The Moderation Role of Religiosity on the Relationship Between Risk Tolerance and Financial Behavior of Small Businesses' Owners

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Abstract

From the psychology and religious perspective, there is a growing faith that religiosity influences financial behavior. Most available literature has only discussed religiosity as the antecedents of investment behavior in various contexts. There are no yet inquiries in financial behavior that examine the role of religiosity as a moderating variable. Hence, this study has provided novelty by testing the role of religiosity as a moderating variable in the relationship between risk tolerance and financial behavior. The population of this study was Muslim SMEs owners in Banyumas Regency, Indonesia. Ninety-one respondents were interviewed using a structured questionnaire. This study found that risk tolerance and religiosity variables had a positive and significant effect on financial behavior. The interaction effect of the religiosity variable would weaken risk tolerance on financial behavior. This research had significant implications for the development of financial behavior theory in SMEs and developing SMEs.

Keywords: Financial Behavior, Moderate Effect, Religiosity, Risk Tolerance, Small Medium Enterprises

1. Introduction

Research on behavioral finance is now proliferating rapidly. Many studies in this field have proven that investors are not fully rational (see Bayar, 2013; Oprean and Tanasescu, 2014; Zhang and Zheng, 2015; Bello et al., 2017). Research from Zhang & Zheng (2015) has found that investors do not always adopt rational behavior assumed by the traditional financial theory. Financial behavior is the ability of individuals to manage finances more responsibly. Financial behavior research has been developing in the capital market. For example research conducted by Filip, Pochea, & Pece (2015); Hellström, Olsson, & Stålnacke (2017); Kubilay & Bayrakdaroglu (2016); Tuyon & Ahmad (2016); Bayar, (2013). Some researchers conduct research into individual financial behavior example Dickason & Ferreira, (2018); Elliott & Rennekamp, (2016); Farrell, Fry, & Risse, (2016); Gerrans, Faff, & Hartnett, (2015); Heo, Grable, & O'Neill, (2017); Pak & Mahmood, (2015); Purwidiанти, (2018); Shusha, (2017); Tang & Baker, (2016); Khan, (2017). Some researchers research financial behavior in SMEs, for example, Naomi, Kiprop, & Tanui (2018); Sadalia, Syahyunan, & Butar-Butar, (2017); Thaker, Mohammed, Duasa, & Abdullah, (2016); Wong, Holmes, & Schaper, (2018)

Based on the explanation above, it can be seen that research on financial behavior has developed in the capital

market, in the community, and in SMEs. Nevertheless, these studies highlight more financial behavior as an individual. While research into owners or managers, financial behavior has not been much researched. It is mainly for research into financial behavior in SMEs. Therefore this study will explore the financial behavior of SMEs owners or managers.

Investor behavior in investing will be influenced by several factors, including personal characteristics (personal traits, risk tolerance) (Pak and Mahmood, 2015), religiosity (León & Pfeifer, 2017; Mylonidis & Zioga, 2018), and other factors. This study will explore the relationship between risk tolerance, religiosity toward financial behavior — the novelty of this research by placing religiosity as a moderating variable.

Risk tolerance is defined as the willingness of individuals to engage in a financial behavior whose results are unknown and can obtain negative results, having a significant role in making asset allocation decisions Heo, Grable, & O'Neill, (2017). Risk tolerance has been discussed in the literature as a factor that influences the behavior of investment decision-making. However, current research is more about risk tolerance in theoretical research. Therefore, empirical research is needed about the effect of risk tolerance on financial behavior Kumari & Sar (2017). Fauzi, Husniyah, Fazli, & Amim (2017) prove that financial risk tolerance influences financial behavior.

Religiosity can be defined as the belief in God's presence

and obedience to the rules that he has determined. Nigam, Srivastava, & Banwet (2016) state that religiosity is a factor that has a role in making investment decisions. Research on the role of religiosity on financial behavior still needs to be explored in financial behavior research. Mylonidis & Zioga (2018) have found that religiosity will influence investment-taking behavior. Several researchers have researched the effect of religiosity on investment risk-taking behavior. These studies found religious results to have a negative influence on investment risk-taking Adhikari & Agrawal, (2016); Chircop, Fabrizi, Ipino, & Parbonetti, (2017); Gao, Wang, & Zhao, (2017). Different results were found by Mahdzan et al. (2017), which shows that the level of religiosity has no effect on investment decisions in portfolio allocation. Research result on the effect of religiosity on financial behavior indicates inconsistencies.

