

Financial inclusion and mutual funds investment decision

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Abstract

This study analyses mutual fund investment decisions based on financial inclusion. Multiple regression analysis and the sobel test were used to analyse the data. The population in this study is all mutual fund investors in Central Java, Indonesia. Purposive sampling was used in the sampling method. The results show that financial literacy and financial technology have no effect on mutual fund investment decisions but have a positive influence on financial inclusion, while financial inclusion has a positive effect on mutual fund investment decisions. Thus, financial inclusion can mediate the influence of financial literacy and financial technology on mutual fund investment decisions.

Keywords

financial literacy; financial technology; financial inclusion; mutual funds investment decision

INTRODUCTION

The capital market is a meeting place for issuers who need funds for business development with people who have excess funds for investment. Issuers can issue shares or debt securities, while investors can buy capital market instruments directly or in the form of mutual funds.

The potential for mutual funds investment in Indonesia is very high, because mutual funds do not only reach investors who have small capital but can also reach investors who do not have the knowledge, understanding and skills in choosing investment instruments in the capital market. The development of mutual funds investment in Indonesia fluctuated is shown in Figure 1.

Based on Figure 1, the development of mutual funds investment in Indonesia from 2016 to 2019 has increased, but from 2019 to 2020 it has decreased. The increase in the number of mutual funds in Indonesia from 2016 to 2017 was 19.18%, 2017 to 2018 was 14.93%, 2018 to 2019 was 2.14%. However, from 2019 to 2020 it decreased, which was 0.73%.

Investment decisions are influenced by several factors, including: financial literacy

(Ahmad & Shah, 2022) and financial technology (Clemons & Weber, 1990).

Previous research has shown inconsistent results. Sabri and Afiqah (2016), Ahmad and Shah (2022), Hassan Al-Tamimi and Anood Bin Kalli (2009), Jariwala (2015), Lusardi (2019), Nicolescu and Tudorache (2021) suggest that financial literacy has a positive effect on investment decisions. This means that when investors have an understanding and knowledge about investing in the capital market using investment instruments (like stock, bond, mutual fund, etc), investment risk, and skills on how to decide on investment in the capital market then it will encourage them to invest in mutual funds. A high level of financial literacy gives people the power to make better investment decisions, including investing in mutual funds (Mahdzan et al., 2020). Das & Ali (2020) found that financial technology has a positive effect on investment decisions. When investors in the capital market have an easy transaction digitally, cheap, and quick, and investors can monitor the price fluctuation of securities and securities risk every time digitally, it will encourage them to invest in mutual funds. However, research by Arianti (2018) shows that financial literacy has no effect on investment decisions.

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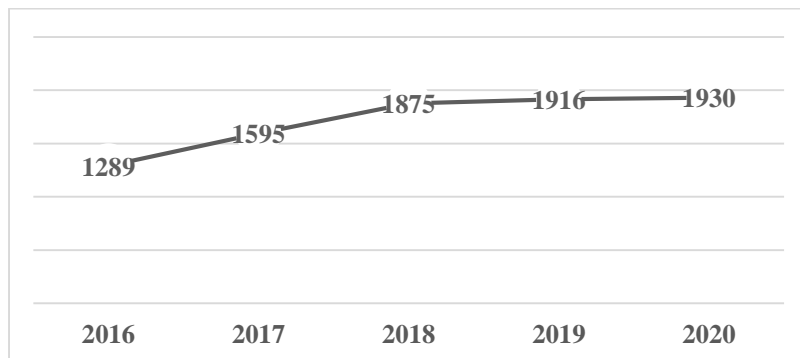


Figure 1: Mutual fund investment development in Indonesia

The existence of the gap phenomenon and the research gap encourage the researchers to use a new variable as a mediating variable, namely financial inclusion. The reason is that the existence of financial inclusion which is the ease of access for investors to capital market products and services will mediate the influence of financial literacy and financial technology on mutual funds investment. This ease of access can provide various advantages for investors such as time efficiency, affordable costs, ease of finding information and ease of transaction.

Because of this, investors who already have the knowledge, understanding and skills as well as the availability of media for the use of financial technology are increasing, so that they can support the ease of access provided by the capital market to improve investment decisions in mutual funds. This is reinforced by Okello Candiya Bongomin et al. (2020) who found that financial literacy can increase financial inclusion. Ozili (2018) found that financial technology can increase financial inclusion. Irman (n.d.); Lubis et al. (2019) in their research also found that financial literacy and financial technology had a positive effect on financial inclusion. Asmara and Abubakar (2019), Paramasivan and Ganeshkumar (2013), and Sekhar (2013) found that financial inclusion can improve mutual funds investment decisions. Thus, the purpose of this study is to analyse the role of financial inclusion in mediating the influence of financial literacy and financial technology on mutual fund investments. The findings of this study will be used as input for capital market regulations regarding the importance of increasing access to capital market products and services for investors.

