

Lecturer's Behavior Finance in Making Investment Decisions on Financial Assets from the Perspective of Psychological Factors

Yuniningsih Yuniningsih^{*1}, Bowo Santoso², Nanda Farah Zhafirah³, Difa Rachmayanti⁴,
Dina Anggraini⁵

^{1,2,3,4,5}Universitas Pembangunan Nasional "Veteran" Jawa Timur, Indonesia

yuniningsih@upnjatim.ac.id

Abstract: This research is a continuation of research year 1 with the title "Lecturer Financial Asset Investment Interest in Surabaya". In the first year of research, the research was limited to investment interest as an endogenous latent variable. 3 exogenous latent variables were consisting of financial literacy, attitude, and motivation. There is also 1 moderating variable, namely family. The purpose of this study was to determine the behavior of lecturers in Surabaya in making investment decisions. 3 factors as exogenous variables are investment interest, risk perception, and risk tolerance. These factors affect investment decisions as endogenous variables. The analysis tool used is SEM PLS and with 56 participant's data. The results show that investment interest greatly influences investment decisions. While the other two variables, risk perception, and risk tolerance do not affect investment decisions. The dependent variable or as an endogenous variable in this study is investment decisions and 3 exogenous latent variables, namely investment interest, risk perception, and risk tolerance.

Keywords: Investment Decision, Investment Interest, Risk Perception, Risk Tolerance

INTRODUCTION

Most of the world community, including Indonesia, began in early 2020 facing the Covid-19 pandemic. The high level of transmission from the pandemic affects the health and economy of the community. The impact of the economy is felt at the level of investment in each country. The level of investment in both financial assets and real assets is highly dependent on the behavior of economic actors or investors, both individually and institutionally.

Many factors influence investment decisions, ranging from demographics, psychology, fundamental factors, and other macro factors. Demographic factors can be seen in terms of gender, profession, age, income level, family (Chavali and Mohan Raj 2016); (Yuniningsih Yuniningsih and Santoso 2020). Psychological factors in terms of attitude, evaluation, financial literacy, herding, motivation, loss aversion, regret aversion, and the illusion of control, (Y Yuniningsih and Taufiq 2019) (Yuniningsih Yuniningsih et al. 2020), (Yuniningsih Yuniningsih and Santoso 2020). Other psychological factors can be investment interest, risk perception, overconfidence, and others. The theoretical basis of this research uses prospect theory developed by (Kahneman 1979), (Kahneman and Tversky 2013) which explains the behavior of people in making decisions are faced with two choices in a gain position or a loss position.

This study examines how a lecturer makes investment decisions with factors of interest, risk perception, and risk tolerance. The courage to invest in an investor or lecturer should indeed consider the investment risks that must be faced. According to (Seo, Goldfarb, and Barrett, 2010), risk-taking is divided into two, namely less risk-taking or risk-averse and greater risk-taking or risk-seeking. Based on opinion (Seo, Goldfarb, and Barrett, 2010), The magnitude of risk-taking carried out by investors will determine whether they are classified as risk-taking or risk-seeking investors and vice versa as risk-averse.

Investors' investment interest can be seen from several characteristics such as efforts to find out about the type of investment, learn, and practice or implement (Cahya, 2019). (Situmorang, Andreas, and Natariasari 2014) state the characteristics of investment interest such as spending time studying and understanding investments, trying to invest in that type of investment, or increasing the portion of investments that have been made previously.

It can be concluded that if someone is interested, they are likely to have a very large curiosity about investment. The more interested in investing, the more influencing investment decision-making.

Risk perception in making investment decisions plays an important role, especially in conditions of uncertainty. An investor who invests will pay attention to various possible risks and how much risk he will face later. Risk perception is a self-perception of losses caused by investing in shares in the capital market (FAHREZA 2020). This opinion supports the research conducted (Nosić and Weber 2010) states that the behavior of investors in making investment decisions is related to the subjective attitude in dealing with risk.

