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FACTORS AFFECTING RETIREMENT SAVING/INVESTMENT ON EMPLOYEES WORKING AT JENDERAL SUDIRMAN STREET, CENTRAL JAKARTA, INDONESIA

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ABSTRACT

This study aims to analyze the effect of risk tolerance (RT), risk perception (RP), risk aversion (RA) through the relationship between financial literacy (FL) variables and retirement saving/investment (RSI) variables. In addition, the researcher partially adds mediation analysis such risk tolerance which is proven to have a positive relationship between financial literacy and retirement saving/investment. In this study, retirement saving/investment prepares an understanding or desire to realize mature finances in retirement, especially in long- term elections investment. Primary data was used and sourced from filling out 13 questionnaires indicators which were answered through Google form by respondents during May 2022. The research sample was selected using the purposive sampling method that 130 employees were actively working as an employee as group samples. The data analysis that used to test the hypothesis by multivariate statistical analysis method using SEM (Structural Equation Modeling). The results showed that financial literacy had a positive and significant effect on risk tolerance, risk perception, and risk aversion. In addition, the risk perception and risk aversion have a positive and significant impact on retirement saving/investment. Besides that, the results also shown that risk tolerance is proven to be able to mediate positive and significant relationship between financial literacy and retirement saving/investment. On the other hand, risk tolerance has a negative relationship to retirement saving/investment. This study provided information which an employee must have a good understanding of financial literacy. Referring to good financial literacy, an employee will be able to have an appropriate and right retirement saving/investment through the stages of risk considerations such as risk tolerance, risk perception, and risk aversion. The more aware an employee to financial literacy and the higher the employee mastery in potential risks, the greater the opportunity to decide these investments pension.

KEYWORDS: financial literacy, risk tolerance, risk perception, risk aversion, retirement saving/investment.

1. INTRODUCTION

Most people have a prosperous retirement dream. Everyone aspires to retire prosperously without facing financial problems ahead. At present, most people find it is difficult to place the right retirement investment (stocks, mutual funds, insurance, fixed asset, etc). The decline of retirement investment becomes a hotly discussed issue. The uncertain nature of the future makes a person less understanding in seeing the importance of preparing reserve funds (retirement) as soon as possible for financial well-being (Tca, 2018).

Despite the willingness to invest long term (for retirement) and goodwill of individuals, most of them fail to implement it. Instead of saving money in a savings account or investing in the various products offered, a person prefers to buy expensive shoes or eat a luxury hotel. The importance of individuals in carefully considering the urgency of current needs and the allocation of reserve funds in the future will avoid themselves from financial vulnerability. The importance of financial knowledge will help individual intentions to invest. The income received is meaningless without good financial management. The level of financial literacy and knowledge has an impact on the level of wealth accumulation and retirement planning (Deenanath et al., 2019).

When retirement investment decisions are difficult to choose, many of them give a greater share of the consequences of risks than the benefit received. The existence of financial tolerance on every individual is subjective, influenced by social and demographic aspects (age, gender, education level, income, family, etc). People with higher wealth and education tend to tolerate financial risk because they ability to bear the risk of paying. Risk tolerance is an individual's readiness to choose and invest in the long term (Grable, 2018).

The risk perception that arises when investing is the basis for differences in individual decision making. Financial problems arise because of unpreparedness for the uncertainty of losses and profits. Some of us can tolerate low risk and others can tolerate high risk. If every individual can understand risk perception that arises, the investment provider agencies/services first consider and provide solutions (Ngo et al., 2019).

It is true that investing looks complicated and difficult to understand. Many people are still hesitant to invest. No investment is free from risk, but don't make it a problem. Many phenomena are found related to fewer savings balances and the amount of debt on credit cards. It takes a strong will to resist the temptation of biased consumption. For those who are in a mature age, they have thought about finances in retirement and how they can start investing for retirement (Shariff & Isah, 2019).

LITERATURE REVIEW

I. Retirement Saving/Investment

Retirement saving/investment is defined as the intention in planning investments for the future (Hoffmann & Plotkina, 2020). The desire to invest needs to be instilled in every individual. The intention to sacrifice to set aside income becomes a stage invest behavior. Saving money at present (as early we can) provides certainly and benefits the opportunity to manage financial problems (Tca et al., 2018). In other words, the awareness of holding back every individual in spending money and sacrifice to save for long term goals is not in vain (Amari et al., 2020).

II. Financial Literacy

Financial literacy is defined as an individual’s intention and/or ability to invest for retirement (Hastings & Mitchell, 2020; Hauff et al., 2020). Individuals who focus on the short term do not see the importance of planning for the future so they don’t set aside income for investment. The reason of it because of the difficulty of deciding the amount of money to set aside and uncertain future goals. Individuals need to be more confident in dealing with retirement. Individuals who assess themselves as having high financial literacy are difficult to withdraw money from retirement accounts that those who are weak in financial literacy (Lee & Hanna, 2020).

