

The Effect of Financial Knowledge, Financial Skill, Financial Attitude, and Time Preference on Investment Intention With Perceived Risk as a Moderating Variable

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ARTICLE INFO

Keywords:

Financial Knowledge;
Financial Skills;
Financial Attitudes;
Time Preference;
Risk Perception;
Intention To Invest

Article history:

Received 2025-04-10
Revised 2025-05-12
Accepted 2026-05-16

ABSTRACT

This study aims to analyze the influence of Financial Knowledge, Financial Skill, Financial Attitude, and Time Preference on Intention to Invest with Perceived Risk as a moderating variable. The study was conducted on employees of Hospital X in Tangerang with a sample of 190 respondents. The post-COVID-19 pandemic conditions have driven changes in individual financial behavior, particularly in financial management and investment decision-making. This study used a quantitative approach with the Structural Equation Model (SEM) method. The results showed that Financial Knowledge, Financial Skill, Financial Attitude, and Time Preference significantly influenced Intention to Invest. In addition, Perceived Risk was proven to moderate the relationship between Financial Skill and Intention to Invest, but was unable to moderate the relationship between Financial Knowledge, Financial Attitude, and Time Preference on Intention to Invest. This study contributes to the development of financial behavior and investment literature, particularly regarding the role of financial knowledge, financial skills, financial attitudes, time preferences, and risk perception in shaping individual investment intentions. The findings of this study are also expected to form the basis for developing financial education and literacy to increase public participation in investment activities.

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1. INTRODUCTION

The economic sector has been severely impacted by the *coronavirus pandemic*. Restrictions on community activities influence activity world business Which Then impact The significant impact of the economic downturn was caused by strict health quarantines in various countries, severely limiting economic activity. (Kurniawan, SD, & Bertuah 2022)

Data released by the Central Statistics Agency (BPS) stated that in the second quarter of the year 2020 Indonesia experience growth economy as big as -5.32%. On quarterly III years 2020 happen A little improvement, Where economy Indonesia grow by - 3.49%. On quarterly I year 2020, reported growth economy Indonesia only 2.97 percent, lower than the 5.02% growth rate in the same period in 2019. (Natsir, K., & Arifin 2021)

Pandemic COVID-19 has trigger response emergency in all over world, require hospital And system maintenance health For functioning in outside capacity normal To address these challenges, many hospitals and governments are providing financial incentives to employees as a token of appreciation for their hard work and sacrifices in caring for COVID-19 patients. Although the pandemic has caused significant economic uncertainty, financial incentives provided to employees can create new opportunities and motivate investment. is commitment to a number of funding or *resources* Which held for a certain period and used to generate future profits. (Sasongko, G., Huruta, AD 2021) However, many people fail to invest. This can be due to choosing the wrong instrument, a lack of knowledge about investment products, joining friends, and misperceptions of risk. Some employees may receive additional incentives or significant bonuses during the pandemic. This can influence interest they in allocate source Power finance they to various forms of investment. It is important to understand how incentives are provided to employee during pandemic influence interest they For invest. Factors such as financial knowledge, financial skills, financial attitudes, time preferences, and risk perception may play a significant role in investment decisions. How employees plan and manage their incentives is also a crucial aspect. (Sasongko, G., Huruta, AD 2021)

Finance is a necessity for all parties across all generations, both individuals and groups. Finance is a tool to meet needs. Although everyone understands how to use money, not everyone is able to manage it optimally. Many people manage their money through investing. The goal of investing is to gain profits in the form of *capital gains and dividends* . If an investor makes the right decision, the investment will be profitable. Therefore, the right decision has a higher chance of winning. Each investor has different considerations when making decisions. Different psychological factors influence investment decisions . (Achmad Chusanudin, & Munandar 2022)

Literacy finance very important For define process business in institution financial institutions, both banking and non-banking. (Dewi, VI, Febrian, E., Effendi, N., & Anwar 2020) In addition, retail investors also need financial literacy to make investment decisions, as financial literacy is considered a vehicle for increasing welfare. financial. (Achmad Chusanudin, & Munandar 2022) Feature This enable accurate assessment and efficient decision making in the use of investments, give belief to investors that they make evaluation who entered reason And taken into account with Good. Behavior finance is part integral to the decision-making process. (Shehata, SM, Abdeljawad, AM, Mazouz, LA, Aldossary, LYK and MY, & Sayed 9AD)