Several studies have proved the relationship between risk tolerance and religiosity. Jiang, Jiang, Kim, & Zhang (2015) find companies with religious founders with a lower risk level. Cheong (2018) also found a negative influence between religiosity on risk.

Based on the result of this study, it is suspected that there is a strong interaction relationship between risk tolerance and religiosity on financial behavior. This study will examine the moderation religiosity on the relationship between risk tolerance and financial behavior.

This study uses demographic factors as a control variable. Demographic factors are factors that have been shown to affect financial behavior. This study uses two demographic factors, namely age, and gender. Mak & Ip (2017) have found that demographic factors have a significant influence on investor behavior. The study found that age and gender influence investment behavior. It is also reinforced by Sadiq & Ishaq (2014), which proves age influences investor behavior. Different results are shown by Mahdzan, Zainudin, Che Hashim, & Sulaiman (2017); Oehler, Wendt, Wedlich, & Horn (2017), which prove that age does not have a significant effect on investment behavior. Research on gender relations and investment behavior is carried out Walczak & Pienkowska-Kamieniecka, (2018). This study found evidence that there were differences in financial behavior between men and women. Mahdzan et al. shows the results of different studies., (2017); Purwidiyanti (2018) found evidence that gender did not influence financial behavior.

Based on the explanation above, it can be seen that there are still inconsistencies in the study effect of risk tolerance and religiosity on financial behavior. The purpose of this study was to re-examine the effect of risk tolerance and religiosity on financial behavior. In addition, this study also offers a novelty by testing the moderating effect of religiosity variables on the relationship between risk tolerance and financial behavior.

This research will make a theoretical contribution to research in the field of financial behavior. The first is that the effect of risk tolerance on financial behavior has not been widely developed in empirical research. Second, research on the effect of religiosity on financial behavior requires further study in empirical research. Third, this study is the first to examine the moderation religiosity on the relationship between risk tolerance and financial behavior.

2. Literature Review

2.1 Risk Tolerance and Financial Behavior

An economist will study how people behave and make choices, assuming everyone acts rationally. A person's risk tolerance will influence the choices they will make. Financial

risk tolerance will affect their financial behavior (Wagner, 2011). The extent of risk tolerance among individuals affected much of their investment behavior. Low-risk tolerance investors tend to take up investment products without first understanding the financial risk involved. An individual's risk tolerance level will influence their investment behavior. Previous studies have found evidence of the positive effect of risk tolerance on investment behavior Kumari & Sar (2017), Fauzi et al. (2017). Based on the statement above, the first hypothesis in this study is:

H1: Risk tolerance influences financial behavior

2.2 Religiosity and Financial Behavior

Religiosity shows a commitment that can be seen from a person's activities or behavior related to religion, faith, and trust. Religion for followers of Islam is a code of conduct, a way of life in all parts of the world. The religiosity of a follower of Islam can be adherence to knowledge, trust, implementation, and understanding of Islam. The religiosity of a Muslim can be seen from daily behavior, including economic activities (Nugroho, Hidayat, & Kusuma, 2017). From the perspective of scientific psychology and religion, personality traits, including religion, are also considered to influence the financial and economic behavior of the household. Experts argue that religious beliefs give rise to self-categorization processes that shape individual identity (Benjamin, Choi, & Fisher, 2016).

Research on investment decision-making shows various factors considered in making investment decisions; one of the factors is religion (Tahir & Brimble, 2011). The investment decision of a Muslim will be influenced by risk, return, and religion. Sipon, Othman, Ghani, & Radzi (2014) research results show that religiosity has a significant relationship with financial debt. Research by Nugroho et al. (2017) proves that religiosity has a positive influence on saving behavior.

Several researchers have researched the effect of religiosity on investment risk-taking behavior. These studies found religious results to have a negative influence on investment risk-taking Adhikari & Agrawal, (2016); Chircop, Fabrizi, Ipino, & Parbonetti, (2017); Gao, Wang, & Zhao, (2017). Based on the results of the research above, the second hypothesis of this study states.