III. Risk Tolerance

Risk tolerance is defined as a subjective standard of an uncertain maximum nominal that individuals are willing to accept when making financial decisions (Budiarto, 2017). Risk tolerance is an important variable in influencing individual investment decisions. Individuals with long- term planning tend to consider risk so they are careful in making their retirement savings plan. Investing requires us to have a realistic understanding of the capabilities and expectations of the value of the investment in the future. Financial risk comes from uncertainty or negative possibilities that will occur. According to (GGrlitz & Tamm, 2015) risk tolerance is not only influenced by age but also by marital status. Married people become less risk tolerance.

IV. Risk Perception

Risk perception is defined as a person’s assumption/preference to see a situation that has a risk, especially if the assumption/preference has an effect on attitude and investment intentions (Shehata et al., 2021). Individual’s decision making will be different depending on the individual’s assessment based on an understanding of the risks and disadvantages (Wilson et al., 2019). Risk perception has an important role in individual behavior patterns, related to decisions in uncertainty (Huber et al., 2019). According to Theory of Reasoned Action (ToRA), Ajzen & Fishbein (1975) suggest that a person’s preference in viewing risky investment will represent their attitude in making choices about these risks. In addition, the theory Risk Perception Attitude (RPA), Rimal & Real (2003) shows that a person’s risk perception motivates the action they will take and is believed to be able to change that decision making.

V. Risk Aversion

Risk aversion refers to the amount of financial risk faced by individuals and keeps them from making decisions (Ferreira & Dickason-Koekemoer, 2019). According to Kahneman & Tversky (1979) prospect theory discusses how individuals make decisions and seek information sources before determining the concept of a decision. Prospect theory explains that individuals who have a higher irrational inclination are reluctant to risk profits (gains) compared to losing profits (losses). Someone with a profit will be more risk averse, while someone who experiences a loss will be willing to take risks (risk seeking). Individuals will avoid financial risks that make them disappointed. Financial risk aversion or the tendency to avoid uncertainty in making investments has a positive relationship with aversion to disappointment. A person who made financial decision see a greater degree of disappointment to be faced than the benefit received. Belousova et al., (2019) said when a person is aware of financial risks; this understanding becomes an important consequent of choosing retirement products such as insurance. Risk aversion is an important determinant of financial and investment decision-making (Nguyen et al., 2021).

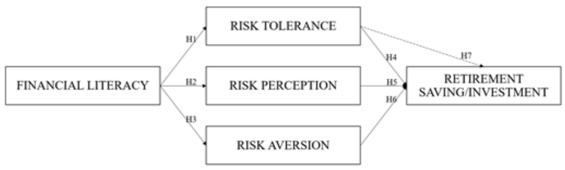

Figure 1: Conceptual Framework

Hypothesis Development

Bayar et al., (2020); Bayrakdaroglu & Kuyu (2018); Ferreira & Dickason-Koekemoer (2019); Naiwen et al., (2021); Nguyen et al., (2021) on their research prove that the results of financial literacy have a positive influence on risk tolerance. The level of financial literacy affects risk tolerance positively. The increasing level of financial literacy allows individuals to be more aware of their financial investment decisions. With the increasing awareness of individuals about investment products and their derivatives, they will tend to be risk tolerant. In another study by Luh et al., (2021) showed different results that financial literacy did not have a positive effect on risk tolerance. A high level of financial literacy does not necessarily reduce enthusiasm for investing, who are easily influenced by promotions and social media that lead to problems. Based on the description above, the first hypothesis can be concluded as:

H1: Financial literacy has an effect on risk tolerance.

Aeknarajindawat (2020); Munawar et al., (2020); Nguyen et al., (2021) on their research prove that the results of financial literacy have a positive influence on risk perception. Some individuals can accept low risk, but others are able to accept high risk. The higher the individual's financial literacy, the higher the understanding of the risk involved in an investment. Financial literacy provides an overview, assessment, approach, and confident in the risks of investing in the future. Based on the description above, the second hypothesis can be concluded as:

H2: Financial literacy has an effect on risk perception

Adil et al., (2022); Mudzingiri et al., (2021); Nyanga & Chindanya (2021) on their research prove that the results of financial literacy have a positive influence on risk aversion. Risk aversion refers to the level of aversion to a financial risk that is avoided. Risk aversion prioritizes certainty over uncertainty. When making investment, it is important for us to understand financial literacy in order to avoid losses. High financial literacy will make someone skip big profits because they choose definite profits based on their calculations. Financial literacy in women shows a positive significance result compared to men in investment decisions. Based on the description above, the third hypothesis can be concluded as:

H3: Financial literacy has an effect on risk aversion.

Naiwen et al., (2021); Nur Aini & Lutfi (2019); T. S. & Amrutha (2021); Magendans et al., (2017) on their research prove that the results of risk tolerance have a positive effect on retirement saving/investment. The higher the risk tolerance level, the higher the intention to invest in high- risk assets. In another study by Darwati et al., (2022); Mahdzan et al., (2020); Naiwen et al., (2021) showed different results that risk tolerance had a negative effect on retirement saving/investment. A person's low risk tolerance causes a lack of prudence in choosing a high-risk retirement investment. Based on the description above, the fourth hypothesis can be concluded as:

H4: Risk tolerance has an effect on retirement saving/investment.