A better understanding of financial literacy is crucial because it enables investors to make informed investment decisions. Investment decisions are based on the expected level of *return* , the level of risk, and the relationship between *return* and risk. (Hermanto 2017)

Financial knowledge influences a person's investment decision-making. Financial knowledge has been shown to have a significant impact on investment management. finance, And more consistent when various policy used, this can be explained by how a person manages his personal finances And management finance the is factor main Which contribute to a person's level of financial satisfaction. (Wangi, LALGC, & Baskara 2021)

Understanding financial attitudes will help a person to understand the importance of finance. For time front. By Because That, understanding attitude finance interpreted as a state thought, opinion, And evaluation to finance. According to (Wangi & Baskara, 2021), aspect First related with personality believe self investors to financial behavior, independent of career, health, and financial approaches. A person who rational And more believe self to knowledge finance influential towards more profitable financial behavior. (Wangi, LALGC, & Baskara 2021)

Another study was also conducted by Shehata 2021, Achmad Chusanudin 2022 besides knowledge finance, there is Also perception risk Which suggest investors in investment decisions. *Perceived Risk* is a way of viewing or assuming the risks that an investor might face. using thinking events that have happened to other people. This reflected risk means that there are risks in each investor's activities that cannot be avoided with certainty, and some of them are unpleasant. (Trang Phung 2017) According to theory risk moment This, Benefits or advantages are often associated with risks. Investing involves the risk of financial loss. Because error transaction or abuse account share. Besides That, There is There is also the risk of losing privacy through online fraud or hacking. (Shehata, SM, Abdeljawad, AM, Mazouz, LA, Aldossary, LYK and MY, & Sayed 9AD)

Based on studies previously, there is correlation Which significant between perception risk and intentions investment, as Shehata et al. research in market share Saudi. Research on detection risk , that Indonesia itself has also done study about perspective risk related decision investment that is survey of the impact of financial literacy on intention investment, Where risk perceived currently, Already done previous researchers, in market share Saudi with total The sample consisted of 400 participants. The impact of financial information on investment intentions has also been studied in Indonesia. For example, Achmad Chusanudin & Munandar found a significant correlation between financial literacy and investment intentions. on study other There is disparity Which will happen, that is. No there is A significant correlation between financial knowledge and investment intentions. There are inconsistent research findings regarding investment intentions and the impact of financial literacy, which is evidence that this study does not provide strong evidence of the effect of financial literacy on investment intentions. (Achmad Chusanudin, & Munandar 2022) Researchers want to study inconsistency study And continue This study compares previous research by adding several other aspects besides financial knowledge, namely the impact of *financial knowledge, financial skills, financial attitudes, and time preferences* on investment intentions, with perceived risk as a moderating variable. Furthermore, research in Indonesia is still rare, where perceived risk variables moderate *financial knowledge, financial skills, financial attitudes, time preferences* , and investment intentions.

Behavioral Economic Theory in the world of investment, investors do not only use estimates performance something product investment, but Also use factor psychological to determine investment products. Some argue that psychological factors play a role in investing. (Achmad Chusanudin, & Munandar 2022) These factors can influence an investor's investment and rate of return. Therefore, analysis of the investment industry using psychological and economic contributions is called behavioral financial attitudes. This has been studied in developed countries. Trang Phung & Tho Nguyen assert that the majority of investors consider these behavioral biases in their investment decisions. Financial attitudes are defined as the study of psychological influences on financial service providers and the stock market. which can help mention Why And how markets can become inefficient. (Trang Phung 2017)

According to Qasim, using statistical methods in decision-making, people rely on heuristic principles to make decisions. According to Achmad Chusanudin, financial behavior is the weight of stock market investors' buying and selling decisions. Financial behavior is a better understanding of investment as investment decisions that affect market prices related to human biases and social, cognitive, and emotional. Economic behavior is defined as: as factor behavior Which influential on taking decision personal. (Qasim, M., Hussain, RY, Mehboob, I., & Arshad 2019)