LITERATURE REVIEW AND HYPOTHESES

Mutual funds in Indonesia

Mutual funds are a capital market instrument that collects funds from investors collectively to invest in a portfolio of securities such as stocks or bonds (Hanafizadeh et al., 2014). Mutual funds can generate profits for investors, namely dividends or interest (Hanafizadeh et al., 2014). The development of mutual funds in Indonesia is very rapid because mutual funds can offer safe and profitable investments. Investors who have small funds can still invest in mutual funds. Based on Law Number 8 of 1995 concerning the Capital Market, Article 1 Paragraph 27 states that mutual funds are instruments used to collect funds from the public and then invested in portfolios by investment managers. Law No. 8/1995 Article 21 stipulates that managers of mutual funds in the form of legal entities or collective investment contracts are managed by investment managers on a contract basis. Law No. 8/1995, Article 25 also contains the obligations of mutual funds such as regulating the assets of mutual funds to be deposited in custodial banks and prohibited from dealing with investment managers, furthermore, mutual funds are required to calculate their net worth and provide open reports.

Financial literacy and investment decision in mutual funds

Investment decisions depend on the high or low level of knowledge and understanding of a person (Kusumawardhani et al., 2020; Setyorini & Indriasari, 2020; Yuliani, 2019). Therefore before making investment

decisions, one must carefully understand and consider something while making investment decisions (Ingale & Paluri, 2022; Weiss-Cohen et al., 2019). Therefore, the investment decision is influenced by the person's financial literacy level.

Financial literacy is a guide that can be used by financial instruments such as mutual funds to convince investors to decide to invest in mutual funds (Lusardi, 2019). Hassan Al-Tamimi & Anood Bin Kalli (2009) analysed the factors that influence investment decisions and examined the relationship between financial literacy and investment decisions in the United Arab Emirates financial market using a sample of 290 United Arab Emirates national investors. The results show that United Arab Emirates investors have high financial literacy. The financial literacy of investors in the United Arab Emirates is influenced by income, education, and activities at work. Investors with high incomes who have a higher education degree and work in the field of economics have higher financial literacy than other investors. Gender differences in financial literacy were also discovered. Women tend to have lower financial literacy than men. The results also show that financial literacy influences investment decisions. Investors who have a high capital market investment understanding, knowledge, and skills to analyze the return and risk of securities in the capital market will make it easier to make mutual fund investment decisions (Bihari & Shukla, 2012; Jariwala, 2015; Bhushan, 2014; Sabri & Afiqah, 2016; Mahdzan et al., 2020; Jiang et al., 2020). Ahmad & Shah (2022) analyse the influence of financial literacy on investment decisions on the Pakistan Stock Exchange (PSX). Of the 183 investors who invest in PSX, the results show that financial literacy can improve investment decisions. In the Capital Markets of Central and Eastern Europe (CEE), Nicolescu & Tudorache (2021) researched investment behaviour in mutual funds by looking at the effect of financial knowledge and skill analysis on investment decisions. The results show that the investment decisions of investors in the CEE capital market are influenced by knowledge because investors in these regions only consider some of the available information to make investment decisions. However, there are differences between countries. Hungarian investors obtain more information and understand information better than investors in other countries when making investment

decisions. Based on this, the hypothesis is as follows:

H1: Financial literacy has a positive effect on mutual fund investment decisions.

Financial technology and investment decision in mutual funds

Financial technology is one of the payment system activities and financial services based on digital, either through mobile banking or internet banking, that can make it easier for investors to carry out transactions in the capital market.

These financial services are causing rapid changes and revolutions in the investment business. Generally the roles of financial technology are: 1) financial technology can replace the functions and roles of humans. In this context, financial technology performs automatically on process activities or activities related to financial services. 2) financial technology strengthens human functions and roles, namely by providing financial information services for a transaction process. 3) financial technology in rearranging human functions and roles. In this case, financial technology plays an important role in making changes to the collection of transaction processes and financial information.

Financial technology is a form of implementation of financial services information technology with the emergence of various financial service models starting for the first time in 2004, namely by Zopa—a financial institution located in the UK that runs money lending products and services. Financial technology is very helpful in the investment world, especially in the capital market sector, in data processing speed, data transparency, and accuracy in processing various data as well as in the marketing of mutual fund products. The implementation of information systems is very influential in the capital market industry, where it affects the desire and confidence of the public to invest in the capital market sector, considering that the capital market industry is an industry with a high level of dependence on data processing and collection activities, analysis, and delivery.