Adil et al., (2022); Hidayah (2021); Nguyen et al., (2021); Trang & Tho (2017) on their research prove that risk perception has a positive effect on retirement saving/investment. The higher the perception of the investment is risky, then they tend to avoid the allocation of funds and consider various things before making the right decision. In another study by Kaur & Arora (2021); Nur Aini & Lutfi (2019); Nguyen et al., (2016) proved different results that risk perception has a negative effect on retirement saving/investment. In other words, someone who has a high perception of risk automatically has a low influence on investment intentions for retirement. Based on the description above, the fifth hypothesis can be concluded as:

H5: Risk perception has an effect on retirement saving/investment.

Amari et al., (2020) shows that having high risk aversion has a positive effect on the lack of intention to invest in retirement. Unstable investments can enrich or drain a person's saving. Most people choose low-risk investments with reasonable returns, not the other way around. In another study by Michailova et al., (2017); Nur Aini & Lutfi (2019); Adil et al., (2022) proved different results that risk aversion has a negative effect on retirement saving/investment. A person's high or low lost aversion can't influence someone to invest in high-risk and low-risk assets. Based on the description above, the sixth hypothesis can be concluded as:

H6: Risk aversion has an effect on retirement saving/investment.

Naiwen et al., (2021) shows that risk tolerance mediates positively between financial literacy and retirement saving/investment. In another study by Luh et al., (2021); Magendans et al., (2017); Nguyen et al., (2021) show that risk tolerance mediates negatively between financial literacy and retirement saving/investment. This is caused by income received factor. When a person's risk tolerance and financial literacy are high enough, it does not guarantee or encourage someone to save/invest for the future. Based on the description above, the seventh hypothesis can be concluded as:

H7: Risk tolerance mediates financial literacy on retirement saving/investment.

Table 1: Measurement of Research

Variable	Definition	Indicator	Measurement	Source
Financial Literacy	Individual's intention and/or ability to invest for retirement.	1. Comparing to other people, I know more about finance and investing. 2. I understand finance and investment. 3. I am sure of my knowledge in finance and investment.	Likert 1-4	Nguyen et al., (2021) Hastings & Mitchell, (2020); Hauff et al., (2020)
Risk Tolerance	Individual's intention and/or ability to invest for retirement accept when making financial decisions.	1. Investing is too difficult to understand. 2. I am more comfortable putting my money in a bank account than in the stock market. 3. When risk appears, I immediately think of loss. 4. Making money on stocks/bonds is just a factor of luck. 5. In investing, security is more important than results.	Likert 1-4	(Budiarto, 2017) (Grable,2018)
Risk Perception	Person's assumption/preference to see a situation that has a risk, especially if the assumption/preference has an effect on attitude and investment intentions.	1. Not saving/investing regularly for retirement will be risky. 2. It is very risky if you do not have good long-term financial goals such as preparing financially for retirement. 3. Don't skimp on having reserve funds retirement will be risky.	Likert 1-4	(Shehata et al., 2021) (Nguyen et al., 2021)
Risk Aversion	The amount of financial risk faced by individuals and keeps them from making decisions.	1. Long-term savings/investments can be in the form of deposits, stocks, houses, insurance. 2. It is important for me to have retirement investments.	Likert 1-4	(Ferreira & Dickason-Koekemoer, 2019) Amari et al., (2020)
Retirement Saving/Investment	The intention in planning investments for the future.	1. I set the budget allocation for social security and financial while retirement.	Likert 1-4	Hoffmann & Plotkina, (2020)
		2. I will save money for social security and financial while retirement. 3. I have the intention of saving money for social and financial security while retirement.		Nguyen et al., (2021)

Source: Data compilation, 2022

METHODOLOGY

Research Design

According to Sugiyono (2018), population is the subject or object targeted in the study. This research uses primary data collection method. The sample entity summarized according to the theory by Hair et al., (2017) which the total statement indicator multiplied by 5 to 10. Referring to this theory, the target questionnaire was distributed using 16 question indicators with a total of 130 respondents collected via online Google Form with link https://forms.gle/5oe4WxVyaGAtm7t76 during May 2022.

The Sampling Method

The sampling technique in this study was carried out using the Tuner (2020) purposive sampling method. The target population is active employees with criteria:

a. Employee who has at least 2 years active working till May 2022.
b. Employee who has status permanent.
c. Employee who have a fixed income monthly and in a productive age range.

The scale used in the questionnaire is the Likert scale.

Table 2: Demographics Respondent by Age

Age Range	Quantity	Percentage
20 - 25 yo	20	15.4
26 - 30 yo	41	31.5
31 - 35 yo	21	16.2
36 - 40 yo	28	21.5
41 - 46 yo	20	15.4
Total	130	100.0

Source: Data processed, 2022

Table 3: Demographics Respondent by Home base

Homebase	Quantity	Percentage
Bekasi	36	27.7
Bogor	3	2.3
Depok	18	13.8
Jakarta	62	47.7
Tangerang	11	8.5
Total	130	100.0

Source: Data processed, 2022

Table 4: Demographics Respondent by Gender

Gender	Quantity	Percentage
Male	52	40.0
Female	78	60.0
Total	130	100.0

Source: Data processed, 2022

Table 5: Demographics Respondent by Income

Income/month	Quantity	Percentage
≤ Rp 5.999.999	29	22.3
Rp 6.000.000 - Rp 8.999.999	41	31.5

Rp 9.000.000 - Rp 11.999.999	20	15.4
≥ Rp 12.000.000	40	30.8
Total	130	100.0

Source: Data processed, 2022

Data Testing Method

I. Validity Test

The instrument validity test in this study is declared valid if the statement items in the questionnaire are good for measuring research variables. If the value of validity of each answer is ≥0,5, the result is valid (Hair et al., 2017). Testing the validity of the instrument in this study was carried out with Pearson correlation analysis.