Another psychological factor in this study is risk tolerance. Risk tolerance discusses how an investor understands the magnitude of the risk faced and how solutions must be taken. As said by (Ainia and Lutfi 2019) that to get the expected rate of return in the future from an investment, investors must understand the magnitude of the risk of the chosen investment, as well as the opportunities that will be received. Investors who have high-risk tolerance will be more daring to make an investment decision and invest their funds in the chosen investment.

Fundamental factors and financial behavior will determine the investment decisions that will be made. The courage of a lecturer in making investment decisions cannot be separated from how to behave daily, mindset, environment, and understanding of the importance of investing, especially in financial assets. Based on the explanation above, the research will focus on **“lecturer's behavior finance in making investment decisions on financial assets from the perspective of psychological factors”**.

Based on the description above, this research hypothesizes

- H1. Investment interest has a positive impact on investment decisions
- H2. Risk perception has a positive impact on investment decisions
- H3. Risk tolerance has a positive impact on investment decisions

METHOD

The population is lecturers in Surabaya, both teaching at State Universities (PTN) and Private Universities (PTS). Samples were taken from lecturers who have NIDN and have received Lecturer Certification (SERDOS). Data collection was carried out by distributing questionnaires and with a total of 56 data being processed. The measurement of variables is done with the Linkert scale. Investment decisions are measured by 5 indicators which are divided into 2 indicators referring to (Subash 2012) namely knowledge of investing in financial assets, knowledge of investing money. Meanwhile, 3 indicators refer to Andini, RA (2019), namely investment decisions after consideration, decisions based on information available in the market, investment decisions based on self-confidence. Investment interest is measured using 5 indicators that refer to (Fishbein and Ajzen 1975) namely believing in the benefits of investment, being responsible for investment rules, complying with the rules set by the institution, considering the amount of capital invested, dividing time between investment efforts and routine work. Risk perception uses 4 indicators out of 10 indicators from (Pasewark and Riley 2010) namely a high level of security, interest payments (dividends), projected income, investment returns. risk tolerance is measured using 3 indicators that refer to research (Grable and Lytton 1999) in (Ainia and Lutfi 2019) namely the comparison of profit and security, investment preferences, and investment situation. The analysis tool uses Partial Least Square (PLS).

RESULTS

Statistical Analysis

The picture below shows the influence between the independent variables of investment interest (X1), Risk Perception (X2), and Risk Tolerance (X3) on Investment Decisions. The explanation in Figure 1 is shown by a series of analyzes which will be presented in several tables.

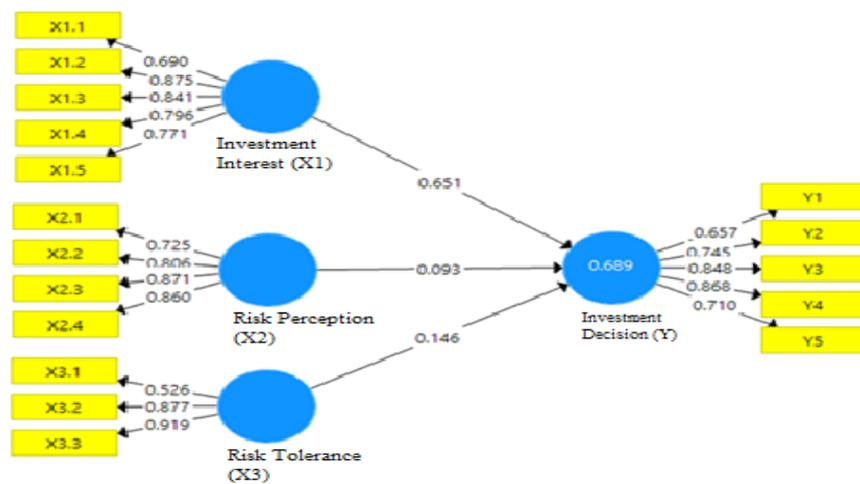


Figure 1. Direct testing with 61 of data

From a total of 61 data, it turns out that after being analyzed there are values for the outer loading indicators X1.1, X3.1, and Y1 has a value below 0.7 causing the data to be declared invalid. After evaluation, it turns out that there are several answers from the indicator variable that are not valid. As result 5 participants with inconsistent answers were excluded. So in this study using as many as 56 data in the analysis. Below is an image with 56 data.