Fintech is a financial innovation, that will make it easier for investors to carry out transactions digitally, cheaper, and more efficiently (Mutamimah & Sueztiangrum, 2021). This will encourage investors to choose

various investment instruments in the capital market, including mutual funds. The existence of fintech makes it easier for investors to monitor price fluctuations, risks, investment options, company prospectus, analyze transactions, and assess mutual funds performance. Investment in the capital market is always faced with risk and return, so investors need digital financial technology to monitor their investment in mutual funds anytime and anywhere (You et al., 2023; Grade & De, 2022; Das & Ali, 2020; Mutamimah & Sueztianingrum, 2021; Dubey et al., 2023).

Report the results of information needed by investors to meet their information needs. Das & Ali (2020) found that technology facilitates mutual fund investing, implying that financial technology can improve investment decisions. Knewton & Rosenbaum (2020) also show that financial technology can improve investment decisions. Based on this, the proposed hypothesis is:

H2: Financial technology has a positive effect on mutual fund investment decisions.

Financial literacy and financial inclusion

Investors with high financial literacy can easily decide on the right, safe, reliable, and profitable investment. The ease of access to finance now makes it easier for investors to obtain information and make investment transactions, particularly investments in mutual funds, so that they can be encouraged to invest in mutual funds. Koomson et al., (2020) explained that financial training can encourage investors' financial literacy. If investors have high financial literacy, they can use the easy access opportunities that are available in the capital market to get investment benefits. Okello Candiya Bongomin et al. (2020) examined the effect of financial literacy on financial inclusion in developing countries. The results show that financial literacy can increase financial inclusion in developing countries. Irman (n.d.); Lubis et al. (2019) found that financial literacy has a positive effect on financial inclusion. Based on this, the proposed hypothesis is:

H3: Financial literacy has a positive effect on financial inclusion.

Financial technology and financial inclusion

The rapid development of technology requires the capital market to provide easy access for the community (Ratnawati & Susilowati, 2022; Widyanti & Mahfudz, 2020). This is shown by the various facilities available in the capital market with digital platforms and infrastructure support that can reach all investors from various regions for investors to transact easily (Ali et al., 2020). Financial inclusion is a condition where people have easy access to various facilities, services, and financial products provided by the capital market. Financial technology provides various facilities, such as M-Banking, Internet banking, digital platforms, marketplaces, etc., that can facilitate transactions and obtain information quickly and anywhere. The existence of financial inclusion will make it easier for investors to use financial technology. Financial technology can solve various problems in society, business and government. Financial technology and financial inclusion are beneficial for users of financial services, digital financial providers, governments, and the economy. Hasan et al. (2020) revealed that financial technology use has created opportunities for people in China people use non-cash transactions more than cash transactions. Financial technology use with infrastructure support can be a driving force for the development of financial inclusion, which will provide benefits for long-term financial growth and development in China. Ozili (2018) analyses the problem of the influence of financial technology on country-level projects directed at financial inclusion in various developing countries. The results show that high financial technology use can support the increase in financial inclusion in various developing countries. The increasing use of technology has also had an impact on financial inclusion in Africa. The government, media, and academics have explored the potential of technology in supporting financial inclusion. Evans (2018) examines the effect of financial technology on financial inclusion in Africa. Empirical evidence shows that financial technology can increase financial inclusion. Amoah et al. (2020) also prove that increasing the use of financial technology can encourage financial inclusion in Ghana. Irman (n.d.); Lubis et al. (2019) found empirical evidence that financial technology has a positive effect on

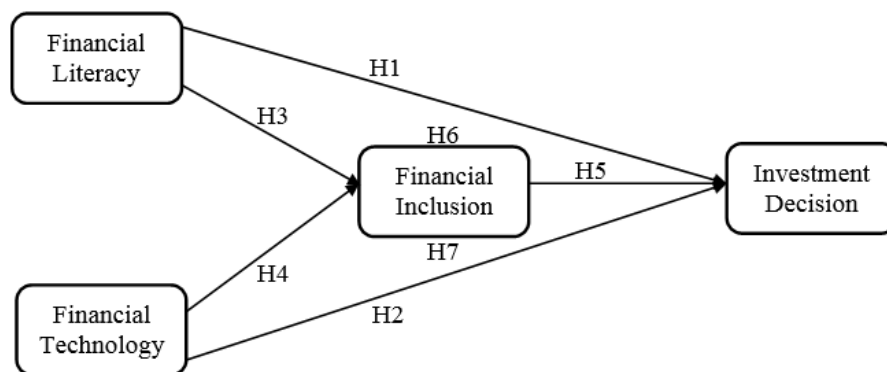


Figure 2. Research model

financial inclusion. Based on this, the following hypotheses can be concluded:

H4: Financial technology has a positive effect on financial inclusion.

