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Financial Literacy and House Hold Portofolio Diversification: The Moderation Role of Risk Preferences

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Abstract

The study examines the relationship between financial literacy and household portfolio diversification in Palembang, Indonesia. The sample was proportionally surveyed using proportional random sampling, so 405 households in Palembang, Indonesia divided into 18 districts. Inferential testing uses Structural Equation Modeling (SEM) based on variants, namely Partial Least Square (SEM-PLS). Results show that financial literacy positively influences portfolio diversification, while risk preference moderates this effect. The interaction between financial literacy and risk preference has a smaller effect size. The study contributes to the concept of optimal portfolios in Modern Portfolio Theory, as financial literacy encourages logical decisions and risk preferences optimize diversification decisions. The study also found that risk preference reduces the effect of financial literacy on portfolio diversification, as households understand that additional asset distribution may increase costs and reduce returns. Research suggests incorporating risk preference as a predictor and mediator to better understand the impact of financial literacy on portfolio diversification.

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1. Introduction

Portfolio diversification is a choice that can be influenced by the rational and irrational factors of investors (Candraningrat & Sakir, 2019; Jamshidi et al., 2019; Syarkani & Alghifari, 2022; and Yusbardini & Natsir, 2022). The rational factor was initially based on the Utility Theory that every sacrifice that must be made for the benefits of a choice has a positive relationship (Shih et al., 2022; Yeo et al., 2023; and She et al., 2024). In Traditional Finance Theory, it is further explained that actors in the financial market are rational as explained in the Efficient Market Hypothesis (EMH) in the Theory of Modern Portfolio (Fama, 1998) which in its development is supported by the results of recent empirical researches (Costa et al., 2019, Lekhal & El Oubani, 2020, Tran & Leirvik, 2020, and Zhou et al., 2022) which state that investors in the capital market make investment decisions based on rationality, where every piece of information becomes relevant. However, several previous studies that empirically tested this theory showed that there are behavioral factors that also influence a choice (Costa et al., 2019; and Wong, 2020). This analysis is further explained in the Theory of Planned Behavior where every behavior in financial and investment decisions begins with an intention that can be influenced by many factors (Yeo et al., 2023). One of the factors that can influence individual financial behavior, including investment decisions, is financial literacy as explained in Kengatharan &

Kengatharan (2014); Pahlevi & Oktaviani (2018); Umboh & Atahau (2019); Senda et al. (2020); Baihaqqy et al. (2020) Ahmad & Shah 2022); and Marciano & Wijaya, 2024). Other research results focus on the analysis of financial literacy and its influence on the diversification actions of a set of portfolios of stock investors in Tunisia (Mouna & Jarboui, 2015). The results of this study indicate that financial literacy is a rational factor variable and can affect investors' ability to diversify the risks that will be borne due to their investment choices. This shows the importance of investors to have a good level of financial literacy, where the results of this study are supported by several empirical research results by Li et al. (2020) with family analysis units in China; Koh et al. (2020) on investors in Singapore; Winne (2021) on investors in Europe and Nguyen et al. (2023) that analysis on household evidence in Vietnam. Meanwhile, other research results were found to show that financial literacy has no effect on family portfolio diversification decisions in China (Jia et al., 2021).

On the other hand, empirical facts regarding the financial literacy index of the Indonesian people based on the results of a survey by the Financial Services Authority have basically started to increase since 2019, namely by 38.03% and becoming 51.76% when compared to 2013 which was still 21.84%. However, this increase is still very low compared to the increasing population of Indonesia, which was recorded at 269,536,482 people in 2019 to 270,203,917 people in 2020. Likewise when compared to other empirical facts, namely the level of financial inclusion in Indonesia which in 2021 reached 76 (SNKI, 2022). Where this figure is also still very small compared to the financial literacy index of neighboring countries such as Malaysia (88. 37%), Singapore (99.37%) and Thailand (95.58%) (Ismoyo, 2021). So it can be concluded that the potential risk of the Indonesian people in utilizing the financial access available in general and making investment choices in particular is still high, especially when compared to the surrounding countries. This national risk potential also illustrates the potential individual risk.