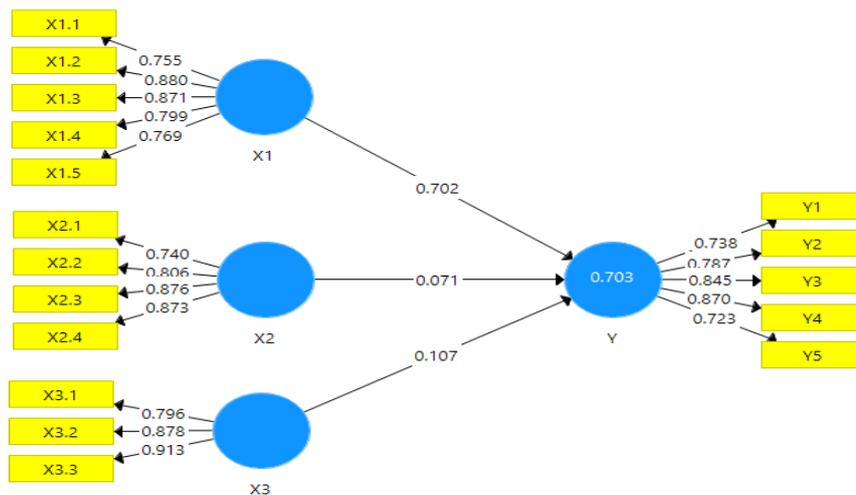


Figure 2. Direct testing with 56 of data

Figure 2 shows the outer loading value of more than 0.7 for all indicators indicating the validity of the data. Furthermore, the evaluation of the measurement model is presented in table 1, table 2, and table 3.

Measurement model evaluation

The results of the evaluation of the measurement model are presented in table 1 showing the value of Cronbach's Alpha, rho_A, Composite Reliability and Average Variance Extracted (AVE).

Table 1. Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Investment Interest (X1)	0.874	0.877	0.909	0.667
Risk Perception (X2)	0.846	0.873	0.895	0.682
Risk Tolerance (X3)	0.835	0.893	0.898	0.746
Investment Decision (Y)	0.853	0.863	0.895	0.631

Source: Data processed

Based on table 1, Internal Consistency is indicated by Cronbach's Alpha and Composite Reliability. Internal Consistency with Cronbach's Alpha Value is used to assess internal consistency which is calculated based on the inter-correlation of construct indicator values. Table 1 shows that Cronbach's Alpha value for all latent variables is more than 0.7. Thus, it can be concluded that the latent variables used in this study have high internal consistency.

Internal Consistency Test to test the suitability of other models using the reliability test with Composite Reliability. The measure of internal consistency of the indicators of each variable used in this study shows the Composite Reliability value of more than 0.7. This shows that there is a good internal consistency of each research construct (Ghozali and Latan 2015). The high internal consistency in this study is indicated by the Cronbach's Alpha value which is also supported by the Composite Reliability results that meet the requirements in the study. The rule of thumb used for Composite Reliability values is greater than 0.7 and Cronbach's alpha value is greater than 0.7 (Ghozali and Latan 2015).

Based on table 1, convergent validity is indicated by the value of Average Variance Extracted (AVE). Convergent validity shows the extent to which an indicator is positively correlated with other indicators in the same construct. Table 1 shows that the AVE value of each construct is more than 0.5. This means that each construct explaining more than half of the variance does come from its indicators (R. Hair and JJ n.d.), (J. F. Hair, Ringle, and Sarstedt 2011)

Discriminant validity is a value that indicates that a construct is different from another construct. Discriminant validity was tested at the indicator level and construct level. Discriminant validity at the indicator level is seen from the cross-loading value. According to (Barclay, Smith, and Watts 1995), the value of the outer loading of an indicator for a construct must be greater than the value of the outer loading indicator of another construct. The results of discriminant validity are shown in table 2.

