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# THE INTERACTION OF FINANCIAL RISK ATTITUDE ON FINANCIAL LITERACY, FINANCIAL BEHAVIOR, AND FINANCIAL INCLUSION ON THE PERFORMANCE OF MSMES IN JEMBER REGENCY, INDONESIA

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Digital transformation strategy; enterprise management; digital transformation of the enterprise; digital technologies.

#### **Original research**



#### ABSTRACT

The increased intensity of competitive influences for doing business emphasizes the importance of interaction between all participants in the processes when implementing digital transformation. This fact encourages leaders to implement management strategies, make quality decisions based on international experience, digital tools to help achieve quality management. Management decisions made by the top management of an enterprise regarding digital transformation will not only affect the effective management of the enterprise and profits in the short term, but will also allow for the proper choice of business model. This circumstance determines the expanded content of the methodological approach to the development of digital transformation and the need to choose a business model. The purpose of the study is to substantiate the feasibility and scientific correctness of forming a strategy for the digital transformation of an industrial enterprise as an object of economic and management research.

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# 1. INTRODUCTION

One of the economic actors that play an important role in the Indonesian economy is Micro, Small, and Medium Enterprises (MSMEs). The contribution of MSMEs to Indonesia's Gross Domestic Product reaches 61.1%. Indonesia has the largest number of MSMEs compared to other countries. According to the Ministry of Cooperatives and SMEs, around 57.9 million MSME players are currently in Indonesia. The strategy that can be used to develop MSMEs is to increase access to financing from financial institutions (Sriary & Nyoman, 2020). In addition, there is a needs for training and education programs to support the sustainability of SMEs in Indonesia, such as financial literacy training. An important issue MSME owners face is the lack of basic knowledge or financial literacy, especially those related to business financial management knowledge.

Financial literacy for MSMEs is the ability of managers to manage financial statements, manage debt, and prepare budgets that allow MSME managers to record business activities, business income and costs, business profitability, and other performance-related topics. (Esiebugie et al. 2018; Gunawan & Rahmawany Pulungan, 2022; Irman et al., 2021; Ratnawati, 2020; Ye & Kulathunga, 2019). Financial literacy is believed to improve business performance, which can be seen in the financial behavior of business owners. Business owners with high financial literacy can manage their businesses well. Business owners can make seemingly irrational decisions when they save and invest their money. (Esubalew & Raghurama, 2020). Adequate financial literacy can help business owners manage their finances properly. Financial literacy can be an important determinant of access to finance (Cole & Fernando, 2008; Okello Candiya Bongomin et al., 2017).

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Business owners often experience business owners' lack of access to institutions. Capital difficulties will have an impact on the decline in business performance. Every business owner is expected to be able to take advantage of the financial inclusion that is available to all. According to Gunawan and Rahmawany Pulungan 2022, Irfany et al. 2022, financial inclusion seeks to remove all barriers to public use of existing financial services and infrastructure. Weak financial inclusion of business owners will weaken the performance of their MSMEs (Rasheed et al. 2019).

Jember Regency is one of the regencies in East Java Province, Indonesia, with abundant natural resources that MSMEs can process and market appropriately. 612,072 MSMEs support the economy of the Jember Regency. In 2020, many business owners went out of business due to the COVID-19 pandemic and the lack of knowledge of business owners. Based on data (GRDP) Gross Regional Domestic Product, the economy of Jember Regency contracted by -2.987 compared to the same period the previous year, which grew by 5.51%. In 2023, the economy in the Regency experienced an economic recovery of 4.93%, and economic acceleration occurred because all business fields experienced positive growth. Based on data from the Jember District Cooperative and Micro Business Office, 647,416 business owners and 612,072 businesses are micro-businesses that require capital assistance and training. Financial literacy is very important for business owners in Jember Regency as a guideline to face competition between businesses. Business owners' high level of basic financial knowledge can make it easier for them to make appropriate decisions. Jember Regency is one of the densely populated cities with various forms of MSMEs and strategic locations in their businesses. However, there are still many gaps experienced by business owners, such as a lack of knowledge, training, and capital, which is due to the lack of understanding of business owners. Therefore, a solution is needed to this problem, one of which is to provide financial literacy training for business owners. Low financial literacy of business owners will impact the performance of MSMEs. Conversely, business owners with high financial literacy can carry out good financial management to improve business performance. This research relates to the performance of MSMEs with the support of financial literacy, financial behavior, and financial inclusion by business owners in Jember Regency. The varied results of previous studies have made MSME performance research interesting to be re-examined. Therefore, this study aims to determine the effect of financial literacy, financial behavior and financial inclusion on MSME performance. In addition, there is a moderating variable, namely financial risk attitude, related to the performance of MSMEs (ElDeeb et al., 2021; Offiong et al., 2019; Song et al. 2023).