H2: Religiosity influences financial behavior

2.3 Moderate Effect Risk Tolerance and Religiosity

Jiang et al. (2015) have conducted a study using sample family companies in China. This research found that companies with religious founders have lower leverage and invest less in fixed assets and intangible assets. Companies established by religious entrepreneurs have more negligible risks than other companies.

Cheong (2018) used micro-level data on the religiosity of manager Malaysian public firms to examine how religion influences risk-taking. The result of this study found that managers who have a high religious level will avoid risk. Aburish (2013) has researched risk and religion. The result indicates that Islamic borrowers tend to have a risk-seeking preference. The results also show that Islamic borrowers are more religious than conventional borrowers.

H3: Religiosity moderate the relationship between risk tolerance and financial behavior

2.4 Control Variables and Financial Behavior

Demographic factors are a determinant of investor behavior or investment behavior. Demographic characteristics consisting of age and gender can influence financial behavior.

Researchers have researched the influence of demographic factors on financial behavior. However, the results of these studies have not been consistent. Research from Lan, Xiong, He, & Ma (2018) proves that demographic factors influence investment behavior.

The investment decision process will be influenced by the investor Sadiq & Ishaq's age (2014). Older investors will tolerate more significant risks than young people. Research by Tekçe, Yilmaz, & Bildik (2016) found that age will influence investment behavior bias.

Differences in gender-based behavior have been carefully examined in the fields of psychology and economics. It is related to information processing, perseverance, conservatism, excessive trust, and risk tolerance Palvia, Vähämaa, &

Vähämaa, (2015). Women are characterized by a rational approach to making financial decisions and have unique characteristics when making decisions related to financial problems in the future Walczak & Pienkowska-Kamieniecka, (2018).

Some studies have linked the influence of gender on financial behavior. Pak & Mahmood (2015) states that gender has a significant positive effect on investment decisions. Women are more willing to invest than men. This finding is also supported by Mak & Ip (2017); Palvia et al., (2015); Sadiq & Ishaq (2014); Tekçe et al., (2016).

Figure 1 below is the research framework. The figure shows the influence of risk tolerance and religiosity on financial behavior.

Figure 1: Conceptual Framework of The Research

3. Materials and Methods

This research used a quantitative approach. The Population of this research is SMEs owner located in Purwokerto city, Banyumas regency, Indonesia. This research was conducted on 91 SME owners. The source of research data comes from the results of respondents' answers. The researcher used a structured questionnaire—data analysis using moderated regression analysis.

The financial behavior indicators used in this study are five indicators. The indicators are payment of obligations on time, preparation of financial designs for the future of the business, provision of retained earnings for investment, financial distribution for personal and business interests. The scale used to measure financial behavior is the Likert scale with a score of 1 to 5 for "never," "rarely," "sometimes," "often," and "always."

Risk tolerance is assessed by four items that seek answers about the client's willingness to take risks in different scenarios (Nguyen, 2015). The item is coded with the lowest value (i.e., 1) for "the smallest risk-tolerant response" and the highest value for "most risk tolerances" (i.e., 4 or 5, depending on the number of response options). Zero (0) is coded for the "unsure" option. Questions were raised about earnings volatility, investment losses, decreased investment value, willingness to bear short-term losses to obtain long-term benefits.

The principles of sharia transactions measure religiosity indicators. This principle is a fundamental Islamic sharia concept in running a business. There are five principles, namely, brotherhood, justice, benefit, balance, and universalism. There are 12 question items based on the principles of sharia transactions. Those question items are the principle of mutual understanding and mutual pleasure, the

principle of freedom of transaction as long as the object is lawful and reasonable, money only functions as a medium of exchange and a unit of measure for value, does not contain usury, does not contain the element of tyranny, does not contain speculation, does not contain gharar, does not contain the unclear element, does not adhere to the principle of the time value of money, there is an explicit agreement, no distortion, and does not contain collusion.

All items are measured using a Likert scale. The respondent's answer is given a range of numbers 1 to 5 for answers "strongly disagree," "no/disagree," "abstain/not argue," "agree," and "strongly agree."

