

Research Article

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Digital Investment and Online Financial Markets: A Quantitative Case Study on Mutual Fund Investment Decisions by Millennials Using Blue Apps in Jakarta

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Abstract: *The development of digital technology has driven significant changes in investment behavior, particularly among millennials. This study aims to analyze the influence of financial literacy, risk perception, and ease of use of applications on mutual fund investment decisions among millennials who use the Blue App in Jakarta. This study employs a quantitative approach using a survey method, involving 120 respondents selected through purposive sampling. The research instrument consists of a closed-ended questionnaire with a Likert scale, and the data was analyzed using multiple linear regression with the assistance of SPSS software. The results indicate that financial literacy has a positive and significant effect on investment decisions, suggesting that the higher an individual's financial understanding, the more rational their investment decisions. Risk perception has a negative and significant effect, meaning that the higher the perceived risk, the lower the individual's tendency to invest. Meanwhile, the ease of use of the application was found to have a positive and significant influence on investment decisions, indicating that a good user experience encourages higher investment activity. This study has implications for application developers and financial institutions to improve financial literacy, minimize risk perception, and continue to refine application features to encourage increased digital investment participation among the younger generation.*

Keywords: *Digital Investment, Mutual Funds, Financial Literacy, Risk Perception, Ease of Application, Millennials.*

Introduction

In today's digital age, developments in information technology have driven major transformations in the global financial sector, including Indonesia. One form of this transformation is the emergence of digital investments, which enable individuals to invest online through financial markets such as mutual funds, stocks, or digital bonds. The rise of various fintech-based investment applications has also expanded public access to financial services, particularly among tech-savvy younger generations (OJK, 2023).

According to a report from Katadata Insight Center (2022), the growth of retail investors in Indonesia is dominated by millennials and Generation Z, with mutual funds being one of the favorite investment choices due to their lower risk compared to stocks and professional management. One digital application that provides this service is the Blue App, designed to offer convenience, transparency, and ease in the online mutual fund investment process. However, the increase in the number of app users does not fully reflect optimized investment decisions, especially among millennials.

Various factors can influence mutual fund investment decisions among millennial users of digital investment apps. Financial literacy, risk perception, and the ease of using the app are important variables in shaping the investment behavior of this generation. According to research by Setiawan & Pradana (2023), high financial literacy encourages investors to better understand financial products, leading to more rational

and targeted decision-making. However, many millennials still have low financial literacy, causing them to make investment decisions impulsively or based on invalid information.

Additionally, risk perception is a key cognitive factor influencing investment interest. In the digital context, millennials tend to be cautious about potential financial losses, data security vulnerabilities, and market uncertainty. A study by Rachmawati & Nugroho (2021) shows that high risk perception tends to hinder investment decision-making, especially if not balanced with sufficient knowledge and experience.

On the other hand, the ease of use of an application is an important determinant in the adoption of digital platforms. Based on findings from Nurhaliza et al. (2022), millennials prefer investment applications that have a user-friendly interface, clear navigation, and fast transaction processes. This ease of use not only impacts user comfort but also directly contributes to their investment interest and sustainability.

Through a quantitative case study approach, this research aims to analyze the influence of financial literacy, risk perception, and ease of use of the application on mutual fund investment decisions by millennials who use the Blue application in Jakarta. Jakarta was chosen because it is the center of fintech growth and has a high level of digital investment adoption.

Literature Review

Digital Investment and Online Financial Markets

Digital investment is the process of investing through digital media that relies on information technology. This includes online financial markets that offer instruments such as stocks and mutual funds. (Yulia & Gunawan, 2022).

Mutual Funds

Mutual funds are collective investment vehicles managed by investment managers, enabling individual investors to invest in a diversified manner. (OJK, 2023).

Millennials

Millennials, born between 1981 and 1996, are a tech-savvy group with unique financial behaviors. (Dimock, 2019).

Financial literacy

Financial literacy is an individual's understanding of basic financial concepts, such as debt management, savings, and investment. Financial literacy is an individual's understanding of basic financial concepts such as debt management, savings, and investments. Having a good level of financial literacy can improve the quality of investment decisions. (Lusardi & Mitchell, 2014).

Risk Perception

In the context of investing, risk perception is an investor's subjective view of potential losses. Investors with a high risk perception tend to be more cautious when making investment decisions. (Wahyuni & Pratama, 2020).

Ease of Use

In the context of digital technology, ease of use refers to how easy it is for users to understand and operate a system. This affects user comfort and satisfaction (Davis, 1989). (Davis, 1989).