In previous studies, the analysis of investment instrument diversification was more focused on stock investment, while the results of a survey by the Financial Services Authority in 2021 showed that only 3% of the total population of Indonesia invested in stocks directly through the capital market (SNKI, 2022). Therefore, this study analyzes the diversification of investment portfolios in investment instruments comprehensively (not limited to stock investors in the Indonesian Capital Market) with a location in Palembang City, Indonesia. Palembang City, Indonesia based on PP No. 26 of 2008 is one of the metropolitan cities ranked 13th after Jakarta and its surroundings, Medan, Bandung and Makassar representing the population of metropolitan cities in Indonesia. Meanwhile, the selection of the household analysis unit is motivated by the argument that households are a representation of the productive age population who have responsibility for improving family welfare which is ultimately expected to improve the welfare of the Indonesian people.

In contrast, individual investor preferences are not only based on rationality as explained in conventional finance. The research results Shahidin et al., 2021; Kahneman & Tversky, 2021 and Zheng et al., 2024) state that investors can be irrational because they only have limited rationality. The risk preference factor which is also an attitude based on the irrationality of household investors is important to consider in this analysis. The limitations of pre-vious research results that analyzed the effect of financial literacy on portfolio diversification specifically in households in the last five years (Capponi & Zhang, 2020; Koh et al., 2020; and Nguyen et al., 2023) which were moderated by risk preferences (Jia et al., 2021; Hermansson & Jonsson (2021; and Peng et al., 2022) were the background for conducting further studies that analyzed these three variables to solve the empirical problem of household portfolio diversification behavior in Indonesia with Palembang City as the unit of analysis representing the population. So that the objective of this study is to analyze the effect of financial literacy on household portfolio diversification if moderated by risk preferences, both those motivated by rational and irrational factors as moderators.

2. Hyphotesis Development

The development of this research hypothesis are based on Modern Portfolio Theory and Prospect Theory. Modern Portfolio Theory explains that one of the efforts in rational risk management is to diversify the portfolio (Ismail & Pham, 2019). This theory states that the higher the risk levels of an investment choice, the higher the rate of return that would be obtained.

The classic concept of "High Risk High Return" has been empirically tested several times in early studies and then analyzed its development by literature studies (Yeo et al., 2023) which concluded that financial behavior is not only influenced by the rationality factor explained by Modern Portfolio Theory but also by the irrationality factor. These two theories are still being debate and analyzed through empirical studies to date. Therefore, it used to conclude that risk management in every investment decision is important for every investor to do in order to optimize the rate of return on investment. One effort to manage this risk is to diversify the selected instruments.

However, the ability to diversify into an investment portfolio will be influenced by both rational elements based on utility theory and irrational elements or behavior based on Prospect Theory analyzed based on risk preference factors including by Kahneman & Tversky (2021), Aren & Zengin (2016), and Shahidin et al. (2021). Therefore, it is important to analyze behavior in diversifying a portfolio based on financial literacy level factors moderated by risk preferences.

Portfolio diversification is an effort to spread the risk factors borne from several investment options (Emenike, 2016; Wong, 2020; Mehmood et al., 2020; and European Central bank, 2024). This concept is a development of Modern Portfolio Theory which is supported by the results of empirical research in this field of study. This is based on the concept that explains the positive correlation between risk and return on investment which is also influenced by the investor's ability to diversify their investment portfolio (Koumou, 2020). In order to form a set of investments that can generate optimal returns, risk management is needed by spreading the potential losses that may be borne by a particular investment (Peng et al., 2022). However, in diversifying this portfolio, there are several influencing factors where these factors can be motivated by the rational thinking of investors or other irrational factors. One of the variables that is a rational factor is the individual's Financial Literacy level (Cornil et al., 2019; Koh et al., 2020; Li et al., 2020 and Nguyen et al., 2023). Preferences are not only determined by rationality but also irrationality (Shahidin et al., 2021; Capponi & Zhang, 2020; Jia et al., 2021; Zheng et al., 2024 and Martijn et al., 2022)).