Financial inclusion and investment decision mutual funds

The ease of access to finance that is now publicly available to obtain information and transact is called financial inclusion (Mutinda et al., 2018). Presidential Regulation Number 82 of 2016 states that everyone must have easy access to various quality, safe, effective, efficient and affordable financial products and service facilities. The financial inclusion point of view is divided into two, namely the supply-side and the demand-side (Ali et al., 2020). The supply-side point of view shows that the ease of access is seen by the capital market, while the demand-side point of view shows that the ease of access is seen by investors. The condition of a rapidly developing country triggered the existence of financial inclusion in India. Paramasivan and Ganeshkumar (2013) and Sekhar (2013) examined financial inclusion that can increase investment decision awareness in India. The results show that ease of access can increase investment opportunities in India. Asmara and Abubakar (2019) also found that ease of access could encourage an increase in investments in mutual funds. Based on this, the following hypothesis is proposed:

H5: Financial inclusion has a positive effect on mutual fund investment decisions.

Financial literacy, financial inclusion and investment decision mutual funds

Investor competencies, namely knowledge, understanding, skills, and confidence, will make it easier for them to decide on safe, reliable, and profitable investments. Supported by the ease of access to finance now growing rapidly it makes it easier for investors to obtain information and transact in investing so that investors can know the benefits of investing in mutual funds (Morgan et al., 2019). Paramasivan and Ganeshkumar (2013) and Sekhar (2013) show that financial inclusion can improve investment decisions. Asmara & Abubakar (2019) show that financial inclusion has the potential to increase investment decisions. Based on this, the following hypothesis is proposed:

H6: Financial inclusion can mediate the influence of financial literacy on mutual fund investment decisions.

Financial technology, financial inclusion and investment decision mutual funds

Mutual funds are an alternative investment for investors, especially for investors who have small capital. Mutual funds can reach all groups, thus easy access has the potential to be a driver for the development of mutual funds in Indonesia (Asmara & Abubakar, 2019). Mutual funds optimisation is carried out through financial technology, namely the marketplace (Asmara & Abubakar, 2019). Investors in mutual funds with marketplaces have the potential to grow because it can be done easily, time is efficient, and costs are relatively low. Financial technology use by

investors is currently increasing because financial technology is a financial innovation that can make it easier for investors to conduct digital transactions in mutual funds. Using this financial technology, investors can have easy access to financial services and can carry out transactions such as investments. The existence of technology makes it easier for financial institutions to provide financial services responsibly and sustainably (Damayanti et al., 2020). This means investors' ease of access can make it easier for them to choose the right and safe investment. Therefore, if investors use financial technology and are supported by easy access, it can encourage investors to make investment decisions in mutual funds. Research in India conducted by Paramasivan and Ganeshkumar (2013) found that financial inclusion was able to improve investment decisions. (Asmara & Abubakar, 2019) also found that financial inclusion can increase investors who invest in mutual funds. Based on this, the following hypotheses can be concluded:

H7: Financial inclusion can mediate the influence of financial technology on mutual fund investment decisions.

Based on the research model (Figure 2), financial literacy has an effect on mutual fund investment decisions. Financial technology has an effect on mutual fund investment decisions. Financial Inclusion can mediate the influence between financial literacy and financial technology on mutual funds investment decisions.

METHODS

The population in this study is all mutual fund investors in Central Java. Data were collected using purposive sampling with several criteria, namely: investors who already have a SID (Single Investor Identification) and are members of the FKKS (Semarang City KSPM Forum), totalling 254 people. However, after the respondents filled out the questionnaires, some were incomplete. Therefore, 250 (98.43%) questionnaires were analysed, it can be seen at Table 1. To see contribution of every indicators to variables, this paper used factor analyses. Beside that, descriptive analysis and multiple regression were used in the data analysis. The regression equation for this study is as follows:

$$FnCL = \alpha + \beta FiNL + \beta FiNT + \epsilon \quad (1)$$

$$InvD = \alpha + \beta FiNL + \beta FiNT + \beta FnKL + \epsilon \quad (2)$$

Notes :

α = Constanta

β = Coefficients

F_nKL= Financial Inclusion

F_iNL = Financial Literacy

F_iNT = Financial Technology

InvD = Investment Decision

ϵ = error

(Table 1)

RESULTS AND DISCUSSION

Respondent profile

Based on the analysis of 250 investors, the profiles of respondents are: 96 men (38.4%) and 154 women (61.6%). This shows that most mutual fund investors are women. Respondents aged less than 20 years were 62 people (24.8%) and those aged over 20 years were 188 people (75.2%). This shows that the majority of respondents are of productive age. Respondents with education in economics and business were 203 respondents (81.2%), and respondents who were not educated in economics and business were 47 respondents (18.8%). This shows that the majority of respondents are educated in economics and business.