Table 2. Cross Loadings

	Investment Interest (X1)	Risk Perception (X2)	Risk Tolerance (X3)	Investment Decision (Y)
X1.1	0.755	0.588	0.607	0.714
X1.2	0.880	0.687	0.664	0.725
X1.3	0.871	0.746	0.534	0.695
X1.4	0.799	0.706	0.421	0.631
X1.5	0.769	0.562	0.573	0.625
X2.1	0.471	0.740	0.285	0.445
X2.2	0.588	0.806	0.373	0.481
X2.3	0.798	0.876	0.538	0.662
X2.4	0.744	0.873	0.540	0.662
X3.1	0.452	0.337	0.796	0.354
X3.2	0.609	0.456	0.878	0.554
X3.3	0.680	0.568	0.913	0.656

Y1	0.671	0.478	0.607	0.738
Y2	0.561	0.432	0.427	0.787
Y3	0.734	0.674	0.490	0.845
Y4	0.738	0.714	0.546	0.870
Y5	0.575	0.406	0.413	0.723

Source: Data processed

Table 2 shows that the cross-loading values of each construct are Investment Interest (X1), Risk Perception (X2), and Risk Tolerance (X3). The yellow cells show the outer loading value of each indicator of each construct. These values are greater when compared to the outer loading value of the other construct indicators. It is concluded that the discriminant validity at the indicator level is good and in accordance with the provisions.

The next step after the research shows that discriminant validity has met the requirements, it is necessary to compare the AVE value of a construct with the correlation of the construct with other constructs. These results are shown in table 3

Table 3. Fornell-Larcker Criterion

	Investment Interest (X1)	Risk Perception (X2)	Risk Tolerance (X3)	Investment Decision (Y)
Investment Interest (X1)	0.817			
Risk Perception (X2)	0.807	0.826		
Risk Tolerance (X3)	0.690	0.544	0.864	
Investment Decision (Y)	0.834	0.696	0.631	0.795

Source: Data processed

Table 3 shows the comparison of the AVE root values of each construct. According to the criteria of Fornell and Larcker (1981), the AVE root value of each construct (yellow cells) is greater than the correlation value of one construct with other constructs.

Structural Model Evaluation

After evaluating the measurement model, the structural model evaluation is then carried out. Evaluation of the structural model in the form of collinearity at the Construct Level in table 4, Coefficient of Determination (R^2) in table 5, Effect Size f^2 in table 6.

Collinearity assessment at the construct level is needed to determine whether there is a high correlation between the constructs used. Collinearity testing at the construct level is carried out using the VIF value presented in table 4.

Table 4. Inner VIF Values

	Investment Interest (X1)	Risk Perception (X2)	Risk Tolerance (X3)	Investment Decision (Y)
Investment Interest (X1)				3.854
Risk Perception (X2)				2.870
Risk Tolerance (X3)				1.910
Investment Decision (Y)				

Source: Data processed

Table 4 shows that the VIF value of all constructs is less than 5 ($VIF < 5$). It can be concluded that there is no collinearity problem at the construct level.

Coefficient of determination (R^2)

The coefficient of determination (R^2) shows the magnitude of the combined effect of the exogenous latent variable on the endogenous latent variable. The coefficient of determination (R^2) in

this study is shown in table 5.

Table 5. R Square

	R Square	R Square Adjusted
Investment Decision (Y)	0.703	0.686

Source: Data processed

Table 5 shows the magnitude of the coefficient of determination of 0.703, which means that the influence of the exogenous latent variable on investment interest, risk perception, risk tolerance to the endogenous latent variable on investment decisions is quite high (moderate). The exogenous latent variable explains the endogenous latent variable of 0.703, the remaining 0.297 is explained by other variables.