II. Reliability Test

Reliability test on a research instrument is a test used to determine whether a questionnaire used in collecting research data can be said to be reliable or not. In the reliability test of this study using Cronbach's Alpha analysis. Where if a variable shows Cronbach's Alpha value > 0.70, it can be concluded that the variable can be said to be reliable or consistent in measuring Hair et al., (2017).

1. If the value of Cronbach's Alpha > 0.7 then the questionnaire is declared reliable.
2. If the value of Cronbach's Alpha < 0.7 then the questionnaire is declared unreliable.

From the results of the validity and reliability of the research questions, can be seen in the following table:

Table 6: Results of Validity Test and Reliability Test

Variable	LoadingFactor	CronbachAlpha	Kriteria
FL1	0.698	0.844	Valid dan Reliable
FL2	0.928	0.844	Valid dan Reliable
FL3	0.818	0.844	Valid dan Reliable
RT2	0.620	0.720	Valid dan Reliable
RT3	0.653	0.720	Valid dan Reliable
RT4	0.602	0.720	Valid dan Reliable
RT5	0.676	0.720	Valid dan Reliable
RP1	0.854	0.742	Valid dan Reliable
RP2	0.805	0.742	Valid dan Reliable
RP3	0.504	0.742	Valid dan Reliable
RA1	0.896	0.786	Valid dan Reliable
RA2	0.720	0.786	Valid dan Reliable
RSI1	0.983	0.860	Valid dan Reliable
RSI2	0.877	0.860	Valid dan Reliable
RSI3	0.979	0.860	Valid dan Reliable

Source: Data processed, 2022

Hypothesis Testing

The data analysis method used is Structural Equation Modeling through Partial Lease Squares (Haryono, 2017). Before analyzing the proposed hypothesis, the goodness of fit model is tested first. The types of goodness of fit measures according (Ghozali, 2017):

1. Absolute fit measure, used to measure the overall fit model (both structural model and measurement model simultaneously). The criteria are by looking at the profitability value and the root mean square error of approximation (RMSEA).
2. Incremental fit measure is a measure used to compare the proposed model with other models specified by the researcher. The criteria are by looking at the Normed Fit Index (NFI), the Turker-Lewis Index (TLI), the Comparative Fit Index (CFI), and the Incremental Fit Index (IFI).
3. Parsimonious fit measure, which is to make adjustments to the fit measurement to be able to compare between models with different number of coefficients. Chi-square (CMIN/DF) with the recommended value being between 1-5 points.

Table 7: Goodness of Fit Model (H1-6)

Measure	Result	Cut-off Value	Decision
Probability	0.000	≥0.05	No Goodness of fit
RMSEA	0.126	≤0.08	No Goodness of fit
NFI	0.769	≥0.90	Marginal fit
TLI	0.761	≥0.90	Marginal fit
CFI	0.827	≥0.90	Marginal fit
IFI	0.832	≥0.90	Marginal fit
CMIN/DF	3.037	$1 \leq x \leq 5$	Goodness of fit

Source: Data processed, 2022

Table 8: Goodness of Fit Model (H7, direct)

Measure	Result	Cut-offValue	Decision
Probability	0.437	≥0.05	Goodness of fit
RMSEA	0.000	≤0.08	Goodness of fit
NFI	0.980	≥0.90	Goodness of fit
TLI	1.000	≥0.90	Goodness of fit
CFI	1.000	≥0.90	Goodness of fit
IFI	1.000	≥0.90	Goodness of fit
CMIN/DF	0.995	$1 \leq x \leq 5$	Goodness of fit

Source: Data processed, 2022

Table 8: Goodness of Fit Model (H7, indirect)

Measure	Result	Cut-off Value	Decision
Probability	0.200	≥0.05	Goodness of fit
RMSEA	0.040	≤0.08	Goodness of fit
NFI	0.932	≥0.90	Goodness of fit
TLI	0.982	≥0.90	Goodness of fit
CFI	0.987	≥0.90	Goodness of fit

IFI	0.988	≥0.90	Goodness of fit
CMIN/DF	1.205	1 ≤ x ≤ 5	No Goodness of fit

Table 9: Regression Analysis (H1-6)

Variabel	Coeff	SE	CR	Prob	Result
FL → RT	0.316	0.158	2.000	0.046	+significant
FL → RP	0.289	0.111	2.599	0.009	+significant
FL → RA	0.189	0.094	2.024	0.043	+significant
RT → RSI	0.077	0.068	1.138	**0.255**	Not significant
RP → RSI	0.773	0.110	7.020	0.000	+significant
RA → RSI	0.317	0.103	3.072	0.002	+significant