Financial Literacy has a meaning that is still debated in the world (Rai et al., 2019). Based on Atkinson & Messy (2012), financial literacy as a knowledge and understanding of financial concepts and risks, along with skills, motivation and confidence to apply the knowledge and understanding they have in order to make effective financial decisions, improve the financial well-being of individuals and society, and participate in the economic sector. Meanwhile, the Strategy of Indonesian National Financial Literacy provides a refinement of the definition of financial literacy as knowledge, skills, and beliefs that influence attitudes and behavior to improve the quality of decision-making and financial management in order to achieve well-being (SNKI, 2022).

More specifically, in empirical research on Household Financial Literacy, it is explained that Household Financial Literacy is the ability and skills of financial management that are implemented in household financial attitudes and behaviors that are oriented towards improving financial well-being (Li et al., 2020 and Capponi & Zhang, 2020). Therefore, the construct of Financial Literacy in this study is knowledge, skills, attitudes and behavior in managing and making household financial decisions in order to improve financial wellbeing.

Meanwhile, risk preferences are a person's attitude in tolerating an investment risk (Shahidin et al., 2021). In other studies, it is explained as a household characteristic in assessing the risk that can be borne by the household income (Kahneman & Tversky, 2021) which then becomes the construct of the risk preferences variable in this study.

An investor's preference for the risk factor of an investment instrument has been widely studied by previous studies. However, those who analyze its role as a variable that moderates the influence of financial literacy on portfolio diversification are still limited.

The results of these studies explain that the higher the level of household Financial Literacy coupled with understanding and considering Risk Preferences, the more effective and efficient the household investment portfolio will be (Capponi & Zhang, 2020). In other words, a set of optimal investment product choices will be formed to diversify risk and increase the rate of return received in the end (Shahidin et al., 2021). One of the indicators of financial literacy that influences is the ability to plan finances

(Burchi et al., 2021; Zou et al., 2021; Djou & Lukiastuti, 2021; Zaimovic et al., 2023; Yeo et al., 2023). Therefore, the hyphothesis of this study is that there is an influence of financial literacy on portfolio diversification, both directly and moderated by household risk preferences.

H_1: Financial Literacy affects Portfolio Diversification.

H_2: Financial Literacy affects Portfolio Diversification moderated by Risk Preferences.

3. Data and Methods

The population in this study was all households in Palembang City, which based on data from the (*Central Statistics Agency*, 2022) was 379,435 households but was taken proportionally in each sub-district (proportional random sampling). The initial sampling process was carried out randomly using the Yamane Formula (Ibitomi et al., 2024). This random sampling was carried out not to intervene and the purpose of sample generalization so that the validity of the research sample was more tested. Based on the calculation results with a margin of error: 5%, the number of samples was obtained as follows 399.58 ≈ 400.

Based on the calculation results, this study has more questionnaires to distribute. 450 households in Palembang City which are divided proportionally into 18 Districts to maintain the possibility of non-return of the questionnaire. The results of the distribution of questionnaires obtained a total of research data from 405 respondents.

The variables in the study consist of two types, namely exogenous variables, namely Financial Literacy and endogenous variables, Portfolio Diversification and Moderating variables, namely Risk Preferences with the following regression equation:

$$Divers = \alpha + \beta_1 Literat + \beta_2 Risk + \beta_3 Literat * Risk + \varepsilon$$

The data analysis technique used is quantitative descriptive statistics to explain the description of each variable and inferential statistics to analyze the results of the hypothesis test. Measurement in this study used a questionnaire with 5 possible answers that must be selected by 405 respondents and considered appropriate. To facilitate interpretation, the answers from respondents are arranged based on assessment criteria that use the largest measurement scale (categories 1-5). Furthermore, the difference in the percentage of the largest criteria (100%) with the percentage of the smallest criteria (20%) is divided by 5 categories, so that a range value of 16% is obtained.