Based on What Which has described in on, so objective study This to explore further the influence of *Financial Knowledge, Financial Skills, Financial Attitude, And Time Preference to Intention to invest* with *Perceived Risk* as variables moderation, Good in a way direct or Which in mediation by risk The perceptions of employees receiving incentives during the COVID-19 pandemic. It is hoped that the results of this study will provide insight into how financial incentives can drive investment. It may also help identify whether employees are more likely to invest in certain forms during the pandemic. The results of this study may benefit households. Sick And government in designing program incentive Which more effective and give guide to employee about management finance they. Besides that,

research This can help in understand impact term long from incentive provided to employees regarding their financial stability and their readiness to face situation economy Which No Certain.

2. METHODS

Researchers use questionnaire in a way on line with use Google Form to collect primary data for this study. The questionnaire consisted of six main sections. Measurements were made using a Likert scale with a range of 1-5 (1 = strongly disagree and 5 = strongly agree). The questionnaire consisted of seven main sections. First measure *Financial Knowledge* consists of from 6 question Which includes understanding about finance including trust participant on knowledge their overall financial well-being. (Lin, HW, & Bates 2022) The second section measured *perceived risk* (PR) by asking participants to indicate their level of agreement with six statements about perceived risk. Researchers used a 5-point scale, ranging from “strongly agree” to “never agree.” (Shehata, SM, Abdeljawad, AM, Mazouz, LA, Aldossary, LYK and MY, & Sayed 9AD).

The third section measures *Intention to invest* (IN) by asking participants to indicate their level of agreement with three statements about their intention to invest on a 5-point scale, ranging from “strongly agree” to “never agree.” (Dewi, VI, Febrian, E., Effendi, N., & Anwar 2020) The fourth section measures *Financial Skill* (FS) using a rating ranging from 1 to 5 (very No agree, No agree, No agree or No agree, agree, strongly agree). The level of financial skills is grouped using the quartile method into 3 categories: poor, fair, and good. (Dewi, VI, Febrian, E., Effendi, N., & Anwar 2020) The fifth section measures *Financial Attitude* (FA) using a Likert-type scale. with ranking start from 1 until 5 (very No agree, No agree, neither agree nor disagree, agree, strongly agree). The level of financial attitudes is grouped using method quartile to in three category: poor, fair, And good. (Dewi, VI, Febrian, E., Effendi, N., & Anwar 2020) The sixth section measures *Time Preference* (TP) which is measured by financial time preference, measured by 7 questions, each with 5 options (“Strongly disagree” to “Strongly agree”), for example “Money is there to be spent (reversed)”.

According to BPS on study, group income resident divided into 4 that is group income very tall with average more from Rp 3,500,000 per month, group income tall with average between Rp 2,500,000 – Rp. 3,500,000 per month, middle income group with average between Rp. 1,500,000 – Rp. 2,500,000 per month And group income low with average not enough from Rp . 1,500,000 per month. (Salisa 2021) This study was conducted in 2023, with a population of Hospital X, using a sample of permanent employees. The sampling technique used *non-probability* sampling in the form of an online survey. This study collected quantitative data through online surveys via Google form links on various social media *platforms* such as WhatsApp, Telegram, and Instagram. The data collection period was October to November 2023.

This research is quantitative. The researcher used *the Structural Equation Model* (SEM) method, and data processing and analysis were performed using SmartPLS 3 (*Partial Least Squares*) *software* . PLS was used because it is capable of analyzing complex measurement models. Which involving Lots construct . On study This there is 6 variables, namely FK, FS, FA, TP, IN, and PR, each of which has a meaning of how the independent variable is able to explain the dependent variable. (Hair, JF, Hult, GTM, Ringle, CM, Sarstedt, M., Danks, NP, & Ray nd) In analysis SEM-PLS size sample at least minimum 5 until 10 time total The indicators used in the research method, because the total number of indicators is 19, then the sample required is at least 95 to 190 samples. Thus, SEM-PLS is considered a suitable approach for measurement within the scope of this study. (Hair, JF, Hult, GTM, Ringle, CM, Sarstedt, M., Danks, NP, & Ray n.d.) Researchers conducted validity and reliability tests of *pretest data* using SmartPLS by looking at the values of outer loading and average variance extracted (AVE), where the indicators it is said valid when own mark outer loading > 0.7 And $AVE > 0.5$. Study This use method *Structural Equation Modeling* (SEM) to analyze the data. (Hair, JF, Hult, GTM, Ringle, CM, Sarstedt, M., Danks, NP, & Ray nd) The analysis of cross-sectional statistical samples to test the hypothesis proposed in the study will be tested using SEM through the path analysis method (path diagram analysis). For