Source: Data processed, 2022

Table 10: Regression Analysis (H7)

H7 (direct)					
Variabel	**Coeff**	**SE**	**CR**	**Prob**	**Keterangan**
FL → RSI	0.417	0.105	3.970	0.000	+significant
H7 (indirect)					
Variabel	**Coeff**	**SE**	**CR**	**Prob**	**Keterangan**
FL → RT	0.346	0.173	1.996	0.046	+significant
RT → RSI	0.182	0.074	2.461	0.014	+significant
FL → RSI	0.346	0.101	3.443	0.000	+significant

Source: Data processed, 2022

Discussion of Research Results

Based on table 9, the result of the analysis shows positive and significant influence between financial literacy variable and risk tolerance variable with a probability value of 0.046, coefficient value of 0.316. This is in accordance with the results by Bayar et al., (2020); Bayrakdaroglu & Kuyu (2018); Ferreira & Dickason- Koekemoer (2019); Naiwen et al., (2021); Nguyen et al., (2021) who prove that financial literacy have a positive influence on risk tolerance. People will have to add by financial knowledge and learn retirement products investment that offered. The purpose is to know how to invest properly. By knowledge the right way to invest, a person will not feel afraid when he loses their money (risk). The increasing level of financial literacy allows individuals to be more aware in their retirement investment decisions. With the increasing awareness of individuals about investment products and derivatives, they will tend to be tolerant of risks that are unseen.

HI: Effect of Financial Literacy to Risk Tolerance.

Based on table 9, the result of the analysis shows positive and significant influence between financial literacy variable and risk perception variable with a probability value of 0.009, coefficient value of 0.289. This is in accordance with the results by Aeknarajindawat (2020); Munawar et al., (2020); Nguyen et al., (2021) who prove that financial literacy result have a positive influence on risk perception. By having strong financial literacy, a person will be optimistic and never give up start investing on retirement fund. The higher the individual's financial literacy, the higher the understanding/mindset of the risk involved in an investment that will be significant for financial success.

H2: Effect of Financial Literacy to Risk Perception.

Based on table 9, the result of the analysis shows positive and significant influence between financial literacy variable and risk aversion variable with a probability value of 0.043, coefficient value of 0.189. This is in accordance with the results by Adil et al., (2022); Mudzingiri et al., (2021); Nyanga & Chindanya (2021) who prove that financial literacy results have a positive influence on risk aversion. By understanding risk management, someone can take prevention things that are not desirable. If a person's financial literacy is low, risk management properly will be very limited (less risk aversion) so it can be ascertained that the investment is in danger. It is important for someone to always learn and dig up information first before starting to invest in any form to mitigate risk.

H3: Effect of Financial Literacy to Risk Aversion.

Based on table 9, the result of the analysis shows that there is no effect between risk tolerance variable and retirement saving/investment variable with a probability value of 0.255, coefficient value of 0.077. This is in accordance with the results by Darwati et al., (2022); Mahdzan et al., (2020); Naiwen et al., (2021) which proves the results of risk tolerance have no effect on retirement saving/investment. The age group of respondents in this study was 41 people aged 26-30 years old; the majority was female as 78 people, with an income IDR6.000.000- per month. A person's high/low risk tolerance does not result in the presence or absence of a desire to invest in retirement fund. Risk tolerance is subjective in every individual, influenced by social and demographics factors (age, gender, education level, family, etc).

H4: Effect of Risk Tolerance to Retirement Saving/Investment.

Based on table 9, the result of the analysis shows positive and significant influence between risk perception variable and retirement saving/investment variable with a probability value of 0.000, coefficient value of 0.773. This is in accordance with the research results by Adil et al., (2022); Hidayah (2021); Nguyen et al., (2021); Trang & Tho (2017) who prove the results of risk perception have a positive influence on retirement saving/investment. Investing is not as easy saving money in the bank. The higher the perceived risk of the investment, the higher the tendency of a person to avoid the allocation of funds and consider various things before making the right decision. This also has an impact on a person's attitude and behavior to be willing to invest now and in the future. If someone does not have a positive risk perception, that person is hard to invest.

H5: Effect of Risk Perception to Retirement Saving/Investment.

Based on table 9, the result of the analysis shows positive and significant influence between risk aversion variable and retirement saving/investment variable with a probability value of 0.000, coefficient value of 0.317. This is in accordance with the research results by Amari et al., (2020); Nguyen et al., (2021) who prove the results of risk aversion have a positive influence on retirement saving/investment. If investment crisis arises fatal and not handled carefully and thoroughly, it will spread to other risks that lead to investment failure. Risk aversion will make an individual always aware of the various risks faced, including the risks in investing.

H6: Effect of Risk Aversion to Retirement Saving/Investment.

Based on table 10, the result of the analysis shows positive and significant of risk tolerance as a mediator of financial literacy and retirement saving/investment with probability value of 0.046, coefficient value of 0.316. This is in accordance Naiwen et al., (2021); Nguyen et al., (2021); Nguyen et al., (2016) show that risk tolerance mediates positively between financial literacy and retirement saving/intention. Success in investing requires a process that must be passed by increasing knowledge and experience, including always paying attention to the right ways to invest. Successful investing takes time, dedication, sacrifice (money). The higher a person's financial literacy, the higher the tolerance to face the risks to make investment realized immediately.