Hypothesis 1: Financial Literacy

Financial literacy is believed to be one of the important factors that influence investment decisions, especially in the digital context. Individuals with good financial literacy tend to have the ability to understand the risks and benefits of financial instruments such as mutual funds, and are able to compare investment alternatives rationally. Setiawan and Pradana (2023) argue that financial literacy is positively correlated with the quality of investment decision-making among millennials. This is reinforced by Fitriani et al. (2022), who state that the higher a person's financial literacy, the greater their ability to understand the features and information on investment applications, resulting in wiser decisions. OJK (2023) also emphasizes that an increase in the financial literacy index among the productive age group has a real impact on the increase in the number and quality of digital investors. Therefore, the hypothesis proposed is that financial literacy has a positive effect on mutual fund investment decisions among Blue app users.

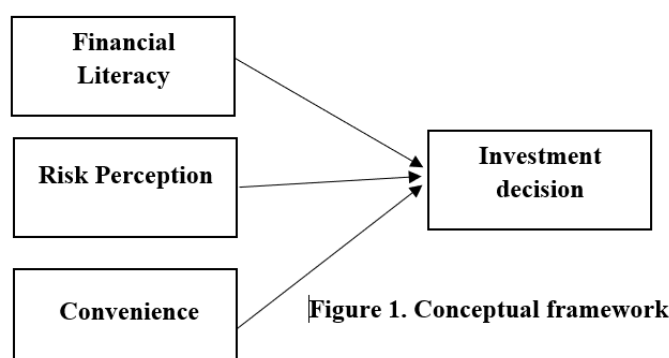
Hypothesis 2: Risk Perception

Risk perception is one of the psychological factors that influence digital investment decisions. In the context of investment apps, risk perception includes concerns about potential financial losses, data security, and market volatility. Rachmawati and Nugroho (2021) found that millennial investors with high risk perception tend to delay or even avoid investing, despite the potential for high returns. This is in line with the findings of Wijaya and Nursalam (2022), who stated that digital risk perception significantly reduces investment intentions on online platforms. Research by Putri and Halim (2020) also stated that uncertainty about results and a lack of knowledge about digital mechanisms can reinforce negative perceptions among novice investors. Thus, it can be assumed that risk perception has a negative effect on mutual fund investment decisions among Blue app users.

Hypothesis 3: Ease of Use of the Application

The ease of use of investment applications is one of the main determinants in investment decision-making by users, especially among millennials who are accustomed to practical digital interfaces. Nurhaliza et al. (2022) explain that if users find the app easy to use, they will be more confident and motivated to invest regularly. Similar findings were reported by Handayani and Prasetya (2023), who stated that user-friendly interface design and ease of access to investment information positively contribute to investor engagement in the app. Wulandari and Hidayat (2021) even add that the perception of ease can act as a mediator between user experience and final investment decisions. Based on these studies, the ease of use of the application is believed to have a positive effect on mutual fund investment decisions among Blue app users.

The researchers' conceptual framework can be seen in Figure 1 below:



Method

This study uses a quantitative approach with an associative research type. The quantitative approach was chosen because it is able to explain phenomena objectively based on numerical data and statistical testing (Sugiyono, 2021). The population in this study consists of millennials (aged 25–40 years) residing in Jakarta who have used the Blue app to invest in mutual funds at least once in the past six months. Since the population size is unknown (unlimited population), the sample size was determined using the Lemeshow approach with a minimum sample size of 100 respondents (Lemeshow et al., 2013). The sampling technique used was purposive sampling, which is a method of selecting samples based on specific criteria (Sekaran & Bougie, 2020). Data collection was conducted using a closed-ended questionnaire distributed online via Google Forms and using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree).

The variables in this study consist of three independent variables and one dependent variable. Financial literacy is measured through indicators of understanding investment concepts, the risks and benefits of mutual funds, and the ability to read performance reports (Lusardi & Mitchell, 2014; Setiawan & Pradana, 2023). Risk perception was measured based on the level of concern about losses, perception of platform security, and uncertainty of investment outcomes (Rachmawati & Nugroho, 2021; Putri & Halim, 2020). Application usability was assessed based on accessibility, clarity of navigation, and convenience in transactions (Davis, 1989; Nurhaliza et al., 2022). Meanwhile, investment decisions are measured through the frequency of investing, the amount of funds invested, and awareness in selecting mutual fund products (Fitriani et al., 2022; Handayani & Prasetya, 2023). All analyses were conducted using statistical software such as the latest version of SPSS to obtain accurate, objective, and relevant results in line with the research objectives.