statistical testing using the T test, with a significance level of 10%, namely > 1.28 . If the data obtained T value is more than the standard value (1.28) then the data supports the hypothesis. In addition to the T test, a measurement of the model equation is also carried out which is seen in the R-squared value, this value has the meaning of how the independent variable can reveal the dependent variable. Test the moderating variable of risk perception on investment intentions using the Sobel Test where this test looks at the t_a and t_b values. This t_a value is the calculated T value from the independent variable to the moderating variable and t_b is the calculated T value from the moderating variable to the dependent variable. If the T value is > 1.28 then it means that the variable is able to moderate the relationship between the independent variable and the dependent variable (Achmad Chusanudin, & Munandar 2022).

3. FINDINGS AND DISCUSSION

Financial Influence Knowledge , Financial Skills , Financial Attitude and Time Preference towards Intention to Invest in Hospital Employees

The COVID-19 pandemic has had a significant impact on the community's economic conditions, including on individual financial behavior in managing income and making investment decisions. During the pandemic, hospital employees were one of the groups of workers experiencing different economic dynamics compared to other sectors due to additional incentives for healthcare workers and changes in household spending patterns. These conditions led some respondents to consider investment as an alternative for long-term financial management to maintain economic stability post-pandemic. Changes in public financial behavior after the COVID-19 pandemic also led to increased awareness of the importance of financial literacy, risk management, and investment planning. Hospital employees who received additional incentives during the pandemic had the opportunity to improve their financial management through investment activities. In this situation, financial knowledge, financial skills, financial attitudes, and time preferences are important factors influencing individual investment intentions. This study shows that financial knowledge, financial skills, financial attitudes, and time preferences have a positive influence on the intention to invest in hospital employees (Natsir, K., & Arifin 2021).

Financial knowledge has a positive effect on intention to invest. Research shows that the higher the level of financial knowledge employees possess, the higher their intention to invest. Financial knowledge helps individuals understand investment concepts, risks, returns, and proper financial management, enabling them to make rational investment decisions. Financial knowledge also encourages individuals to be wiser in selecting investment instruments that align with their future financial needs and goals. This indicates that individuals who understand financial concepts tend to have greater confidence in investing than those with low levels of financial knowledge (Wangi, LALGC, & Baskara 2021).

The results of this study align with the research respondents, who mostly have middle to high incomes, thus having greater opportunities to manage their finances and invest. High levels of financial knowledge enable respondents to understand the importance of investing as a form of long-term financial planning. This knowledge helps respondents understand the relationship between risk and return, thus increasing their interest in investing. Financial knowledge also provides a foundation for individuals in determining investment strategies that align with their personal financial situation (Achmad Chusanudin, & Munandar 2022).

Financial skills have also been shown to have a positive influence on intention to invest. Financial skills reflect an individual's ability to manage income, create a budget, control expenses, and allocate funds for investment. Individuals with strong financial skills will find it easier to manage their personal finances, thus preparing them for investment. Good financial management skills make individuals more confident in making investment decisions because they understand how to manage risk and manage investment funds effectively (Dewi, VI, Febrian, E., Effendi, N., & Anwar 2020).

Hospital employees in this study demonstrated a fairly good ability to manage income and prioritize finances. This is reflected in the high average Financial Skill score of respondents, indicating their ability to conduct financial planning. This ability is a crucial factor driving investment intentions, as individuals feel financially prepared and capable of sustainably managing investment funds. With good financial skills, individuals are also able to minimize errors in investment decision-making (Tanuwijaya, N., & Nuryasman 2023).