H7: Risk Tolerance as a Mediator of Financial Literacy and Retirement Saving/Investment.

CONCLUSION

Based on the research conducted, it is concluded that:

1. Financial literacy has a positive and significant effect on risk tolerance.
2. Financial literacy has a positive and significant effect on risk perception.
3. Financial literacy has a positive and significant effect on risk aversion.
4. Risk tolerance has no effect on retirement saving/investment.
5. Risk perception has a positive and significant effect on retirement saving/investment.
6. Risk aversion has a positive and significant effect on retirement saving/investment.
7. Risk tolerance has a positive mediator between financial literacy and retirement saving/investment.

SUGGESTION

The suggestions that can be recommended for further research are:

1. Future researchers are expected to be able to add dependent variable of asset allocation/investment decision Naiwen et al., (2021); Aeknarajindawat (2020); Nguyen et al., (2016) which can be used as the final result of the realization/correlation of income and psychological factors/financial risk mitigation.
2. Future researchers should be able to use banking data (retirement savings program) to show accurate data on the number of applicants who independently join or participate in the program outside the company program where they work.

IMPLICATIONS

For companies/employers

In terms of retirement, the company must have a comprehensive retirement plan for its employees. All permanent employees are included in the local policy government guarantee (BPJS) and are also entitled to the benefits of the company's independently for retirement program. This is intended as an additional benefit that complements government program. The monthly fee is paid jointly to the employee based on a predetermined percentage. Companies must understand the importance of welcoming retirement life so employee can smoothly continue their life in a good welfare. The existence of a retirement preparation program aims to provide life skills training through financial and psychological guidance and training so that they be able to design retirement life according to their needs, interests, and life plans during retirement. Companies can also provide Employee flexibility to apply for leave six months before retirement to start a new business.

For government

The implementation of the welfare security program is one of the responsibilities and obligations governments to provide socio-economic protection to the community. The government needs to play an active role in encouraging citizens to start thinking a retirement fund that will be very beneficial for them in their old age. The government should be involved in the process of educating citizens about the importance of retirement fund for them. Currently only civil servants receive pension insurance form the government while private companies do not. The government only hands over the management of retirement fund to one particularly institution, which in the end will forbid non-government pension fund industry. The government has enacted Law No. 40/2004 on the National Social Security System which regulates retirements for all Indonesian workers but has not been implemented because there is no government regulation and still voluntary. By requiring the company to include employees in the retirement fund, it means that there is a company contribution in paying retirement contribution which will relieve the employees. Retirement program can be taken when the worker is 55 years old or has been terminated as long as a member for 5 years minimum. This program has not been implemented by all companies in Indonesia due to weak law enforcement by government. Government should enforce the existing policy so all companies are obedient and submissive in realizing it.

REFERENCES

Adil, M., Singh, Y., & Ansari, M. S. (2022). How financial literacy moderate the association between behaviour biases and investment decision? Asian Journal of Accounting Research, 7(1), 17–30. https://doi.org/10.1108/ajar-09-2020-0086

Aeknarajindawat, N. (2020). The combined effect of risk perception and risk tolerance on the investment decision making. Journal of Security and Sustainability Issues, 9(3), 807–818. https://doi.org/10.9770/JSSI.2020.9.3(7)

Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. Psychological Bulletin, 82(2), 261–277. https://doi.org/10.1037/h0076477

Amari, M., Salhi, B., & Jarboui, A. (2020). Evaluating the effects of sociodemographic characteristics and financial education on saving behavior. International Journal of Sociology and Social Policy, 40(11–12), 1423–1438. https://doi.org/10.1108/IJSSP-03-2020-0048

Ansofino, J. Y. (2016). Buku Ajar Ekonometrika. Yogyakarta: Deepublish. Retrieved from https://opac.perpusnas.go.id/DetailOpac.asp x?id=1143552

Bayar, Y., Sezgin, H. F., Öztürk, Ö. F., & Şaşmaz, M. Ü. (2020). Financial Literacy and Financial Risk Tolerance of Individual Investors: Multinomial Logistic Regression Approach. SAGE Open, 10(3). https://doi.org/10.1177/2158244020945717

Bayrakdaroglu, A., & Kuyu, E. (2018). FarkliDemografiProfillerdeki Kadinlarin Yatirim Kararlariİ lişkinFinansalRisk Algilarinii̇ ncelenmesi. Mehmet Akif Ersoy Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, 705–724. https://doi.org/10.30798/makuiibf.414065

Belousova, T. A., Gryzenkova, Y. V., Kirillova, N. V., Vasyakin, B. S., & Pozharskaya, E. L. (2019). The financial literacy assessment among students majoring in the field of finance. EurAsian Journal of BioSciences, 13(1), 141–148. Retrieved from https://www.proquest.com/openview/7aaa2a 304f3cdf6ae7bdd03cc1570d6a/1?cbl=20427 20&pq-origsite=gscholar