Influence value f^2 was obtained by comparing the value of R^2 when all exogenous variables are included in the trajectory model analysis with one of the exogenous variables omitted the value of R^2 in path analysis. The influence value (f^2) shows how much the latent exogenous influence is at the structural level. The value of f^2 is categorized as a weak influence if the value is 0.02, the value of 0.15 have a sufficient influence and a value of 0.35 is categorized as a strong influence. The results of f^2 in this study are shown in table 6.

Table 6. f Square

	Investment Interest (X1)	Risk Perception (X2)	Risk Tolerance (X3)	Investment Decision (Y)
Investment Interest (X1)				0.431
Risk Perception (X2)				0.006
Risk Tolerance (X3)				0.020
Investment Decision (Y)				

Source: Data processed

Table 6 shows that the exogenous latent variables Risk Perception (X2) and Risk Tolerance (X3) have a weak influence at the structural level. Meanwhile, the exogenous latent variable of Investment Interest (X1) has a strong influence at the structural level.

Path Coefficient Value and Significance

The path coefficient shows the relationship between variables stated in the hypothesis. The path coefficient has a value between -1 and +1. The path coefficient value close to +1 indicates a very strong positive relationship, while the path coefficient value close to -1 indicates a very strong negative relationship. The results of data processing are shown in table 7. The significance level used in this study is 5%.

Table 7. Mean, STDEV, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Conclusion
Investment Interest (X1) → Investment Decision (Y)	0.702	0.693	0.151	4.663	0.000	Accepted
Risk Perception (X2) → Investment Decision (Y)	0.071	0.086	0.148	0.481	0.631	rejected
Risk Tolerance (X3) → Investment Decision (Y)	0.107	0.090	0.102	1.057	0.291	rejected

Source: Data processed

Based on table 5, the results of the study showed

- The hypothesis of the investment interest variable affects investment decisions
- The hypothesis of the risk perception variable does not affect the investment decision
- The risk tolerance variable hypothesis does not affect investment decisions

DISCUSSION

Research shows that investment interest influences investment decisions in a positive direction. These results support the hypothesis of this study. This shows that the amount of investment interest of lecturers in Surabaya greatly influences the size of the investment decision-making. The size of the investment interest of Surabaya lecturers is strongly influenced by how deep financial literacy is. A better understanding of investment conditions and financial information is one of the factors in investment decisions. What demographic conditions, especially family conditions, income conditions, and family welfare conditions play an important role. The size of the motivation, belief in the benefits of investment, ownership of responsibility, understanding of investment rules, time, and capital owned will determine in making investment decisions. If these factors are very strong, it will affect the greater investment interest for a lecturer so that the impact will determine whether he is strong or brave in risk-taking investment. The more daring someone makes investment decisions, the more likely they are to have risk-seeking behavior. According to (Cahya 2019), people who have a high investment interest will try to find out about the type of investment, learn, and practice. (Situmorang, Andreas, and Natariasari 2014) also said people who are interested in investing will take the time to learn, understand, and try to invest in this type of investment or will increase the portion of investments made previously. This can be concluded if someone is interested, it is more likely that there is a very large curiosity about everything related to any information from the investment to be made. On the other hand, people who are not interested are not accompanied by hard efforts by digging deeper into the investment information.

The results of the research on risk perception show that it does not affect investment decisions and this result is contrary to what was hypothesized. Risk perception from (FAHREZA 2020), as an opinion, thought or self-belief about losses due to investing in shares in the capital market. The insignificance of risk perception with investment decisions is due to differences in psychological factors that cause different perspectives on risk. Various kinds of perceptions such as perception of risk, perception of profit, perception of company prospects, and perceptions to reinvest from lecturers will not affect investment decisions. Investment decisions made by a lecturer are based on the desire and understanding of the investment itself. Investment understanding can be obtained from literacy, mastery of information technology, family environment, academic environment, daily interactions, and others. This insignificance is also supported by the fact that most of the existing lecturers' time is used to carry out tri dharma tasks in the fields of teaching, research, service, and other supports as performance achievement in the main task. The size of a lecturer's risk perception tends to be related to how to interpret risk if he does not perform well in tri dharma activities that have an impact on the income received and future career paths, not on the investment decisions made.