Demographic factors are proxied in two measurements: age and sex. gender uses variable dummy variables, namely 1 for men and 0 for women. The age of the SME owner measures the owner's age.

This study aims to examine the effect of risk tolerance and religiosity on the financial behavior of SME owners. This study examines the interaction effect between risk tolerance and religiosity on financial behavior. This study used moderated multiple regression as in below.

Financial Behavior = $\alpha + \beta_1$ Risk Tolerance + β_2 Religiosity + β_3 Risk tolerance*Religiosity + $\beta_4 \sum$ control + ε

This study uses the classic assumption test of normality and heteroscedasticity. The research hypothesis was tested using a t-test with the probability level was below 0,05.

4. Result

4.1 Validity and Reliability Test

Tests carried out in this study include validity and reliability

tests, descriptive statistical tests, classic assumption tests, and regression equation tests. Test the validity of all the questions in this study to produce a significant Pearson Correlation test, which is smaller than 0.05 or valid. The reliability test in the study shows that Cronbach's alpha number is more than 0.6 or reliable.

4.2 Demographic Profile

The demographic profile of respondents showed an average age of 48.5 years with a minimum value of 30 years and a maximum value of 65 years. As many as 44% of respondents have male sex, and 56% are female. Based on the level of education, as much as 50.5% of respondents graduated from high school, 46.2% of respondents graduated

from Senior High School and below, and the rest as many as 3.3% graduated from the undergraduate level.

The SMEs studied were in four sub-districts in Banyumas, namely West Purwokerto, East Purwokerto, North Purwokerto, and Ajibarang. Respondents' statistics according to their line of business describe 30 respondents (32.97%) from SMEs in the trade sector; in the service sector, as many as 16 people (17.58%), as many as 29 (31.87%) culinary fields, and 16 (17.58%) manufacturing fields. The average UKM has been established for 7.29 years.

4.3 Description of The Respondent's Answers

Respondent's answers about the risk tolerance variable are presented in the following table.

No	Statement	Mean (1-5)
1	Earnings volatility	2,20
2	Investment losses	2,23
3	Decreased investment value	2,94
4	Willingness to bear short-term losses to obtain long-term benefits	1,96

Table 1: Respondent's answer about risk tolerance variable

Four items assess risk tolerance that seek answers about the client's willingness to take risks in different scenarios (Nguyen, 2015). The item is coded with the lowest value (i.e., 1) for "the smallest risk-tolerant response" and the highest value for "most risk tolerances" (i.e., 4 or 5, depending on the

number of response options). Zero (0) is coded for the "unsure" option. Based on the table above, the highest average value of 2,94, and the lowest average value of 1,96. It means that the risk tolerance of SMEs is at the middle level.

No	Statement	Mean (0-5)
1	The principle of mutual understanding and mutual pleasure	3,85
2	The principle of freedom of transaction as long as the object is lawful and good	4,01
3	Money only functions as a medium of exchange and a unit of measure for value	3,67
4	It does not contain usury	4,34
5	It does not contain the element of tyranny	4,43
6	It does not contain speculation	4,43
7	It does not contain gharar	4,44
8	It does not contain an unclear element	4,42
9	Does not adhere to the principle of the time value of money	3,76
10	There is an explicit agreement	4,15
11	No distortion	4,00
12	It does not contain collusion	4,32

Table 2: Respondent's answer about religiosity variable

The principles of sharia transactions measure religiosity indicators. All items are measured using a Likert scale; the respondent's answer is given a range of numbers 1 to 5 for answers "strongly disagree," "no/disagree," "abstain/not

argue," "agree," and "strongly agree." In table 2 above shows, the average respondent's answer is at value 4. It can be interpreted by the respondent agreeing with the statement given.

No	Statement	Mean (1-5)
1	Payment of obligations on time	4,19
2	Preparation of financial designs for the future of the business	3,97
3	Provision of retained earnings for investment	4,09
4	Financial distribution for personal and business interests	4,02

Table 3: Respondent's answer about financial behavior variable

The financial behavior indicators used in this study are five indicators. The scale used to measure financial behavior is the

Likert scale with a score of 1 to 5 for "never," "rarely," "sometimes," "often," and "always." Table 3 shows the

average respondent's answers about financial behavior variables. The result obtained indicates an average value of 4. It shows that the respondents stated often make the statement given.