Budiarto, A. (2017). Pengaruh Financial Literacy, Overconfidence, Regret Aversion Bias, dan Risk Tolerance Terhadap Keputusan Investasi (Studi pada investor PT. Sucorinvest Central Gani Galeri Investasi BEI Universitas Negeri Surabaya). Jurnal Ilmu Manajemen (JIM), 5(2), 1–9. Retrieved from https://jurnalmahasiswa.unesa.ac.id/index.php/jim/article/view/19441/17757

Darwati, J. T., Zulkifli, Z., & Rachbini, W. (2022). Pengaruh Literasi Keuangan, Self Control Dan Risk Tolerance Terhadap Keputusan Investasi Melalui Perilaku Keuangan (Studi Kasus Karyawan Bank BUMN di Kota Depok). Jurnal Ilmiah PERKUSI, 2(1), 8. https://doi.org/10.32493/j.perkusi.v2i1.17616

Deenanath, V., Danes, S. M., & Jang, J. (2019). Purposive and unintentional family financial socialization, subjective financial knowledge, and financial behavior of high school students. Journal of Financial Counseling and Planning, 30(1), 83–96. https://doi.org/10.1891/1052-3073.30.1.83

Ferreira, S., & Dickason-Koekemoer, Z. (2019). The relationship between depositor behaviour and risk tolerance in a South African context. Advances in Decision Sciences, 23(3). https://doi.org/10.47654/v23y2019i3p36-55

GGrlitz, K., & Tamm, M. (2015). Parenthood and Risk Preferences. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2618442

Ghozali, I. (2017). Model Persamaan Struktural Konsep Dan Aplikasi Program AMOS 24. Semarang: Badan Penerbit Universitas Diponegoro

Grable, J. E. (2018). Financial Risk Tolerance: A Psychometric Review. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3088292

Hair, J., Hollingsworth, C. L., Randolph, A. B., & Chong, A. Y. L. (2017). An updated and expanded assessment of PLS-SEM in information systems research. Industrial Management and Data Systems, 117(3), 442–458. https://doi.org/10.1108/IMDS-04-2016-0130

Haryono, Siswoyo. 2017. Metode SEM Untuk Penelitian Manajemen Dengan AMOS LISREL PLS. Luxima Metro Media. Retrieved from http://repository.umy.ac.id/handle/12345678 9/12640

Hastings, J., & Mitchell, O. S. (2020). How financial literacy and impatience shape retirement wealth and investment behaviors. Journal of Pension Economics and Finance, 19(1), 1–20. https://doi.org/10.1017/S1474747218000227

Hauff, J. C., Carlander, A., Gärling, T., & Nicolini, G. (2020). Retirement Financial Behaviour: How Important Is Being Financially Literate?

Journal of Consumer Policy, 43(3), 543–564. https://doi.org/10.1007/s10603-019-09444-x

Hidayah, E. (2021). Investment Decision : The Analysis of Risk Perception, Regret Aversion Bias Perception, and Overconfidence. Review of Integrative Business and Economics Research, 10, (3). Retrieved from https://www.proquest.com/docview/259867 0231?pq-origsite=gscholar&fromopenview=true

Hoffmann, A. O. I., & Plotkina, D. (2020). Why and when does financial information affect retirement planning intentions and which consumers are more likely to act on them? Journal of Business Research, 117(September 2019), 411–431.

https://doi.org/10.1016/j.jbusres.2020.06.02 3

Huber, J., Palan, S., & Zeisberger, S. (2019). Does investor risk perception drive asset prices in markets? Experimental evidence. Journal of Banking and Finance, 108, 1–17. https://doi.org/10.1016/j.jbankfin.2019.1056 35

Kahneman, Daniel dan Amos Tversky. 1979. Prospect Theory: An Analysis of Decision Under Risk. Econometrica, 47,.263-291 https://doi.org/10.2307/1914185

Kaur, S., & Arora, S. (2021). Role of perceived risk in online banking and its impact on behavioral intention: trust as a moderator. Journal of Asia Business Studies, 15(1), 1–30. https://doi.org/10.1108/JABS-08-2019-0252

Lee, S. T., & Hanna, S. D. (2020). Financial knowledge overconfidence and early withdrawals from retirement accounts. Financial Planning Review, 3(2). https://doi.org/10.1002/cfp2.1091

Luh, N., Wiagustini, P., Bagus, I., & Sedana, P. (2021). The Effect Of Financial And Personal Literacy On Risk Tolerance And Risk Financial Decisions In Small Medium Micro Businesses In Bali. Journal of Management Information and Decision Sciences Volume 24, Special Issue 6, 2021. Retrieved from https://www.abacademies.org/articles/the- effect-of-financial-and-personal-literacy-on- risk-tolerance-and-risk-financial-decisions-in-small-medium-micro-businesses-in-b-12852.html

Magendans, J., Gutteling, J. M., & Zebel, S. (2017). Psychological determinants of financial buffer saving: the influence of financial risk tolerance and regulatory focus. Journal of Risk Research, 20(8), 1076–1093. https://doi.org/10.1080/13669877.2016.1147 491

Mahdzan, N. S., Zainudin, R., & Yoong, S. C. (2020). Investment literacy, risk tolerance and mutual fund investments: An exploratory study of working adults in Kuala Lumpur. International Journal of Business and Society, 21(1), 111–133. DOI:10.33736/ijbs.3230.2020