Factor analysis

Factor analysis aims to reduce data complexity by identifying factors from the group of manifest variables (variable indicators in table 1) that are the strongest in explaining latent variables (financial technology, financial literacy, financial inclusion and Mutual funds investment). The KMO and Bartlett's tests aim to determine whether a variable is suitable for further processing in factor analysis or not. If the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO MSA) value is more than 0.5 with a significance level of 5% then the variable is suitable for further processing in factor analysis. Based on the results of the KMO and Bartlett's tests, the KMO MSA financial technology value was 0.714, financial literacy was 0.791, financial inclusion was 0.796 and

Table 1.
Variable, definition of variable, and indicators

Variable	Definition of Variable	Indicators	Items	Questions	Factor Loading	AVE	Composite Reliability
Financial Literacy	Financial literacy is knowledge, skills and beliefs, which influence attitudes and behavior to improve the quality of decision making and financial management in order to achieve prosperity.	a. Financial knowledge	FiNL1	a. I know the operational mechanism in the capital market	0.692	0.643	0.878
		b. Financial understanding	FiNL2	b. I understand investment instruments in the capital market, such as: stocks, bonds, mutual funds, etc	0.714		
		c. Financial Skill	FiNL3	c. I have skill to calculate the return and risk of mutual fund investment	0.564		
		d. Financial belief (Financial Services Authority Regulation Number 76 /POJK.07/2016 on Improving Financial Literacy And Inclusion in The Financial Services Sector For Consumers and / or The Public, 2016)	FiNL4	d. I am convinced in investing of mutual funds in the capital market	0.603		
Financial Technology	Financial Technology is a new innovation in financial services Adapt technological development to facilitate financial services and financial system to be more efficient and effective.	a. There are digital applications financial services	FiNT1	a. I used of financial technology in business transaction	0.409	0.663	0.849
		b. There are facilities reporting complaints	FiNT2	b. I use digital to facilitate reporting complaints	0.578		
		c. There is a system digital payments	FiNT3	c. I use mobile banking for payment of investment transactions, buying and selling of mutual funds	0.594		
		d. There is shape non-cash payment	FiNT4	d. I use internet banking to pay every transaction in mutual fund investment and trading transactions	0.570		
		e. There is easy to monitore the price of mutual fund (Anggraeni & Rezki, 2021)	FiNT5	e. Easy to monitore the fluctuate of mutual fund price	0.500		
Financial Inclusion	Financial Inclusion is the availability of access to various financial institutions, products and services in accordance with community needs and capabilities in order to improve community welfare.	a. Availability of financial access	FnKL1	a. There is easy access to investment in the capital market	0.701	0.662	0.887
		b. Investment requirements in the capital market are easier and less complicated	FnKL2	b. Monitoring the development of capital market product, prices and transaction can be done anywhere and less complicated	0.729		
		c. Investment products that suit investor needs	FnKL3	c. Investment in the capital market is suit with investment needs	0.618		
		d. Quick response in providing solutions to investor problems (Financial Services Authority Regulation Number 76 /POJK.07/2016 on Improving Financial Literacy And Inclusion in The Financial Services Sector For Consumers and / or The Public, 2016)	FnKL4	d. Any problems of investment in the capital market quick respond	0.603		
Mutual Fund Investment	Mutual fund investment is a person's decision to invest some of their assets based on existing considerations in investment products portfolio as mutual funds.	a. Investment Interest	InvD1	a. I choose mutual fund investment because it suit with my interest	0.734	0.718	0.910
		b. Investment Desire	InvD2	b. I invest in mutual funds to fulfill my desire	0.756		
		c. Understanding of Investment	InvD3	c. Understanding of mutual fund investment is easy	0.720		
		d. Investing confidence (Marsis, 2013)	InvD4	d. I am interested in mutual fund investment in the capital market, because it convinces to get returns.	0.661		

Table 2.
Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Financial Literacy	250	1.20	5.00	3.6584	0.68860
Financial Technology	250	0.80	5.00	3.4676	0.71138
Financial Inclusion	250	0.00	5.00	3.8056	0.72939
Investment Decision	250	0.00	5.00	3.5476	0.75969
Valid N (listwise)	250				

more than 0.5 with a significance value for all variables of 0.00, less than 0.05. These results indicated that all variables are worthy of further processing.

Anti-image Matrices aim to identify and determine variables that are suitable for use in factor analysis. If the MSA value of each indicator is more than 0.5 then these variables are suitable for use in factor analysis. The results shown by Anti-image Matrices obtained an MSA value for each indicator of financial technology, financial literacy, financial inclusion and mutual funds investment decision of more than 0.5. This shows that all variables meet the requirements for factor analysis.

The extraction value shows the ability of the indicators to explain the factors formed. If the extraction value is more than 0.5 then the indicator has the ability to explain the factors. Based on the extraction values obtained for all financial literacy, financial inclusion and investment decision indicators, they have a value of more than 0.5. However, one financial technology indicator, namely digital financial service applications, has a value of 0.409, less than 0.5, but all other financial technology indicators have a value of more than 0.5. Thus, all the indicators in the research are able to explain the factors.