#### 2. LITERATURE REVIEW

Financial literacy is the knowledge of individual abilities that refer to information and skills to make good judgments and effective decisions related to using and managing money and as a tool to achieve one's life goals to attain prosperity (Sajuyigbe et al., 2020; Srisusilawati et al., 2021; HC, 2022). Knowledge-based view theory views knowledge as the company's most important and strategic resource. The competitive advantage of a company lies in its ability to collect and use knowledge (Horisch et al., 2015; Maulana et al., 2022). This shows that financial literacy affects the performance of MSMEs, consistent with previous research put forward (Yanti, 2019; Sajuyigbe et al., 2020; Kadoya & Khan, 2020; Cossa et al., 2022; Christianty et al., 2022).

Financial behavior is a series of human interpretations and actions taken by them involving activities in the financial sector, which can be seen as four broad areas: saving, spending, borrowing, and investing. (Sudindra & Naidu, 2018; Beilsky & Gilovih, 2010; Esubalew & Raghurama, 2020; Banthia & Dey, 2022). The theory of planned behavior is explicit about the behavior of interest in terms of its targets, actions, attitudes, subjective norms, behavioral control, and timeframe. (Singh et al., 2018; Ajzen, 2020). This shows that financial behavior affects the performance of MSMEs, consistent with research conducted by (Hoirul Ummah et al., 2021)

Financial inclusion is a condition in which everyone has access to or can reach a variety of normal financial services that are quality, available, smooth, open, timely, and accessible to all levels of society to encourage quality economic growth and as a poverty alleviation tool (Sajuyigbe et al., 2020; Christianty et al., 2022; Gunawan & Rahmawany Pulungan, 2022). This is consistent with previous research, which shows that financial inclusion affects the performance of MSMEs, as stated by (Septiani & Wuryani, 2020; Eton et al., 2021; Christianty et al., 2022).

Financial risk attitude refers to an individual's perception of risky behavior as well as the ability to distinguish between opportunities and challenges in business and their role when making financial decisions, each individual has a subjective attitude towards risk, with each individual having the choice to engage in risk or avoid risk, this is influenced by past experiences, beliefs and attitudes towards certain situations or activities (Saurabh & Nandan, 2018; Ahmad, 2020; Wati et al., 2021; Willebrands et al., 2012; Ferli, 2023). This shows that financial risk attitude moderates the relationship between the influence of financial literacy, financial behavior, and financial inclusion on the performance of MSMEs put forward by (Saurabh & Nandan, 2018; Mabula & Han, 2018; Bapat, 2020; Ferli, 2023; Colasante & Riccetti, 2021).

Financial performance in business can be seen from the success achieved by individuals or organizations with the division of activities in the form of tasks and roles within a period with existing standards such as improving product quality, innovation, management, human

resources, and customers and finance (Dharmawan Buchdadi, 2020; Fitriati et al., 2020; Mukson et al., 2021; Gunawan & Rahmawany Pulungan, 2022).

