} = 0.631.$$

From the GoF calculation above, it was known that the result was 0.631; it is concluded that the performance between the measurement model and the structural model had a large GoF of 0.631

Table 8. Hypothesis test results (bootstrapping)

Variable	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T-Stat. (|O/STDEV|)	P-Values
KT (X1) → KI (Y)	−0.041	−0.044	0.097	0.427	0.669
LK (X2) → KI (Y)	0.593	0.599	0.111	5.362	0.000
SK (X3) → KI (Y)	0.316	0.315	0.099	3.186	0.001

(above 0.38). This means that the variables used could explain 63.1% of the variation in the investment decision variable.

In hypothesis testing, it can be seen from the bootstrapping results. The bootstrap procedure used the entire original sample to resample again. In the hypothesis testing of the relationship between variables, the t-statistic value of the SmartPLS output was used and can be compared to the T-table. The result of testing the hypothesis and concluding whether the hypothesis is accepted or rejected, the t-statistics value> 1.96 with a p-value <0.05 was used.

From the results of the hypothesis test presented in Table 8, the following conclusions follow:

1. Impact of Technological Progress on Investment Decisions

The hypothesis test results obtained a t-stat value of 0.427 and a p-value of 0.669, smaller than the t-table value of 1.96. This means that the technological progress variable does not affect investment decisions.

2. Impact of Financial Literacy on Investment Decisions

The hypothesis test results obtained a t-stat value of 5.362 and a p-value of 0.000, where the t-stat value is greater than the t-table value of 1.96. These results indicate that the financial literacy variable positively affects investment decisions.

3. Impact of Financial Attitude on Investment Decisions

The hypothesis test results obtained a t-stat result of 3.186 and a p-value of 0.001, more significant than the t-table value of 1.96. These results indicate that financial attitude variables positively affect investment decisions.

4. DISCUSSION

The first finding of this study proves that technological advances do not impact the investment decisions of Gen Z investors. Rapid advances in financial technology as one of the most critical innovations in the financial industry have not been matched by good understanding and acceptance from Gen Z. This result contradicts the characteristics of Gen Z, which is characterized by a high level of digital literacy, curiosity, and acceptance of innovation and tends to make decisions quickly. In addition, Gen Z is also characterized by irrational behavior in the financial market, such as a lack of patience, desire for quick solutions, intolerance to monotonous and consistent activities, and excessive self-confidence. The study's results confirm the findings of Palesta and Paramita (2024), which prove that financial technology does not affect investment decisions. Different findings were revealed by Hutasoit (2021), which showed that advances in information technology affect investment interests or decisions. Fathmaningrum and Utami (2022) also found that information technology can influence investment decisions.

The following finding revealed that Financial Literacy is positively and significantly related to investment decisions. This result shows that Gen Z investors with high levels of financial literacy tend to better understand investment risks and returns when managing finances so that the investment decisions are correct. Conversely, Gen Z investors with low financial literacy make irrational and detrimental investment decisions. This result supports the findings of Yanti and Endri (2024), Loebiantoro et al. (2024), and Suresh (2024), which revealed that individual investor financial literacy has a positive impact on investment decisions. Philippas and Avdoulas (2020) revealed that Gen Z, who have high financial literacy, have the potential to achieve prosperity in the future from the investments they make

The latest findings prove that financial attitude positively affects Gen Z investment decisions. The results of this study indicate that Gen Z's financial attitudes have a better psychological tendency to express aspects of financial management, thus impacting making the right investment decisions. Serido et al. (2023) stated that financial attitude is a psychological tendency expressed when evaluating recommended financial management with the desired investment decision-making. The study results align with the findings of Ilyas et al. (2022), which revealed that financial attitudes are positively related to Gen Z investment decisions. Ratnawati et al. (2022) also proved that financial attitudes determine investment decisions. Sorongan (2022) showed that financial attitudes positively impact investment decisions.