In the initial variance, eigenvalues show the factors that are formed, if the eigenvalues component is more than 1 then it forms 1 factor. The results of the analysis show that of all the variables, 1 factor each was formed with the acquisition of the financial technology eigenvalues component of 2,651 > 1 with 53% variation so that it has a loading factor for each indicator, namely digital applications financial services of 0.640; facilities reporting complaints amounted to 0.760; digital payments system 0.771; non-cash payment of 0.755; easy to monitor of mutual fund price 0.707. The eigenvalues component of financial literacy is 2.573 > 1 with 64.33% variation so that it has a loading factor on each indicator, namely financial knowledge of 0.832; financial

understanding of 0.845 financial skills of 0.751; financial confidence is 0.776. The eigenvalues component of financial inclusion is 2,561 > 1 with 66.27% variation so that it has a loading factor on each indicator, namely availability of financial access of 0.837; investment requirements in the capital market are easier and less complicated at 0.854; investment products that suit investor needs is 0.786; quick response in providing solutions to investor problems of 0.776. The eigenvalues component of Mutual funds investment is 2.870 > 1 with 71.76% variation so that it has a loading factor on each indicator, namely investment interest of 0.856; investment desire of 0.870; understanding of Investment of 0.849; investment confidence of 0.81.\

Based on the factor loading value of each indicator from this factor analysis test, an AVE value of more than 0.5 and a composite reliability value of more than 0.7 were obtained. Therefore, each indicator is declared valid and reliable.

Validity test, reliability test, and classic assumption test

Based on the results of the validity test of Financial literacy, Financial technology, Financial inclusion and investment decisions, the sig value is 0.000 < 0.05, meaning that it passes the validity test. The results of the reliability test obtained a Cronbach's alpha value of > 0.05, meaning that it passed the reliability test. The results of the normality test obtained the Asymp value. Sig (2-tailed) Models 1 and 2 > 0.05. This means that the data is normally distributed. The results of the multicollinearity test obtained tolerance values for Models 1 and 2 > 0.1 and VIF Models 1 and 2 < 10. This indicates that the data passed the multicollinearity test. The scatterplot heteroscedasticity test results show that the points are spread in such a way that Models 1 and 2 pass the heteroscedasticity test.

Table 3.
Regression analysis model 1

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	12.102	2.096		5.774	.000
1	Financial Literacy	.515	.060	.502	8.584	.000
	Financial Technology	.221	.062	.209	3.573	.000

a. Dependent Variable: Financial Inclusion

Table 4.
Regression analysis model 2

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	9.182	2.971		3.090	.002
2	Financial Literacy	.111	.062	.104	1.792	.074
	Financial Inclusion	.668	.051	.641	13.187	.000
	Financial Technology	-.082	.064	-.074	-1.273	.204

a. Dependent Variable: Investment Decision

Descriptive statistics

Based on the descriptive statistical analysis in Table 2, the financial literacy results have a mean value of 3.65, with a minimum value of 1.20 and a maximum value of 5.00 with a standard deviation of 0.68%. This shows that the average value of financial literacy is in the high category (3.50–5.00), meaning that mutual fund investors have excellent knowledge, understanding, confidence, and skills about investing in mutual funds. Financial technology has a mean value of 3.47, with a minimum value of 0.80 and a maximum value of 5.00, with a standard deviation of 0.71%. This shows that the average value of financial technology is in the medium category (1.80–3.40), meaning that quite a lot of investors use financial technology to invest in mutual funds.

Financial inclusion has a mean value of 3.80, ranging between a minimum value of 0.00 and a maximum value of 5.00, with a standard deviation of 0.73%. This shows that the average value of financial inclusion is in the high category (3.50–5.00), meaning that investors have a very high ease of access to various types of information about mutual funds. The investment decision has a mean value of 3.54, ranging between a minimum value of 0.00 and a maximum value of 5.00, with a standard deviation of 0.76%. This

indicates that the average investment decision value is in the high category (3.50–5.00), meaning that investors have a high interest in investing in mutual funds.