Inferential testing uses Structural Equation Modeling (SEM) based on variants, namely Partial Least Square (SEM-PLS). Testing is carried out by testing the measurement model and testing the structural model. Testing the measurement model explains the results of the convergent validity and discriminant validity tests.

The Convergent Validity test is seen from the factor loading value where the factor loading> 0.5 indicates that the indicators used in this study are valid in reflecting each of its latent variables. Then the AVE value for all latent variables is > 0.5 which indicates that more than 50% of the variance of the indicator can be explained by each of its foreign variables. So it can be concluded that the model has good convergent validity.

While the discriminant validity test is seen from the cross loading value, where the indicator that measures the construct must have a higher correlation compared to other constructs. Thus the cross loading value can be declared valid. Meanwhile, the structural model test explains the results of the full structural model based on the PLS Algorithm and Bootstraping to answer the research hypothesis that analyzes the effect of financial literacy on portfolio diversification both partially and moderated by risk preferences.

4. Results

Respondent Characteristics

Based on the data collection process, from 405 respondents, the majority of respondents were male (56.8%), while only 43.2% were female. However, the unit of analysis in this study was the household so that the respondents represented the condition of the household itself.

Meanwhile, the majority were aged 30-40 and the majority of respondents' income was in the range of Rp. 5,000,000 - Rp. 15,000,000, (51. 90%). Meanwhile the characteristics of respondents based on investment education experience based on the results of the study showed that the majority of respondents had informal education (internet, books, brochures, relatives) in the field of investment, namely 202 people (49. 9%), then respondents who had formal education (academic) were 142 people (35.1%), res-

pondents who had non-formal education (seminars, courses) were 110 people (27.2%) and respondents who had never had investment education experience were 74 people (18.3%).

Variable Description

Household financial literacy in the city of Palembang is in the good category (80.3%) with investment understanding and skills also in the good category (80.5%), while the lowest is planning and external funding decisions/debt. However, the provision of emergency funds is carried out by the majority of households (90.2%) as well as planning for children's education as much as 92.4%.

The total score results of respondents' answers entered on the continuum line indicate that respondents' assessment of Risk Preference in this study falls into the sufficient category (67.2%). Household risk preferences in this study are more described by tolerance for price changes/inflation changes and asset distribution that tends to be greater in long-term investments (75.1%). This shows that household risk preferences in Palembang City are quite low. Meanwhile, the descriptive results of portfolio diversification describe that investment distribution is logical, where considerations are made on risk (85%) and investment returns (82.9%) before distributing funds to the investment portfolio set. However, investment distribution is dominant in tangible assets (72.5%).

Measurement Model Testing (Outer Model)

Convergent Validity Test

Based on the results of the loading factor, it can be seen that all indicators have a loading factor above 0.5, which indicates that all indicators used in this study are valid in reflecting each of their latent variables. Then the AVE value for all latent variables is > 0.5, which indicates that more than 50% of the variance of the indicator can be explained by each of its variables. So it can be concluded that the model has good convergent validity.

Discriminant Validity Test

Based on the results of the cross loading test, it shows that the Divers1-Divers7 indicators have the highest correlation with Portfolio Diversification, then Lietrat1-Literate7 have the highest correlation with Financial Literacy and Risk1-Risk7 have the highest correlation with Risk Preference. Because each indicator has a higher correlation to the construct being measured compared to other constructs (latent variables), it can be concluded that all indicators in this study have good discriminant validity.

In addition to the Cross Loading test, the discriminant validity test can also be seen using the Fornell-Larcker criterion, which states that if the AVE value is higher than the correlation between other constructs, it can be concluded that the construct has a good level of discriminant validity.