Results and Discussion

Table 1. Validity and Reliability Test

Statement	Factor loading	Cronbach alpha	Description
Financial Literacy		0,860	Reliabel
I understand basic investment concepts such as risk and return.	0,787**		Valid
I am aware of the benefits and risks of investing in mutual funds.	0,850**		Valid
I can differentiate types of mutual funds based on their objectives.	0,832**		Valid
I am able to read mutual fund performance reports independently.	0,805**		Valid
I understand how mutual fund performance is affected by market conditions.	0,735**		Valid
Risk Perception		0,867	Reliabel
I worry about experiencing losses when investing in mutual funds.	0,851**		Valid
I feel that my personal data is secure in digital investment apps.	0,823**		Valid

Statement	Factor loading	Cronbach alpha	Description
I am uncertain about the results or returns from mutual fund investments.	0,760**		Valid
I hesitate to increase my investment due to fear of value fluctuations.	0,866**		Valid
I feel that investment apps still carry high risk.	0,752**		Valid
Ease of Use of the Application		0,861	Reliabel
I can easily access the Blue app anytime.	0,908**		Valid
The menus and features in the app are easy to understand and use.	0,880**		Valid
I do not face difficulties when making mutual fund purchases via the app.	0,623**		Valid
The app has a user-friendly and non-confusing interface.	0,789**		Valid
I can easily monitor investment progress through the app.	0,798**		Valid
Investment Decision		0,670	Reliabel
I regularly invest in mutual funds through the Blue app.	0,504**		Valid
I have allocated specific funds periodically for investment.	0,557**		Valid
I consider my risk profile before choosing mutual fund types.	0,530**		Valid
I choose mutual fund products considering my long-term financial goals.	0,678**		Valid
I actively evaluate and adjust my investment portfolio.	0,654**		Valid

Source: Data processed using SPSS 29.0

From the validity test results, it can be concluded that all twenty statement indicators have factor loadings > 0.50 , which means that each statement item used to measure the variable is considered valid. Meanwhile, the reliability test of the four variables shows that the Cronbach alpha value is greater than 0.60, so the statement items are considered reliable.

Classical Assumption Test

Table 2. Normality Test Results

One-Sample Kolmogorov-Smirnov Test	Criterion	Result	Description
Asymp. Sig. (2-tailed)	Sig $> 0,05$	0,200	Passed the normality test

Source: Data processed using SPSS 29.0

The results of the classical assumption test show that the normality test is fulfilled, using the error normality test, where the asymp sig value of 0.200 is greater than 0.05 (alpha 5%), so H_0 is accepted and

it is concluded that at a 95% confidence level, the assumption of normal distribution for the error variable is fulfilled.

Table 3. Multicollinearity Test Results

Variable	Tolerance	VIF	Description
Financial Literacy	0,171	5,833	No multicollinearity detected
Risk Perception	0,209	4,795	No multicollinearity detected
Ease of Use of the Application	0,240	4,167	No multicollinearity detected

Source: Data processed using SPSS 29.0

The multicollinearity test results have a VIF value of 1.007 and a Tolerance value above 0.1. From this data, it can be said that the variables of Financial Literacy, Risk Perception, and Ease of Use of the Application in this study are free from multicollinearity, because the VIF value is < 10 and the Tolerance value is > 0.1 .

Table 4. Glejser Test Results

Variable	Glejser Test		Description
	Sig	Significance Level	
Financial Literacy	0.145	0,05	No heteroscedasticity detected
Risk Perception	0.300	0,05	No heteroscedasticity detected
Ease of Use of the Application	0,864	0,05	No heteroscedasticity detected

Source: Processed data from SPSS 29.0

The results of the heteroscedasticity test show that the significant value of the Financial Literacy variable (X1) is 0.145, the Risk Perception variable (X2) is 0.300, and the Ease of Use of the Application variable is 0.864 with a significance value > 0.05 . Therefore, it can be said that the results of the Glejser test show no signs of heteroscedasticity.

Hypothesis Testing

F-Test

Table 5. F-Test (Global)

F-Test	F	Sig	Conclusion
Sig $< 0,05$	65,189	,000 ^b	Passed the F-test

Source: Processed data from SPSS 29.0

The results of the global test (F-test) show that the significance value (F-statistic) obtained is 0.02. This significance value is below 0.05, and since the F-test result is smaller than the significance level ($\alpha=0.05$), it can be concluded that the regression model used in this study is valid for use. The calculated F-value of $65.189 > 2.55$ indicates that one of the independent variables—Financial Literacy, Risk Perception, and Application Usability—has the ability to influence the dependent variable, Investment Decision.