Research shows results that are not in accordance with the hypothesis. The high and low risk tolerance of a lecturer on an investment does not have an impact on investment decisions. This is due to the high and low risk tolerance of a lecturer not only in investment but risk tolerance largely rests on the main obligations of a lecturer that must be carried out in the tri dharma. The size of the risk tolerance for profits and risks, the best choices, and situations that may arise from the main task of the lecturer. The main task of the lecturer requires the fulfillment of minimum obligations to receive the lecturer certification allowance (*serdos*). Lecturers in jobs are usually careful planning about what to do each semester which requires extra effort but not in the investment decisions made. In investing, especially in financial assets, it is necessary to understand the level of risk and risk tolerance. While the courage or risk-seeking in stock investment decisions or financial assets in this study is strongly influenced by literacy and understanding of investment both from belief in benefits, great responsibility for stock investment rules, capital needed, family, income, ability to IT, and own funds. A lecturer tends to choose conditions of certainty over uncertainty. This certainty can be obtained from the income of the main profession, especially lecturers, and the possibility of real asset investment. This statement is supported by research (Yuniningsih Yuniningsih et al. 2019), that investment in real assets tends to provide a more definite return than in financial assets. This research is not in accordance with research (Wulandari and Iramani 2014) states that the higher the level of risk tolerance, the respondents will be more courageous in making investment decisions. This research is also not in accordance with the research (Chavali and Mohan Raj 2016) which shows that risk tolerance has a positive influence on investment decisions.

CONCLUSIONS

A lecturer is at the forefront of education at universities, either state universities (PTN) or private

universities (PTS). The increasing demands of a lecturer's obligations are not only in terms of teaching but also in terms of research, service, and other supports. To carry out these obligations requires extra effort regardless of time. A lecturer will invest in stocks if the lecturer has a high interest in investing in stocks and is equipped with understanding and knowledge in investing, family support, capital, and the courage to get out of the comfort zone of a lecturer. The lecturer's risk perception and risk tolerance are aimed at the obligations that must be carried out to support the income, sustainability, and improvement of the lecturer's career in the future. The size of the risk perception and risk tolerance does not affect the size of the investment made but is related to the lecturer's career as the main job.

Acknowledgement

I would like to thank LPPM UPN "Veterans" East Java, Indonesia for their support in this research.