Based on the Fornell-Larcker test, it can be seen that the Financial Literacy variable has an AVE root value of 0.782, higher than its highest correlation value of 0.421 (correlation between Financial Literacy and Portfolio Diversi-ication). The Portfolio Diversification variable has an AVE root value of 0.774, higher than its highest correlation value of 0.407 (correlation between Portfolio Diversification and Risk Preferences). Meanwhile, the Risk Preferences variable has an AVE root value of 0.782, higher than its highest correlation value of 0.407 (correlation between Risk Preferences and Portfolio Diversification). Because all latent variables have a higher AVE root value compared to the correlation between these variables and other variables, it can be concluded that each construct has good discriminant validity.

Reliability Testing

Evaluation of the construct reliability value is measured by composite reliability and reinforced by Cronbach's alpha. Each construct is said to be reliable if it has a composite reliability greater than 0.70 and Cronbach's alpha>0.6. Based on the results of data processing, it can be seen that each variable has a composite reliability (CR) value greater than 0.7 and is reinforced by a Cronbach alpha (CA) value greater than 0.6, so it is reliable. This shows that all indicators are consistent in measuring each of their constructs.

Structural Model Testing (Inner Model)

The results of the full structural model test based on the PLS Algorithm results are shown in the following figure 1. Figure 1 shows how risk preferences, financial literacy and the interaction of risk preferences with financial literacy influence portfolio diversification.

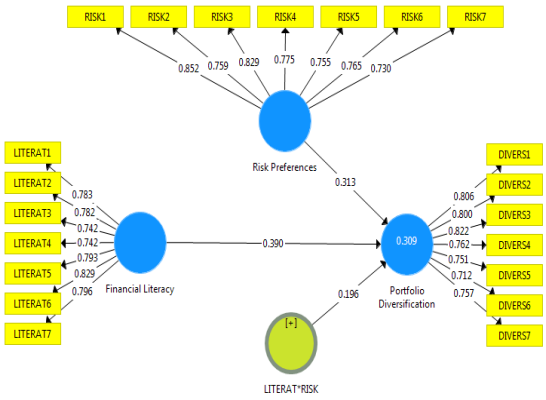

Figure 1. Full Model Structural Berdasarkan PLS Algorithm

Base on the test results visualized in the image above, the following structural model equations were obtained:

$$Divers = 0.390Literat + 0.313Risk + 0.196Literat * Risk$$

The R-square value of the Portfolio Diversification variable is 0.309. This shows that Portfolio Diversification can be explained by 30.9% by the Financial Literacy variable with Risk Preferences as a moderator. While the remaining, 69.1% is influenced by other variables that were not analyzed. This means that the research model is in the moderate category (Chin et al., 2020).

Meanwhile, the bootstrapping results that explain the t-Statistic value of the data processing results of this study are as figure 2. The bootstrapping results show that the t-statistic value > t-table (1.96). In indicates that all relationships between variables Furthermore, the two results of the structural model are summarized in the following table 1. Based on the table 1 of hypothesis test results, it can be seen that the influence of the Financial Literacy variable on portfolio diversification is proven to have a significant effect with p values 0.000<0.005 and a positive relationship direction with a Path value of 0.390, so it is concluded that hypothesis 1 (H_1) is accepted. Likewise, the influence of the Financial Literacy variable moderated by risk preference on portfolio diversification (Literat* Risk), where the p value of 0.002 and the Path value of 0.196 indicate a significant positive effect which means that hypothesis 2 (H_2) can be accepted. In additional explanation of the results of the direct influence of risk preference on portfolio diversification is also positive and significant with p value of 0.000 and path value of 0.313.