CONCLUSION

The study aims to investigate the impact of technological advances, financial literacy, and financial attitudes on investment decisions among investors. Three research findings align with the following hypotheses: 1. Technological advances do not affect investment decisions. This shows that technological advances do not affect Gen Z's investment decisions in Jakarta. This may be due to the ease and convenience of technology for investing being less potent in influencing Gen Z investors in Jakarta. 2. Positive relationship between Financial Literacy and investment decisions. This relationship shows that with better knowledge and understanding of financial concepts and risks, Gen Z investors are increasingly bold in making investment decisions. 3. Financial Attitudes have a positive impact on investment decisions. This shows that the better a person's thoughts, opinions, and assessments of financial attitudes towards finance, the bolder Gen Z investors are in making investment decisions.

The research findings contribute value to investors, academics, policymakers, businesses, professionals, and the community. Gen Z investors continue to improve their financial literacy and develop more mature financial attitudes to make more rational and profitable investment decisions. For the government and capital market managers, it is recommended to organize various education programs and disseminate critical information related to investment that facilitates investment access and improves financial literacy for Gen Z. Some limitations of the study conducted include: (i) Respondents are limited to Gen Z investors who live in urban areas and Jakarta. Future research can involve individual investors from other generation groups who live in non-urban areas and outside Jakarta, Indonesia. (ii) This study did not analyze the psychological and cultural aspects of Generation Z. Further research can include psychological and cultural aspects in influencing Gen Z investment decisions. (iii) This study did not use mediator variables to analyze the determinants of Gen Z investment decisions. Future research can be developed by adding mediator variables, such as risk perception, overconfidence, and herding behavior.

AUTHOR CONTRIBUTIONS

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Writing – review & editing: Kiandra Putri Susanto, Endri Endri, Arjuna Wiwaha.

REFERENCES

1. Abdullah, M. A., & Chong, R. (2014). Financial Literacy: An exploratory review of the literature and future Research. *Journal of Emerging Economies and Islamic Research, 2*(3), 32-41. https://doi.org/10.24191/jeeir.v2i3.9631

2. Abideen, Z. U., Ahmed, Z., Qiu, H., & Zhao, Y. (2023). Do Behavioral Biases Affect Investors' Investment Decision Making? Evidence from the Pakistani Equity Market. *Risks, 11*(6), 109. https://doi.org/10.3390/risks11060109

3. Abreu, M., & Mendes, V. (2010). Financial Literacy and Portfolio Diversification. *Quantitative Finance, 10*(5), 515-528. https://doi.org/10.1080/14697680902878105

4. Aisa, N. N. M. (2021). Do Financial Literacy and Technology Affect Intention to Invest in the Capital Market in the Early Pandemic Period? *Journal of Accounting and Investment, 23*(1), 49-65. https://doi.org/10.18196/jai.v23i1.12517

5. Bencsik, A., Juhász, T., & Horváth-Csikós, G. (2016). Y and Z Generations at Workplaces. *Journal of Competitiveness, 6*(3), 90-106. https://doi.org/10.7441/joc.2016.03.06

6. Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review, 7*(2), 107-128. https://doi.org/10.1016/S1057-0810(99)80006-7

7. Diener, E., & Seligman, M. E. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest, 5*(1), 1-31. https://doi.org/10.1111/j.0963-7214.2004.00501001.x

8. Endri, E., Fatmawatie, N., Sugianto, S., Humairoh, H., Annas, M., & Wiwaha, A. (2022). Determinants of efficiency of Indonesian Islamic rural banks. *Decision Science Letters, 11*(4), 391-398. https://doi.org/10.5267/j.dsl.2022.8.002

9. Endri, E., Sari, A.K., Budiasih, Y., Yuliantini, Y., & Kasmir, K. (2020). Determinants of Profit Growth in Food and Beverage Companies in Indonesia. *Journal of Asian Finance, Economics, and Business, 7*(12), 739-748. https://doi.org/10.13106/jafeb.2020.vol7.no12.739

10. Fathmaningrum, E. S., & Utami, T. P. (2022). Determinants of Investment Decisions in the Capital Market During the COVID-19 Pandemic. *Journal of Accounting and Investment, 23*(1), 147-169. https://doi.org/10.18196/jai.v23i1.13408