Financial attitude, in this study, also had a positive influence on intention to invest. Financial attitude reflects an individual's views, assessments, and mindset regarding financial management. Individuals with positive financial attitudes tend to be oriented towards long-term financial management, including preparing investment funds for the future. A positive financial attitude can encourage individuals to be more disciplined in managing expenses, saving, and investing as a form of financial planning (Felisya, R., & Arifin 2022).

The study results showed that respondents with positive financial attitudes tended to have higher investment intentions. Individuals who perceive investment as important for the future are more motivated to set aside a portion of their income for investment activities. Furthermore, a positive financial attitude also makes individuals more cautious in using money and prioritize long-term benefits over immediate consumer satisfaction. This demonstrates that financial attitudes play a significant role in shaping individual investment behavior (Frans, F., & Handoyo 2020).

Time preference has also been shown to positively influence intention to invest. Time preference relates to how individuals view current and future interests in financial decision-making. Individuals with a long-term orientation tend to consider the future benefits of investing more than simply meeting current consumption needs. A future-oriented time preference makes individuals more motivated to invest as a form of long-term financial preparation (Supriadi, T., & Santi 2021).

The study results showed that respondents with a long-term time preference tended to have a higher investment interest. Hospital employees who considered future economic stability were more likely to allocate a portion of their income to investments. This time preference also enabled individuals to better control their consumption behavior and focus on long-term financial goals. Thus, time preference is a psychological factor influencing individual investment decisions (Aristei, D., & Gallo 2021).

Overall, the research results indicate that financial knowledge, financial skills, financial attitude, and time preference are important factors influencing the intention to invest among hospital employees. These four variables are interrelated in shaping individual financial behavior and encouraging individuals to invest as a form of long-term financial planning. High financial understanding, financial management skills, a positive attitude toward finances, and future orientation can increase individual confidence in making investment decisions (Shehata, SM, Abdeljawad, AM, Mazouz, LA, Aldossary, LYK and MY, & Sayed 9AD).

The Role of Perceived Risk in Moderating the Influence of Financial Knowledge , Financial Skill, Financial Attitude , and Time Preference on Intention to Invest

Perceived Risk is an individual's perception of the risks that may arise in investment activities. In the post-COVID-19 pandemic context, risk perception has become increasingly important because unstable economic conditions have caused people to be more cautious in making investment decisions. Economic uncertainty during the pandemic has led individuals to consider long-term financial security, making the perception of investment risk a factor influencing people's investment behavior. Risk perception is a crucial factor in the investment decision-making process because every investment always has the potential for profit and loss. In this study, Perceived Risk was used as a moderating variable to determine whether risk perception can strengthen or weaken the relationship between Financial Knowledge, Financial Skills, Financial Attitude, and Time Preference on Intention to Invest. The results showed that Perceived Risk only moderated the relationship between Financial Skills and Intention to Invest, whereas Perceived Risk did not have a significant moderating effect on the

relationship between Financial Knowledge, Financial Attitude, and Time Preference on Intention to Invest (Trang Phung 2017).

Regarding the relationship between Financial Knowledge and Intention to Invest, Perceived Risk did not significantly moderate the relationship. This indicates that individuals with high financial knowledge still have good investment intentions even when faced with high perceived risk. Financial knowledge enables individuals to understand the characteristics of investment risk, enabling them to assess risk more rationally. Armed with this understanding, risk perception is no longer a major obstacle for individuals in making investment decisions. Individuals with high financial knowledge tend to be better prepared to face investment uncertainty because they understand the relationship between risk and return in investments (Achmad Chusanudin, & Munandar 2022).

The results of this study indicate that perceived risk does not necessarily weaken investment intentions when individuals already possess sound financial literacy. Hospital employees who possess knowledge of investment products, risk management, and investment strategies still demonstrate high investment interest despite being aware of investment risks. This demonstrates that financial knowledge can shape individuals' confidence in facing risks, rendering the moderating effect of perceived risk insignificant (Floresia, I., & Arifin 2022).

Unlike Financial Knowledge, Perceived Risk has been shown to moderate the relationship between Financial Skills and Intention to Invest. The study's findings indicate that perceived risk strengthens the influence of financial skills on investment intentions. Individuals with strong financial skills are better able to manage investment risks, thus maintaining confidence in investing even when the risk is quite high. Skills in budgeting, managing income, and understanding risk management make individuals better prepared to face investment uncertainty (Dewi, VI, Febrian, E., Effendi, N., & Anwar 2020).