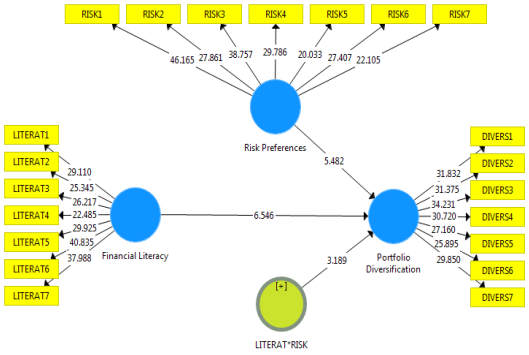

Figure 2. Full Model Structural Berdasarkan Bootstrapping

Table 1. Hypothesis Test Results

Correlation	Path	t-Statistics	p Values	Decision
Financial Literacy→Portfolio Diversification	0.390	6.546	0.000	Accepted
Literat*Risk→ Portfolio Diversification	0.196	3.189	0.002	Accepted
Risk Preferences → Portfolio Diversification	0.313	5.482	0.000	Accepted

Prediction relevance (Stone-Geisser's Q2)

In addition to R-Square, structural model testing on the inner model uses predictive-relevance (Q2) values. The Q-square value>0 is 0.169. This shows that the model has a predictive relevance value (Hair et al., 2013). The predictive relevance Q2 value for each endogenous variable is more than 0, so it can be concluded that this research model meets the requirements as Predictive Relevance.

Goodness of Fit Test

In this study, the overall fit index uses the goodness of fit criteria developed by Tenenhaus called the GoF Index (Chin et al., 2020). This index was developed to evaluate measurement models and structural models and in addition provides a simple measurement for the entirety of the model prediction. For this reason, the GoF Index is calculated from the square root of the average communality index and average R squares values as follows:

$$Gof = \sqrt{\overline{Communality} \; x \; \overline{R^2}}$$

$$Gof = \sqrt{0{,}705 \; x \; 0{,}309} = 0.467$$

Based on the calculation results, the Gof value obtained was 0.467>0.36 so it is included

in the large category and it can be concluded that this research model is fit.

5. Discusssion

Financial Literacy on Portfolio Diversification

The results of the study indicate that financial literacy has a direct influence on portfolio diversification with a positive relationship. This means that the better the financial literacy of a household couple, the more it will increase the decision to diversify their portfolio, conversely if the level of financial literacy is low, the diversification of household portfolios in the city of Palembang, Indonesia is also low. This is because the level of financial literacy of households in the city of Palembang is categorized as Good, although the distribution of assets is dominant in tangible assets only.

Meanwhile, financial assets such as stocks traded through the capital market and derivative financial assets on the futures market have not been a priority for most households in the city of Palembang, Indonesia. In addition, awareness in setting aside education funds and emergency funds is also a factor that can reduce the amount of investment set by the household because the resources/income they have are limited in value. The results of this study are in line with the results of previous studies that also analyzed the effect of household financial literacy on the level of diversification which is still limited. The results of the study Li et al. (2020) show that household financial literacy in Italy has a positive effect on the diversification of the household portfolio. Likewise, households in Scandinavia (Von Gaudecker, 2015) capital market investors in Tunisia (Mouna & Jarboui, 2015), retail investors in Europe (Winne, 2021), (Koh et al., 2020) on investors in Singapore and Li et al. (2020) on households in China.

The results of the study Li et al. (2020) further explain that household financial literacy in China only affects investment variations with a positive relationship but does not necessarily affect the level of return received. This is due to the conflicting results in two different groups of respondents, where older households receive less profit from risky assets than the younger group. The explanation of the research results on older households is certainly not in line with the concept of "High Risk High Return" in Modern Portfolio Theory, where increased risk due to increased investment in risky assets actually reduces returns. So it can be concluded that the purpose of diversification to spread risk and optimize returns is not met. The results of this study also form the basis for stating the limitations of this study, where the importance of further analysis of the effect of financial literacy and portfolio diversification on the rate of return in assessing whether diversification efforts can optimize the return on selected and formed investments is not further analyzed in this study.