11. Flor, C. R., & Hansen, S. L. (2013). Technological advances and the decision to invest. *Annals of Finance, 9,* 383-420. https://doi.org/10.1007/s10436-012-0191-4

12. Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review, 31*(1), 2-24. https://doi.org/10.1108/EBR-11-2018-0203

13. Harahap, M. I., Izzah, N., & Bahagia, R. (2022). Determinants of Interest in Young Muslim Investors Buying Retail Sukuk. *Al-Masharif: Jurnal Ilmu Ekonomi dan Keislaman, 10*(2), 284-302. http://dx.doi.org/10.24952/masharif.v10i2.6524

14. Hidayat, R., Anggraini, D., Riyani, Y., & Endri, E. (2022). Optimal Sharia Portfolio Selection to Outperform the Stock Market in the Post-Pandemic Era. *Quality Access to Success, 23*(187), 287-294. https://doi.org/10.47750/QAS/23.187.35

15. Hidajat, T. (2018). Financial Literacy, Ponzi and Pyramid Scheme in Indonesia. *Jurnal Dinamika Manajemen, IX,* 198-205. https://doi.org/10.15294/jdm.v9i2.16261

16. Hutasoit, A. H. (2021). Effect of Information Technology, Investment Knowledge and Financial Literacy Millennial Generation of Interest Invest in Capital Market. *Jurnal Mantik, 5*(3), 1700-1707. Retrieved from http://iocscience.org/ejournal/index.php/mantik/article/view/1528

17. IDX Channel. (2022). *Kerugian Akibat Investasi Ilegal Tembus Rp117,5 Triliun 10 Tahun Terakhir.* IDX Channel. Retrieved from https://www.idxchannel.com/economics/kerugian-akibat-investasi-ilegal-tembus-rp1175-triliun-10-tahun-terakhir

18. Ilyas, M., Moeljadi, & Djawahir, A. H. (2022). The effect of financial knowledge and financial well-being on investment intention mediated by financial attitude: A study on millennial generation and Gen Z in Malang City. *International Journal of Research in Business and Social Science (2147-4478), 10*(8), 175-188. https://doi.org/10.20525/ijrbs.v10i8.1530

19. Jonathan, R., & Sumani. (2021). Millennial Investment Decision Analysis. *Business and Entrepreneurial Review, 21*(2), 279-296. https://doi.org/10.25105/ber.v21i2.10409

20. Kafuku, J. M., Saman, M. Z. M., Sharif, S., & Zakuan, N. (2015). Investment decision issues from a remanufacturing system perspective: literature review and further Research. *Procedia CIRP, 26,* 589-594. https://doi.org/10.1016/j.procir.2014.07.043

21. Kadoya, Y., & Khan, M. S. R. (2020). Financial Literacy in Japan: New evidence using financial knowledge, behavior, and attitude. *Sustainability, 12*(9), 3683. https://doi.org/10.3390/su12093683

22. Katz, R., Ogilvie, S., Shaw, J., & Woodhead, L. (2022). *Gen Z explained: The art of living in a digital age.* University of Chicago Press.

23. Kautsar, A., & Asandimitra, N. (2019). Financial Knowledge as Youth Preneur Success Factor. *Journal of Social and Development Sciences, 10*(2 (S)), 26-32. https://doi.org/10.22610/jsds.v10i2(S).2906

24. Loebiantoro, I. Y., Cheng, E. H., & Annuar, N. (2024). Smart investing: Unveiling key drivers of strategic investment for investors in the Indonesia Stock Exchange. *Investment Management and Financial Innovations, 21*(4), 156-169. https://doi.org/10.21511/imfi.21(4).2024.13

25. Lusardi, A. (2019). Financial literacy and the need for financial education: Evidence and implications. *Swiss Journal of Economics and Statistics, 155*(1), 1-8. https://doi.org/10.1186/s41937-019-0027-5