Respondents' financial management skills enabled them to make more careful and planned investment decisions. As perceived risk increased, individuals with high financial skills were more likely to consider investments carefully rather than avoid them entirely. This suggests that financial skills can help individuals navigate investment risks and maintain their investment intentions. Thus, perceived risk strengthens the relationship between financial skills and intention to invest (Felisya, R., & Arifin 2022).

Regarding the relationship between Financial Attitude and Intention to Invest, Perceived Risk failed to exert a significant moderating effect. This indicates that a positive financial attitude still drives investment intention even when individuals perceive risk. Individuals with positive financial attitudes tend to view investment as an important part of future financial planning, so perceived risk does not alter their belief in the importance of investment (Felisya, R., & Arifin 2022).

The results of the study showed that respondents with positive attitudes toward financial management still demonstrated high investment intentions despite recognizing the uncertainty involved. Risk perception was not strong enough to change individuals' positive attitudes toward investment because they continued to view investment as an important step toward achieving future financial stability. This finding suggests that financial attitudes have a relatively stable influence on investment intentions compared to individuals' perceived risk factors (Frans, F., & Handoyo 2020).

Regarding the relationship between Time Preference and Intention to Invest, Perceived Risk also failed to significantly moderate the relationship. Individuals with a future orientation still have high investment intentions despite perceived risk. Long-term time preferences lead individuals to focus more on future investment benefits than possible short-term risks. Therefore, perceived risk does not significantly alter the relationship between time preference and investment intentions (Supriadi, T., & Santi 2021).

Hospital employees who are oriented toward future financial security remain motivated to invest despite being aware of the risks in the investment market. They tend to view investment as a means to achieve long-term financial goals, so risk perception is not a dominant factor in determining investment

intentions. These results indicate that future orientation has a stronger influence than risk perception in shaping individual investment intentions (Aydin, AE, & Akben Selcuk 2019).

In addition to being a moderating variable, Perceived Risk in this study was also shown to have a direct influence on Intention to Invest. An individual's risk perception can influence their confidence and courage in making investment decisions. Individuals who understand investment risks well will be better prepared to determine investment strategies that suit their risk profile. However, if the risk is perceived as too high and uncontrollable, individuals tend to be more cautious in making investments. Therefore, risk perception becomes an important part in shaping individual investment behavior (Shehata, SM, Abdeljawad, AM, Mazouz, LA, Aldossary, LYK and MY, & Sayed 9AD).

Overall, the research results show that Perceived Risk plays a different role in each relationship between variables. Risk perception only strengthened the relationship between Financial Skill and Intention to Invest, while no significant moderating effect was found for Financial Knowledge, Financial Attitude, and Time Preference. These findings suggest that an individual's ability to manage finances is the most important factor in dealing with investment risk (Qasim, M., Hussain, R.Y., Mehboob, I., & Arshad 2019).

4. CONCLUSION

Based on the research results, it can be concluded that financial knowledge, financial skills, financial attitudes, and time preferences have a positive influence on the intention to invest among hospital employees. The post-COVID-19 pandemic situation has also influenced changes in individual financial behavior, particularly in increasing awareness of the importance of financial management, financial planning, and long-term investment. Individuals with good financial knowledge, skills, and attitudes, as well as a long-term time orientation, tend to have higher investment intentions.

This study also shows that Perceived Risk, as a moderating variable, is only able to moderate the relationship between Financial Skills and Intention to Invest, but is unable to moderate the relationship between Financial Knowledge, Financial Attitude, and Time Preference on Intention to Invest. These findings indicate that an individual's ability to manage finances is the most important factor in dealing with investment risks. Individuals with good financial skills will be better prepared to make investment decisions even when faced with uncertainty and investment risk.

This research contributes to the development of the literature on financial behavior and investment, particularly regarding the role of financial knowledge, financial skills, financial attitudes, time preferences, and risk perceptions in shaping individual investment intentions. Furthermore, the results are expected to form the basis for developing financial education and literacy programs to improve the public's ability to manage their finances and encourage greater investment participation.

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