However this study is not in line with the results of the study Jia et al. (2021) which concluded that financial literacy has no effect on portfolio diversification in household risky assets in China, but the level of risk perception through good financial planning has a positive effect on the distribution of risky assets. Likewise, the research results (Klapper & Lusardi, 2020) which indirectly explain the reason why financial literacy has no effect on portfolio diversification because poor financial management due to a lack of understanding of interest rate risks results in debt financing decisions to finance living needs and investments.

Financial Literacy on Portfolio Diversification with Risk Preferences as Moderator

The results of the study show that financial literacy moderated by Risk Preference also has a significant positive effect on Portfolio Diversification. The better the Financial Literacy possessed by a household couple coupled with their high level of tolerance for risk, the more it will affect the decision to diversify their household investment portfolio. However, the magnitude of the direct influence of financial literacy on portfolio diversification is closer to 1 compared to if moderated by risk preference. These results explain that with high risk awareness, it will reduce the level of household portfolio diversification. This is in line with the concept of an optimal portfolio in Modern Portfolio Theory, where the purpose of diversification is to reduce the potential risk that will be borne by an investor. The increasing the level of portfolio diversification will result in a suboptimal potential return, on the contrary, it will increase costs and potential investment losses and reduce returns (Hatemi-J & El-Khatib, 2015; Leković, 2018); Theron & van Vuuren, 2018; Ismail & Pham, 2019; Koumou, 2020, Lassance et al., 2022 and Krishnamoorthy & Basha, 2024).

The results of this study provide a positive contribution to research that analyzes the

effect of risk preferences on portfolio diversification, where it is proven that a person's risk preferences tend to be more logical with adequate knowledge and financial management skills. Some point it will influence the decision to increase the spread of their investments. This can be caused by the higher the level of financial literacy of couples in the household, the more they reject the risk of experiencing losses. As explained in the research results Capponi & Zhang (2020) which can ultimately also influence the decision to diversify the portfolio. The increasing level of household risk tolerance at a certain point can actually reduce the effect of financial literacy on the diversification of the household portfolio (Baihaqqy et al., 2020 and Shahidin et al., 2021). Furthermore, Risk Preference interacts with predictors and is also related to criteria, so it can be concluded that Risk Preference is a quasi moderator which indicates that Risk Preference can act as an independent variable as well as a moderating variable. This means that household risk preferences in the city of Palembang have a significant positive effect directly on the diversification of their portfolio. It means that the higher the level of tolerance for investment risk, the more asset distribution in the portfolio formed by the household. However, the interaction of increasing knowledge and skills in managing higher finances with a high level of tolerance actually causes a smaller influence on household portfolio diversification decisions.

This is described through household portfolios in Palembang City which are more dominant in tangible assets (physical assets) and fixed-income investment instruments than risky assets, as explained in the results of descriptive analysis of portfolio diversification variables which are higher in tangible assets (72.5%) and money markets with fixed income such as deposits (53.2%) compared to risky assets in the capital market (52%) and futures markets (35. 8%).

The study reveals that risk distribution is dominant in risk-free assets like physical and fixed-income financial assets, while households hold back distribution in risky assets due to their tolerance for potential losses and inefficiencies.

6. Conclusion and Suggestion

Conclusion

Results show that financial literacy positively influences portfolio diversification directly and also when moderated by risk preference with lower impact. Risk preference in this research is as a quasi-moderator, which means it has direct impact on portfolio diversification. The study contributes to the concept of optimal portfolios in Modern Portfolio Theory, as financial literacy encourages logical decisions and risk preferences optimize diversification decisions. However, households understand that additional asset distribution may increase costs and reduce returns.

Suggestion

Research suggests incorporating risk preference as a predictor and mediator to better understand the impact of financial literacy on portfolio diversification. Improving investment knowledge and skills is crucial for households, while policymakers should focus on enhancing household financial literacy to reduce portfolio diversification and investment returns.

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