#### 3. METHODOLOGY

This research is explanatory-quantitative research, was conducted to determine the effect of financial literacy, financial behavior, and financial inclusion on MSME performance with moderating variables of financial risk attitude in MSMEs in the Jember Regency. The population in this study were MSMEs in the Jember

Regency. The sampling method used was snowball sampling. An online questionnaires were distributed to MSME communities in the Regency until the required sample is obtained. The number of participants in the study was 125 business owners from Jember Regency. The data were obtained by summing the correct answer items of 21 questions. The correct response answer was given a score of 1, and the wrong one is scored 0. This study was using the MRA (Moderated Regression Analysis) method.

The following is an operational definition of financial literacy, financial behavior, financial inclusion, financial risk attitude and MSME performance (Table 1).

Table 1. Operational Definition of Research Variable

Variables	Symbol	Operational Definition	Indicator
Financial	FL	Financial literacy is measured by basic knowledge	(1) General Knowledge of Finance,
Literacy		of basic skills in economic calculation, saving and	(2) Saving and Loans, (3) Investment,
		borrowing, investment, and insurance.	and (4) Insurance
Financial	FB	Financial behavior is measured in finance or	(1) Saving Behavior, (2) Spending
Behavior		business income related to saving, shopping,	Behavior, (3) Borrowing Behavior,
		borrowing, and investment behaviour.	and (4) Investment Behavior
Finanacial	FI	Financial inclusion is measured in terms of access,	(1) Access, (2) Quality, (3) Usage,
Inclusion		quality, usage and welfare of businesses.	and (4) Welfare
Financial	FRA	Financial risk attitude is measured by the ability to	Risk-taking Attitude
Risk		address business risks.	
Attitude			
Perfomance	PM	MSME performance is measured by sales growth	(1) Sales growth and (2) Profit growth
<b>MSMEs</b>		from MSMEs and increased operating profit	

The measurement scale of this research is a ratio scale, which means comparison or multiplication, so calculations and measurements of objects are needed in a ratio scale. The question scores will be summed up as a whole per each respondent.

#### 4. RESEARCH RESULTS AND DISCUSSION

This study uses three regression models, namely MRA (Moderated Regression Analysis), which was conducted before the Heteroscedasticity test to see if the

moderating variable can strengthen or weaken the relationship between the independent and dependent variables. Furthermore, the heteroscedasticity test using the Glejser method is carried out to see the accuracy of the regression model. The last step in this study is to improve the heteroscedasticity test of the regression model, namely using the weighted least square (WLS) test results.

#### 4.1 Description of Respondent Characteristics

The overall picture of respondents in terms of gender, age, business scale and length of business is presented in the table 2.

Table 2. Respondent Characteristics

	Jumlah Responden	Prosentase	
Gender			
Male	43	34,4%	
Famale	82	65,6%	
Age			
0-30 years	41	33%	
31-59 years	81	65%	
≥ 60 years	3	2%	
Scale Enterprises			
Micro	73	59%	
Small	43	34%	
Medium	9	7%	
Length of Business			
0.5-5 years	89	71%	
6-10 years	20	16%	
≥ 10 years	16	13%	

Table 2 shows 82 female respondents, which is quite dominant or equivalent to 65.6% compared to male respondents, who are 43 respondents or equivalent to 35.6%. In the research context, business owners are dominated by women. This shows that MSMEs in the Jember Regency are important in absorbing most of the female workforce. In the data presented, the percentage of women working in the informal sector, especially MSMEs, has a significant role in the economy and the labour sector. As many as 65.6% of entrepreneurs who run MSMEs are women, so all communities must always support MSMEs, the livelihood of most people in Jember Regency.

Table 2 shows that respondents aged 0-30 years totalled 41 respondents or equivalent to 33%, while respondents with vulnerable ages 31-60 years totalled 81 or 65%. In contrast, the age of respondents over the age of 60 was three respondents or equivalent to 2%. Based on this data, it can be seen that respondents with an age range of 31-59 years, with a total of 81 respondents or equivalent to 65%, were the most respondents. So, it can be concluded that MSME owners are in a mature period with the experience they gained at a productive age of 0-30 years to manage their business easily.