4.3 Classic Assumptions Test

Testing of classic assumptions for normality tests using the Kolmogorov-Smirnov test. Normality testing shows a significance value of 0,179. The test results show a significant level above 0.05 or pass the normality test. Heteroscedasticity test using the Park test. The test results show no significant effect of the independent variable on the logarithm of the

natural residual squared variable, meaning the regression model is free from the problem of heteroscedasticity.

4.4 Hypotheses Testing

This study aims to examine the effect of risk tolerance and religiosity on the financial behavior of SME owners. This study also will examine the moderation religiosity on the relationship between risk tolerance and financial behavior. Analysis to test hypotheses using moderated multiple regression. The regression test results for the influence of risk tolerance, religiosity, the interaction between risk tolerance and religiosity on financial behavior are presented in the table below.

Independent Variable	Coefficients		t	Sig.
	B	Std. Error		
Risk Tolerance	1,766	0,543	3,254	0,002***
Religiosity	0,910	0,329	2,762	0,007***
Risk Tolerance * Religiosity	-0,402	0,138	-2,921	0,004***
Age	0,006	0,114	0,050	0,960
Gender	-0,008	0,008	-0,963	0,338

Table 4: Association between risk tolerance, religiosity, the interaction between risk tolerance and religiosity on financial behavior

The table above shows that risk tolerance, religiosity, and interaction between risk tolerance and religiosity have a significant effect on financial behavior. Control variables (age and gender) have not a significant effect on financial behavior.

adequate number of the gender variable shows a negative number even though it is not significant. It can mean that women are better at doing financial behavior. The results of this study are closely related to SME owners who were respondents in the study dominated by women.

5. Discussions

This study found evidence that risk tolerance has a significant positive effect on financial behavior. The higher the risk tolerance possessed by SME owners will improve their financial behavior. These results support research conducted by Fauzi et al. (2017). This study found evidence that religiosity has a positive effect on financial behavior. It supports the results of research from Nugroho et al. (2017). The result of the study found that the higher the level of religiosity of SME owners, the better their financial behavior.

The interaction variable between risk tolerance and religiosity shows a negative effect on the financial behavior of SME owners. These results prove that religiosity can be a moderating variable. Religiosity will weaken the effect of risk tolerance on financial behavior. This research supports Aburish (2013), Cheong (2018), Jiang et al. (2015), which states that the higher the level of religiosity, the more risk aversion.

Demographic factors, namely age and, gender do not have a significant effect on financial behavior. Age does not have a significant impact on financial behavior. It follows the results of his research Mahdzan et al. (2017); Oehler et al., (2017). The regression coefficient for age shows a negative direction. It means that the more an individual gets old, the less valuable he is in performing his financial behavior. It is possible because the age of individuals who are getting older will be less diligent and conscientious in managing their finances.

This study provides evidence of no gender influence on financial behavior. Men and women do not have a significant difference in their financial behavior. This result is in line with his research (Mahdzan et al., 2017; Purwidiyanti, 2018). The

6. Conclusions

This study provides a new clue for research into financial behavior. The study results provide evidence that risk tolerance and religiosity have a positive and significant influence on the financial behavior of SME owners. This research provides novelty by testing the moderate effect of religiosity in relationship risk tolerance and financial behavior. The result of the study proves that the interaction between risk tolerance and religiosity has a significant negative effect on financial behavior.

The implications of this research are essential for SME development. First, the results of the study show that the higher the risk tolerance that is owned by the owner of the SME, the better the financial behavior. Therefore the government needs to provide knowledge about risk tolerance to SMEs. Second, religiosity has a positive effect on SME financial behavior. Besides, religiosity can be the moderate variable that weakens the effect of risk tolerance on financial behavior. Therefore in developing SMEs, the government must continue to pay attention to the role of religiosity in managing SME risks.

The contribution of this study lies in testing the effect of variable religiosity and risk tolerance on financial behavior. The relationship between the two variables has not been explored much in empirical research. Therefore future research is expected to be able to deepen the relationship between the two variables.

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