Hypotheses testing results

Based on the regression test, the results of Hypothesis 1 state that financial literacy has a positive effect on mutual funds investment decisions. However, the results of the analysis in Table 4 show that financial literacy has a coefficient value of 0.111, a t-statistic value of 1.792, and a significance of 0.074. Because the significance level is greater than 5%, Hypothesis 1 is rejected. The results showed that financial literacy has no effect on mutual funds investment decisions at a significance level of 5%, meaning that financial literacy cannot improve mutual funds investment decisions. Various factors can influence the mutual fund investment decision. Investors that have the knowledge, understanding, skills and beliefs, each investor has a different perception and a different level of financial literacy about investing in mutual funds. For example, based on investor data, the majority of investors in mutual funds are women. Women rely more on emotions and have high fundamental heuristics, while men rely more on logic and broader rationality. This resulted in

Table 5.
Sobel test

Model	Results	Variables	Results
Financial Technology → Financial Inclusion	A: 0.515 SE _A : 0.060	Financial Literacy → Financial Inclusion	A: 0.221 SE _A : 0.062
Financial Inclusion → Investment Decision	B: 0.668 SE _B : 0.051	Financial Inclusion → Investment Decision	B: 0.668 SE _B : 0.051
Sobel test statistic	7.17915749	Sobel test statistic	3.43942738
One-tailed probability	0.0	One-tailed probability	0.00029147
Two-tailed probability	0.0	Two-tailed probability	0.00058295

having a relatively lower literacy than men. Another factor that affects the financial literacy of investors is the religious factor. The majority of people in Indonesia are Muslim, this can affect the financial literacy of investors. Muslim investors tend to choose to invest in sharia-based investment instruments, not conventional mutual funds. It is believed that sharia-based investment instruments are considered safer and more profitable. Research by Hassan Al-Tamimi & Anood Bin Kalli (2009) found that female investors have lower financial literacy than men, and religious factors also affect investors' financial literacy and investment decisions. Information related to mutual funds is still limited, thus it has not reached all investors in various regions. These results do not in line with the results of Sabri and Afiqah (2016), Ahmad and Shah (2022), Hassan Al-Tamimi and Anood Bin Kalli (2009), Jariwala (2015a), Lusardi (2019), and Nicolescu and Tudorache (2021) who found that financial literacy had a positive effect on investment decisions.

Hypothesis 2 states that financial technology has a positive effect on mutual funds investment decisions. However, the results illustrated in Table 4 show that financial technology has a coefficient value of -0.082 with a t-statistic value of -1.273 which is significant at 0.204. Because the significance level is greater than 0.05, Hypothesis 2 is rejected. The results of the study indicate that financial technology has no effect on mutual funds investment decisions at a significance level of 5%, meaning that financial technology cannot improve mutual funds investment decisions. This result is reinforced by respondent data (Table 2), that the use of financial technology for investors is low. Most investors have not used financial technology to its full potential. Investors tend to use financial technology for personal and business purposes such as non-cash payment

transactions, credit, insurance, savings, etc., but not to invest in mutual funds. These results do not support the research results of Das & Ali (2020); Knewton & Rosenbaum (2020) which show that financial technology can improve investment decisions.

Hypothesis 3 states that financial literacy has a positive effect on financial inclusion. The results illustrated in Table 3 show that financial literacy has a coefficient value of 0.515 with a t-statistic value of 8.584 which is significant at 0.000. Because the significance level is less than 0.05, Hypothesis 3 is accepted. The results show that financial literacy has a positive effect on financial inclusion at a significance level of 5%, meaning that financial literacy can increase financial inclusion. Financial inclusion is easy to access for every investor. Investors who already have the knowledge, understanding and skills, will be able to use the ease of access to find information related to various instruments in the capital market to the fullest. This requires the capital market to provide easy access for the public. High investor financial literacy encourages easy access for investors (Koomson et al., 2020). The results of this study support Okello Candiya Bongomin et al. (2020); Koomson et al. (2020) who assert that financial literacy has a positive effect on financial inclusion.

Hypothesis 4 states that financial technology has a positive effect on financial inclusion. The results of the analysis in Table 3 show that financial technology has a coefficient value of 0.221, a t-statistic value of 3.573 which is significant at 0.000. Because the significance level is less than 0.05, hypothesis 4 is accepted. The results show that financial technology has a positive effect on financial inclusion at a significance level of 5%, meaning that financial technology can increase financial inclusion. Advances in technology today provide various facilities for the community.

Financial technology use is increasing over time. This encourages the capital market to follow these developments by using digital platforms and infrastructure support so that the capital market can reach investors in various regions to get easy access to information related to the capital market and ease of transactions (Ali et al., 2020). Financial inclusion refers to the community's ease of access to various facilities, services and financial products offered by the capital market, such as mutual funds which can reach a wide range of investors. The increasing use of financial technology encourages various parties, one of which is the capital market to provide financial inclusion. The results of this study support Amoah et al. (2020); Hasan et al. (2020); Irman (n.d.); Lubis et al. (2019); Ozili (2018) who found that financial technology has a positive effect on financial inclusion.