REFERENCES

- Ainia, Nadya Septi Nur, and Lutfi Lutfi. 2019. "The Influence of Risk Perception, Risk Tolerance, Overconfidence, and Loss Aversion towards Investment Decision Making." *Journal of Economics, Business, & Accountancy Ventura* 21(3): 401–13.
- Andini, RW, Pengaruh Minat Investasi Terhadap Pengambilan Keputusan Investasi Di Pasar Modal, Skripsi, UNY, 2019
- Barclay, Michael J, Clifford W Smith, and Ross L Watts. 1995. "The Determinants of Corporate Leverage and Dividend Policies." *Journal of applied corporate finance* 7(4): 4–19.
- Cahaya, Bayu Tri. 2019. "Pengaruh Motivasi Dan Kemajuan Teknologi Terhadap Minat Investasi Saham." *Al-Masharif: Jurnal Ilmu Ekonomi dan Keislaman* 7(2): 192–207.
- Chavali, Kavita, and Prasanna Mohan Raj. 2016. "Impact of Demographic Variables and Risk Tolerance on Investment Decisions: An Empirical Analysis." *International journal of economics and financial issues* 6(1): 169–75.
- Fahreza, Muhammad. 2020. "Pengaruh Pengetahuan Investasi, Persepsi Risiko, Dan Persepsi Kontrol Perilaku Terhadap Minat Investasi Saham."
- Fishbein, Martin, and Icek Ajzen. 1975. "Intention and Behavior: An Introduction to Theory and Research."
- Ghozali, Imam, and Hengky Latan. 2015. "Partial Least Squares." *Konsep, Teknik dan Aplikasi Menggunakan Program SmartPLS* 3.
- Grable, John, and Ruth H Lytton. 1999. "Financial Risk Tolerance Revisited: The Development of a Risk Assessment Instrument." *Financial services review* 8(3): 163–81.
- Hair, Joe F, Christian M Ringle, and Marko Sarstedt. 2011. "PLS-SEM: Indeed a Silver Bullet." *Journal of Marketing theory and Practice* 19(2): 139–52.
- Hair, Risher, and Sarstedt JJ. "M., & Ringle, CM (2019). When to Use and How to Report the Results of PLS-SEM." *European Business Review*.
- Kahneman, Daniel. 1979. "Tversky A.(1979)." *Prospect theory: an analysis of decision under risk*: 263–92.
- Kahneman, Daniel, and Amos Tversky. 2013. "Prospect Theory: An Analysis of Decision under Risk." In *Handbook of the Fundamentals of Financial Decision Making: Part I*, World Scientific, 99–127.
- Nosic, Alen, and Martin Weber. 2010. "How Riskily Do I Invest? The Role of Risk Attitudes, Risk Perceptions, and Overconfidence." *Decision Analysis* 7(3): 282–301.
- Pasewark, William R, and Mark E Riley. 2010. "It's a Matter of Principle: The Role of Personal Values in Investment Decisions." *Journal of business ethics* 93(2): 237–53.
- Seo, Myeong-Gu, Brent Goldfarb, and Lisa Feldman Barrett. 2010. "Affect and the Framing Effect within Individuals over Time: Risk Taking in a Dynamic Investment Simulation." *Academy of Management Journal* 53(2): 411–31.
- Situmorang, Masri, Andreas Andreas, and Riska Natariasari. 2014. "Pengaruh Motivasi Terhadap Minat Berinvestasi Di Pasar Modal Dengan Pemahaman Investasi Dan Usia Sebagai Variabel Moderate."
- Subash, Rahul. 2012. "Role of Behavioral Finance in Portfolio Investment Decisions: Evidence from India."
- Wulandari, Dewi Ayu, and Rr Iramani. 2014. "Studi Experienced Regret, Risk Tolerance, Overconfidence Dan Risk Perception Pada Pengambilan Keputusan Investasi." *Journal of Business & Banking (JBB)* 4(1): 55–66.
- Yuniningsih, Y, and Muhamad Taufiq. 2019. "INVESTOR BEHAVIOR IN DETERMINING INVESTMEN

ON REAL ASSET.” *MIX: Jurnal Ilmiah Manajemen* 9(2): 293227.

Yuniningsih, Yuniningsih et al. 2020. “Risk Taking Investment as the Interaction Effect of Loss Aversion and Information (Pilot Test).” *Calitatea* 21(175): 107–12.

Yuniningsih, Yuniningsih, and Bowo Santoso. 2020. “Does Family Environment Moderate The Effect of Financial Literacy, Attitudes and Motivation on Investment Interest.” *ATESTASI: Jurnal Ilmiah Akuntansi* 3(2).

Yuniningsih, Yuniningsih, Muhamad Taufiq, Eni Wuryani, and Rahmat Hidayat. 2019. “Two Stage Least Square Method for Prediction Financial Investment and Dividend.” In *Journal of Physics: Conference Series*, IOP Publishing, 12212.



© 2022 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY SA) [Creative Commons Atribusi-BerbagiSerupa 4.0 Internasional](https://creativecommons.org/licenses/by-sa/4.0/).