Michailova, J., Mačiulis, A., & Tvaronavičienė, M. (2017). Overconfidence, risk aversion and individual financial decisions in experimental asset markets. Economic Research-Ekonomska Istrazivanja , 30(1), 1119–1131.
https://doi.org/10.1080/1331677X.2017.131 1234

Mudzingiri, C., Guvuriro, S., & Gomo, C. (2021). Exploring Association between Self- Reported Financial Status and Economic Preferences Using Experimental Data. Journal of Risk and Financial Management, 14(6), 243.
https://doi.org/10.3390/jrfm14060243

Munawar, A., Suryana, S., & Nugraha, N. (2020). Pengaruh Literasi Keuangan Dan Faktor Demografi Terhadap Pengambilan Keputusan Berinvestasi. Akuntabilitas, 14(2),253–268.
https://doi.org/10.29259/ja.v14i2.11480

Naiwen, L., Wenju, Z., Mohsin, M., Ur Rehman, M. Z., Naseem, S., & Afzal, A. (2021). The role of financial literacy and risk tolerance: An analysis of gender differences in the textile sector of Pakistan. Industria Textila, 72(3), 300–308.
https://doi.org/10.35530/IT.072.03.202023

Ngo, T. T., Le, M. Q., & Ngo, T. P. (2019).

Incorporating risk into technical efficiency for Vietnam's and ASEAN banks. Journal of Asian Business and Economic Studies, 26(1), 2–16. https://doi.org/10.1108/jabes-10-2018-0083

Nguyen, Linh T.M., Gallery, G., & Newton, C. (2016). The influence of financial risk tolerance on investment decision-making in a financial advice context1. Australasian Accounting, Business and Finance Journal, 10(3), 3–22. https://doi.org/10.14453/aabfj.v10i3.2

Nguyen, Linh Thi My, Nguyen, P. T., Tran, Q. N. N., & Trinh, T. T. G. (2021). Why does subjective financial literacy hinder retirement saving? The mediating roles of risk tolerance and risk perception. Review of Behavioral Finance. https://doi.org/10.1108/RBF-03- 2021-0036

Nur Aini, N. S., & Lutfi, L. (2019). The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision making. Journal of Economics, Business & Accountancy Ventura, 21(3), 401.
https://doi.org/10.14414/jebav.v21i3.1663

Nyanga, T., & Chindanya, A. (2021). From Risk Aversion to Risk Loving. Ushus Journal of Business Management, 20(1), 1–14. https://doi.org/10.12725/ujbm.54.1

Rimal, R. N., & Real, K. (2003). Perceived risk and efficacy beliefs as motivators of change: Use of the risk perception attitude (RPA) framework to understand health behaviors. Human Communication Research, 29(3), 370–399.
https://doi.org/10.1093/hcr/29.3.370

Shariff, N. S. M., & Isah, N. A. M. (2019). An empirical study on the determinants of retirement savings attitude in Malaysia! Journal of Physics: Conference Series, 1366(1), 1–7. https://doi.org/10.1088/1742-6596/1366/1/012110

Shehata, S. M., Abdeljawad, A. M., Mazouz, L. A., Aldossary, L. Y. K., Alsaeed, M. Y., & Sayed, M. N. (2021). The moderating role of perceived risks in the relationship between financial knowledge and the intention to invest in the Saudi Arabian stock market. International Journal of Financial Studies, 9(1), 1–16.
https://doi.org/10.3390/IJFS9010009

Sugiyono. 2018. Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta.
Retrieved from http://inlislite.uin- suska.ac.id/opac/detail-opac?id=22862

T. S., S., & Amrutha, P. (2021). An Exploratory Study on the Factors Affecting Retirement Planning among Working Women in the City of Bengaluru. Indian Journal of Commerce & Management Studies, XII(1), 01. https://doi.org/10.18843/ijcms/v12i1/01

Tca, L., News, R., & Mar, C. C. (2018). Review : ' Meet the Frugalwoods : Achieving Financial Independence Through Simple Living ,' by Elizabeth Willard Thames. 2–4.

Trang, P. T. M., & Tho, N. H. (2017). Perceived Risk, Investment Performance and Intentions in Emerging Stock Markets. International Journal of Economics and Financial Issues, 7(1), 269–278. http:www.econjournals.com

Tuner D.P (2020). Sampling Methods in Research Design. The Journal of Head and Face Pain https://doi.org/10.1111/head.13707

Wilson, R. S., Zwickle, A., & Walpole, H. (2019). Developing a Broadly Applicable Measure of Risk Perception. Risk Analysis, 39(4), 777–791. https://doi.org/10.1111/risa.13207

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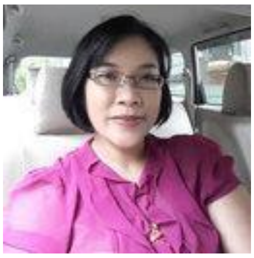

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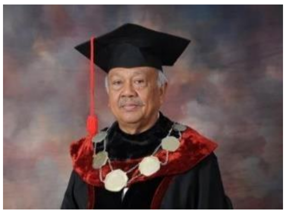

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