Hypothesis 5 states that financial inclusion has a positive effect on mutual fund investment decisions. The results of the analysis in Table 4 show that financial inclusion has a coefficient value of 0.668, a significant t-statistic value of 13,187 at 0.000. Because the significance level is less than 0.05, hypothesis 5 is accepted. The results show that financial inclusion has a positive effect on the investment decisions of mutual funds at a significance level of 5%, meaning that financial inclusion can increase the investment decisions of mutual funds. Financial inclusion is the easy access that can help investors obtain various types of information on how to invest and the benefits of investing in mutual funds easily, quickly, anywhere, anytime and with relatively lower costs. Financial inclusion has two perspectives, namely the supply-side and the demand-side (Ali et al., 2020). The supply-side point of view shows that the ease of access is seen by the capital market. If the capital market is easily accessible to the general public, it can provide opportunities for the capital market, particularly mutual funds, to provide information and offer profitable investments to investors with small and large amounts of capital in various regions. The demand-side point of view shows that the ease of access is valued by investors. Ease of access is critical for investors who want to invest in mutual funds because it allows them to easily access various information and services related to mutual funds as the basis for making investment decisions to invest in mutual funds. The results of this study support the results of research by

Asmara & Abubakar (2019); Paramasivan & Ganeshkumar (2013); SEKHAR (2013) who show that financial inclusion can improve investment decisions.

Indirect test results

Based on the indirect test (see table 4, regression analysis model 2), show the results of hypothesis 6 state that financial inclusion can mediate the influence of financial literacy on investment decisions of mutual funds. The results of the analysis show that the indirect interaction of financial inclusion has a t-statistic value of 7179, which is significant at 0.000. Because the t-statistic value is greater than 1.96 and the significance level is less than 0.05, hypothesis 6 is accepted. The results show that financial inclusion can mediate the influence of financial literacy on investment decisions in mutual funds at a significance level of 5%, meaning that financial literacy can improve investment decisions in mutual funds through financial inclusion. The knowledge, understanding, skills, and confidence possessed by investors will assist investors in making the right, safe, reliable, and profitable investment decisions. The ease of access available to finance can support investors in obtaining the latest information and transactions that are more flexible, allowing investors to learn about the benefits of investing in mutual funds and making it easier for investors to transact in mutual funds. Investors who have knowledge of mutual funds from accessing information related to mutual funds can use this knowledge to understand the advantages and benefits of investing in mutual funds. Mutual funds provide easy access, assisted by digital platforms such as marketplaces, so that skilled investors can use them to access mutual funds anytime and anywhere. Therefore, investors tend to have comfort because easy access to finance can boost investors' confidence in mutual funds. The results of this study support the results of research by Asmara & Abubakar (2019); Paramasivan & Ganeshkumar (2013); Sekhar (2013) who show that ease of access can improve investment decisions.

Hypothesis 7 states that financial inclusion can mediate the influence of financial technology on mutual fund investment decisions. However, the results of the analysis show that the indirect interaction value of financial inclusion has a t-statistic value of

3.439, which is significant at 0.000. Because the t-statistic value is greater than 1.96 and the significance level is less than 0.05, hypothesis 7 is accepted. The results show that financial inclusion can mediate the influence of financial technology on mutual fund investment decisions at a significance level of 5%, meaning that financial technology can improve mutual fund investment decisions through financial inclusion. The development of information technology requires the capital market to innovate to make it easier for investors to conduct digital transactions in mutual funds. Therefore, mutual funds reach all demographics, and easy access to finance is required to encourage investors to invest in mutual funds. The use of financial technology can optimise mutual funds through digital media. Mutual funds will be easier to access. Investors are currently more interested in investing using financial technology because it has the potential to grow, can be done easily, is time-efficient, and costs are relatively low. Ease of access to finance can help growing financial technology to direct investors to access various services in mutual funds. Investors who have easy access to financial services can make transactions such as investments using this financial technology. Financial technology makes it easy for the capital market to provide financial services responsibly and sustainably (Damayanti et al., 2020). This means that the ease with which investors can access mutual funds can encourage investors to allocate their funds for investment in mutual funds. Therefore, if investors use financial technology and are supported by easy access to mutual funds, it can encourage investors to make investment decisions in mutual funds. The results of this study support the results of research by Asmara & Abubakar (2019); Paramasivan & Ganeshkumar (2013); SEKHAR (2013) who show that easy access can improve investment decisions.

CONCLUSION

This study analysed Mutual Fund investment decisions based on financial inclusion. The results of the study indicate that financial literacy and financial technology have no effect on mutual funds investment decisions but have a positive influence on financial inclusion, while financial inclusion has a positive effect on mutual funds investment decisions. Thus,

financial inclusion can mediate the influence between financial literacy and financial technology on Mutual Funds investment decisions. Ease of access greatly supports the increase in mutual funds investment in the capital market. Some of the limitations of this study is that this research is only in Central Java, therefore, it could be extended to different regions. Likewise, the investors studied are mutual fund investors, but in future research could include stock, bond and Sukuk investors.

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