Determination Test

Table 6. Determination Test

Determination Coefficient	Criteria	R Square
	$0 < R^2 < 1$	0,671

Source: Processed data from SPSS 29.0

The results of the test in the table show that the R square value obtained is 0.67 or 67%. This value indicates that 67% of investment decisions can be explained by the variables of financial literacy, risk perception, and ease of use of the application. Meanwhile, the remaining 33% is explained by other variables.

t-test

The results of the regression analysis show the following research model:

$$Y = 8.331 + 0.343 \text{ FL} - 0.434 \text{ RP} + 0.028 \text{ KU} + \varepsilon$$

Table 7. Hypothesis testing

T-Test	Direction	Coefficient	t-Statistic	Sig	Conclusion
Constant		8,331	9,475	,000	
Financial Literacy → Investment Decision	(+)	0,343	2,399	0,018	Accepted
Risk Perception → Investment Decision	(-)	-0,434	-3,631	0,000	Accepted
Ease of Use of the Application → Investment Decision	(+)	0,028	2,366	0,015	Accepted

Source: Processed data from SPSS 29.0

The significance value of Financial Literacy is 0.01. This value is less than 0.05, so it can be concluded that the Financial Literacy variable influences Investment Decisions, and therefore the first hypothesis is accepted.

The significance level for Risk Perception is 0.00. This value is less than 0.05, so it can be concluded that the Risk Perception variable has a significant negative effect on Investment Decisions, and therefore the second hypothesis is **accepted**.

The significance value for Application Usability is 0.01. This value is less than 0.05, so it can be concluded that the Application Usability variable has a significant positive effect on Investment Decisions, and therefore the third hypothesis is **accepted**.

The Influence of Financial Literacy on Investment Decisions

The results of the analysis show that financial literacy has a positive and significant influence on investment decisions. These findings indicate that the higher the respondents' level of understanding of basic investment concepts, risks and returns, and mutual fund products, the better the decisions they make. Millennials with good financial literacy tend to be able to evaluate financial products rationally and are not easily influenced by misleading information.

This study reinforces the findings of Setiawan & Pradana (2023), who stated that investors with high levels of financial literacy have greater confidence in making financial decisions. Additionally, Fitriani et al. (2022) also emphasize that good financial literacy can reduce emotional effects in investing, such as fear or euphoria, which often lead to irrational decisions. Therefore, improving financial literacy through formal and informal education is key to shaping wise and independent digital investors.

The Influence of Risk Perception on Investment Decisions

Risk perception was found to have a negative and significant effect on investment decisions. The higher the level of risk perception felt by investors regarding potential losses or uncertainty in investing through digital applications, the lower their tendency to invest in mutual funds. This indicates that a sense of security is an important factor in building the confidence of digital investors.

These results align with Rachmawati & Nugroho (2021), who noted that risk perception, particularly regarding data security and market fluctuations, can serve as a significant psychological barrier in investment decision-making. Putri & Halim (2020) also found that novice investors tend to be more sensitive to risk and are more likely to refrain from investment activities if they do not feel sufficiently confident in the security of the platform being used. However, risk perception is not only a psychological factor but is also closely related to the level of understanding of investment products. Thus, increased information transparency by application providers such as Blue, as well as risk management features integrated into the application, are urgently needed to reduce user concerns.

The Influence of Application Usability on Investment Decisions

Application usability has been proven to have a positive and significant influence on investment decisions. This shows that intuitive interface features, clear navigation, easy access to information, and fast and efficient transaction processes play a major role in encouraging users to invest actively.

These findings support the results of research by Nurhaliza et al. (2022), who noted that perceptions of ease of use are one of the determining factors in the adoption of digital financial applications, especially among millennials who tend to value efficiency and practicality. Additionally, Handayani & Prasetya (2023) emphasize that a positive user experience not only enhances user loyalty toward the application but also strengthens their investment commitment.

Conclusion

Based on the results of data analysis, it can be concluded that the variables of financial literacy, risk perception, and ease of use of the application simultaneously have a significant effect on mutual fund investment decisions by millennials who use the Blue Application in Jakarta. Partially, financial literacy has a positive and significant effect, indicating that a good understanding of investment and financial concepts encourages wiser and more focused decisions. Risk perception was found to have a negative influence, indicating that the higher the level of concern about investment risks, the lower the interest in investing. Application usability has a significant positive influence, indicating that user-friendly interface features, accessibility, and transaction efficiency encourage interest in digital investing.

These findings have practical implications for investment app developers and financial authorities to focus on improving financial literacy, providing balanced risk education, and optimizing user-friendly app design. Additionally, this study also highlights the importance of technology-based and educational

approaches in enhancing financial inclusion in the digital era, particularly for the younger generation as the main drivers of digital investment growth in Indonesia.

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