Table 2 presents information about the respondents' business scale. The table explains that business owners

with a micro business scale are 73 respondents, equivalent to 59%, while small business scale respondents are 43, equivalent to 43%. Finally, respondents with a medium scale are nine business owners, equivalent to 7%. Referring to this data, it can be concluded that respondents with a micro business scale level dominate because they feel they are sufficient with the current business.

Table 2 shows that there are 89 MSMEs with a business age above 0.5-5 years, equivalent to 71%, and 20 MSMEs that have been established with a business age of 6-10, as many as 20 MSME businesses, the last business age above ten years as many as 16 MSMEs, equivalent to 13%. The dominance of research objects with the most MSME owner businesses is with a business of 0.5-5 years, which is a new business just starting out. This shows that MSMEs in the Jember Regency have a lot of potential to continue developing these businesses to survive and compete.

#### 4.2 Statistical Description of Variables

The description of the research variables in the form of the frequency distribution of each variable, along with the percentage in this study, is presented in Table 3 below:

**Table 3.** Recapitulation of Responses for Research Variables

Indicator	Correct Answer		Wrong Answer				
mulcator	N	%	N	%			
	Aspects of Financial	Literacy					
Basic Financial Knowledge	76	60,8%	49	39,2%			
Basic Financial Knowledge	64	51,2%	61	48,8%			
Investment Knowledge	71	56,8%	54	43,2%			
Saving and Loan Knowledge	57	45,6%	68	54,4%			
Insurance Knowledge	70	56,0%	55	44,0%			
Aspects of Financial Behavior							
Saving Behavior	77	61,6%	48	38,8%			
Shopping Behavior	75	60%	50	40%			
Borrowing Behavior	69	55,2%	56	44,8%			
Investment Behavior	66	52,8%	59	44,8%			
	Aspects of Financial	Inclusion					
Access <sup>1</sup>	59	47,2%	66	52,8%			
Usage	62	49,6%	63	50,4%			
Access <sup>2</sup>	58	46,4%	67	53,6%			
Quality	62	49,6%	63	50,4%			
Welfare	68	54,4%	57	45,6%			
Aspects of Financial Risk Attitude							
Risk-Taking Attitude (Investment) <sup>1</sup>	68	54,4%	57	45,6%			
Risk-Taking Attitude (Investment) <sup>2</sup>	65	52%	60	48%			
Risk-Taking Attitude (Tax and Inflation)	76	60,8%	49	39,2%			
Aspects of MSME Performance							
Sales Increase <sup>1</sup>	78	62,4%	47	37,6%			
Sales Increase <sup>2</sup>	66	53,8%	59	47,2%			
Profit Increase <sup>1</sup>	70	56%	55	44%			
Profit Increase <sup>2</sup>	73	58,4%	52	41,6%			

Table 3 shows that more respondents understand basic financial calculations about interest rates. Basic financial knowledge about the obligation to pay taxes for MSME owners also shows the same trend. This proves that

business owners understand more about basic financial calculation skills than basic financial knowledge. The distribution of business owners' answers on saving and borrowing knowledge shows that, on average,

respondents know more about interest rate knowledge than investment knowledge during transactions at financial institutions. Respondents' investment knowledge is relatively poor (those with investment knowledge 45.6%). Business owners' investment knowledge about bonds is lower than insurance knowledge.

Table 3 shows that more respondents engage in saving behavior than interest in shopping behavior has a very small difference of 1.6%. The government provides a means of borrowing funds from banks and non-banks, 55.2% of respondents make loans yearly. Business owners must be able to invest in their businesses to ensure the continuity of MSMEs. 52.8% of MSME owners agree that it is important to invest in their business.

Table 3 on access to financial institutions shows more respondents with answers who did not get access to financial institutions. Referring to the quality of financial institutions, the distribution of respondents' correct answers is lower than the respondents' wrong answers, this shows that there are still many business owners who do not get the quality that customers, as well as the usage, should obtain, the answers of respondents who do not make transactions at financial institutions are higher than business owners who make transactions in a year at financial institutions. Referring to the welfare provided by financial institutions to customers (MSME owners) is quite high. Namely, 54.4% of business owners feel comfortable in terms of the welfare of financial institutions.