26. Moko, W., Sudiro, A., & Kurniasari, I. (2022). The effect of financial knowledge, financial attitude, and personality on financial management behavior. *International Journal of Research in Business and Social Science (2147-4478), 11*(9), 184-192. https://doi.org/10.20525/ijrbs.v11i9.2210

27. Najib, M., Ermawati, W. J., Fahma, F., Endri, E., Suhartanto, D. (2021). FinTech in the Small Food Business and Its Relation with Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity, 7*(1), 88. https://doi.org/10.3390/joitmc7010088

28. Nurhayati, N., Endri, E., Suharti, T., Aminda, R.S., & Muniroh, L. (2021). The impact of COVID-19 on formation and evaluation of portfolio performance: A case of Indonesia. *Investment Management and Financial Innovations, 18*(3), 63-73. https://doi.org/10.21511/imfi.18(3).2021.06

29. Palesta, P. K., & Paramita, V. S. (2024). The Influence of Financial Technology, Financial Literacy, And Risk Perception on Mutual Fund Investment Decisions in Generation Z in Jawa Barat. *International Journal of Science, Technology & Management, 5*(1), 135-145. https://doi.org/10.46729/ijstm.v5i1.1038

30. Pang, M. F. (2010). Boosting financial Literacy: Benefits from learning study. *Instructional Science, 38,* 659-677. https://doi.org/10.1007/s11251-009-9094-9

31. Parry, E., & Urwin, P. (2021). Generational categories: A broken basis for human resource management research and practice. *Human Resource Management Journal, 31*(4), 857-869. https://doi.org/10.1111/1748-8583.12353

32. Philippas, N. D., & Avdoulas, C. (2020). Financial literacy and financial well-being among generation-Z university students: Evidence from Greece. *European Journal of Finance, 26*(4-5), 360-381. https://doi.org/10.1080/1351847X.2019.1701512

33. Pompian, M. M. (2012). *Behavioral finance and investor types: managing behavior to make better investment decisions.* John Wiley & Sons.

34. Ratnawati, R., Rahman, M., Rochayatun, S., Meldona, M., & Rahayu, Y. N. (2023). Financial attitude and financial performance of export MSMEs: Financial well-being as a mediating. *International Journal of Applied Economics, Finance and Accounting, 16*(1), 77-85. https://doi.org/10.33094/ijaefa.v16i1.901

35. Riyani, Y., Mardiah, K., Mahyus, M., Kusmana, E., Andriana, S., Nengzih, N., Soepriyadi, I., & Endri, E. (2023). Determinants of Indonesian Capital Market Reaction. *WSEAS Transactions on Systems, 22,* 360-367. https://doi.org/10.37394/23202.2023.22.39

36. Robbins, S. P., Judge, T. A., & Millett, B. (2015). *OB: The Essentials.* London: Pearson.

37. Serido, J., Sorgente, A., Lanz, M., & Shim, S. (2023). Becoming self-sufficient: a longitudinal person-centered analysis of financial identity and adult status during emerging adulthood. *Applied Developmental Science, 27*(2), 99-114. https://doi.org/10.1080/10888691.2022.2035224

38. Setiawati, R., Eve, J., Syavira, A., Ricardianto, P., Nofrisel., & Endri, E. (2022). The Role of Information Technology in Business Agility: Systematic Literature Review. *Quality Access to Success, 23*(189), 144-149. https//doi.org/10.47750/QAS/23.189.16

39. Sorongan, F. A. (2022). The influence of behavior financial and financial attitude on investment decisions with financial literature as a moderating variable. *European Journal of Business and Management Research, 7*(1), 265-268. https://doi.org/10.24018/ejbmr.2022.7.1.1291

40. Suresh, G. (2024). Impact of financial literacy and behavioural biases on investment decision-making. *FIIB Business Review, 13*(1), 72-86. https://doi.org/10.1177/2319714521103548

41. Yanti, F., & Endri, E. (2024). Financial Behavior, Overconfidence, Risk Perception and Investment Decisions: The Mediating Role of Financial Literacy. *International Journal of Economics and Financial Issues, 14*(5), 289-298. https://doi.org/10.32479/ijefi.16811