Table 3 shows the risk-taking attitude of business owners. The attitude of risk-taking in investment is more respondents dare to choose risk even though the results are uncertain in investment. Referring to the attitude of risk-taking in terms of a strategic place with many competitors with the same product, from the distribution of answers of MSME owners, it is higher than business owners who choose not to have competitors with less strategic locations in this condition, there are kinds of respondents who have different risk-taking attitudes. Finally, regarding taxes and inflation, more respondents chose higher tax and inflation instalments with densely populated locations, namely 60.8%.

Table 3 shows that sales growth among business owners in Jember Regency from the distribution of answers is higher among respondents who experienced an increase in sales growth than respondents who did not experience an increase in sales in one year. Regarding the rise in profits, 56% of respondents had increased earnings in a year.

#### 4.3 Moderated Regression Analysis (MRA) Test

The moderation regression model is used to determine the influence of the independent variable on the dependent variable and to determine whether the financial risk attitude variable can moderate the influence between the independent variable and the dependent variable.

Table 4. Moderated Regression Analysis (MRA)

Dependent Variable: MSME Performance (PM)						
Independent	ndependent Micro, Small, and Medium Enterprises of Jember Regency					
Variable	M-1A	M-1B	M-1C	M-1D	M-1E	
(FL)	0,410(***)	0,312***	0,378(**)	0,378(**)	0,350(**)	
	(7,147)	(4,129)	(3,207)	(3,195)	(2,924)	
(FB)	$0,101^{\text{ns}}$	$0,073^{\text{ns}}$	$0,075^{\text{ns}}$	$0,083^{ns}$	$0.058^{\rm ns}$	
	(1,305)	(0,934)	(0,957)	(0,650)	(0,653)	
(FI)	$0.015^{\rm ns}$	$0,003^{\rm ns}$	$0,003^{\rm ns}$	$0,003^{ns}$	$0,129^{ns}$	
	(1,305)	(0,058)	(0,057)	(0,050)	(1,223)	
(FRA)		$0,255^{(*)}$	$0,354^{(*)}$	$0,364^{ns}$	$0,459^{(*)}$	
		(1,961)	(1,883)	(1,600)	(1,943)	
(FL*FRA)			-0,041 <sup>ns</sup>	-0,041 <sup>ns</sup>	-0,023 <sup>ns</sup>	
			(-0,730)	(-0,725)	(0,689)	
(FB*FRA)				-0.005ns	$0,004^{\rm ns}$	
				(-0.081)	(0,060)	
(FI*FRA)					-0,070 <sup>ns</sup>	
					(-1,416)	
$\mathbb{R}^2$	0,345	0,365	0,368	0,368	0,379	

Notes: Significance  $\alpha = 1\%$  (\*\*\*) 5% (\*\*) 10% (\*) Not Significance (ns) Table 4 shows the moderated regression analysis (MRA) test. In the table 4, the regression model is carried out in five stages. In model M-1A, the result of the independent variable, namely financial literacy, influences MSME performance. M-1B is a regression model showing that two variables have an influence, namely the financial literacy variable and the financial risk attitude interaction variable. After testing the regression model on the independent variable and the interaction variable, then

testing the contribution of the influence of the interaction variable in M-1C, the results of the interaction of the financial risk attitude variable do not moderate the effect of financial literacy on MSME performance. The M-1D and M-1E regression models have similar results to M-1C in that the financial risk attitude variable does not moderate the effect of the independent variables on the dependent variable.

The R Square value in the highest regression model at the five stages of the model, namely at M-1E, is 0.379, which means that the contribution of the influence of financial literacy variables, financial behavior, financial inclusion, and financial risk attitude on MSME performance and the interaction of the influence of financial literacy, financial behavior and financial inclusion on MSME performance is 37.9%.

#### 4.4 Heteroscedasticity Test (Glejser Test)

This research heteroscedasticity test uses the Glejser heteroscedasticity test. In this study, if the significance value is> 1%, 5%, and 10%, then there are no symptoms of heteroscedasticity (Table 5).

Table 5. Heteroscedasticity Test (Glejser Test)

Dependent Variable: Abs_Res					
Independent Variable	Micro, Small, dan Medium Enterprises	of Jember Regency			
	M-2A	M-2B			
(FL)	-0,039 <sup>ns</sup>	-0,001 <sup>ns</sup>			
	(-1,217)	(-0,013)			
(FB)	$-0.080^{(*)}$	-0,080(*)			
	(-1,859)	(-1,864)			
(FI)	$0,026^{\rm ns}$	0,029 <sup>ns</sup>			
	(0,839)	(0,937)			
(FRA)		$-0.073^{\text{ns}}$			
		(-1,013)			
$\mathbb{R}^2$	0,046	0,056			

Notes: Significance  $\alpha = 1\%$  (\*\*\*) 5% (\*\*) 10% (\*) Not significance (ns)

Heteroscedasticity was applied on models M-1A and M-1B since M-1C, M-1D, and M-1E were derivated from the database of the heteroscedasticity-corrected models as M-1A and M-1B. In Table 5, Model M-2A and M-2B are detected to have a heteroscedasticity problem. Therefore, it is necessary overcome the regression model using.

Using the weighted least square (WLS) method, namely squaring the X2 variable (affected by heteroscedasticity problems), then divided into each independent variable and interaction variable. The improvement can be seen in Table 6.

**Tabel 6.** Weighted Least Square (WLS).

Dependent Variable: MSME Performance (PM)					
Independent	Micro, Small, and Medium Enterprises of Jember Regency				
Variable	M-3A	M-3B	M-3C	M-3D	M-3E
(FL)	0,331***	0,125ts	0,151ts	0,201(**)	0,161 <sup>ns</sup>
	(4,348)	(1,606)	(1,547)	(2,060)	(1,653)
(FB)	-0,030 <sup>(**)</sup>	-0,031(**)	-0,029(**)	-0,011 <sup>ns</sup>	$0,002^{ns}$
	(-2,115)	(-2,463)	(-2,213)	(-0,756)	(0,149)
(FI)	$0,157^{(**)}$	-0.073ts	-0.078ts	$-0.140^{(*)}$	$0,052^{\text{ns}}$
	(2,224)	(-0,959)	(-1.012)	(-1,759)	(0,447)
(FRA)		$0,776^{(***)}$	0,846(***)	1,241(***)	1,605(***)
		(5,309)	(3,927)	(4,637)	(5,186)
(FL*FRA)			-0,024 <sup>ns</sup>	-0,080 <sup>ns</sup>	-0,081 <sup>ns</sup>
			(-0,446)	(-1,383)	(-1,422)
(FB*FRA)				-0,156 <sup>(**)</sup>	-0,189 <sup>(***)</sup>
				(-2,387)	(-1,422)
(FI*FRA)					-0,125 <sup>(**)</sup>
					(-2,215)
$\mathbb{R}^2$	0,518	0,627	0,627	0,648	0,666

Notes: Significance  $\alpha = 1\%$  (\*\*\*) 5% (\*\*) 10% (\*) Not significance (ns)

## 5. RESEARCH DISCUSSION

Model (M-3A) shows that financial literacy is important for business owners to improve their performance. Business owners with higher financial literacy have the potential to produce more optimal business performance and vice versa. With better financial literacy, business owners can minimize risks and maximize better business performance for the sustainability of their MSMEs. And vice versa, with poor financial literacy. Business owners will experience difficulties in making complex financial

decisions that have an impact on reducing their business performance. Understanding financial literacy for business owners in Jember Regency is needed, especially in basic financial calculations. Business owners in Jember district need financial science education and training to improve their financial literacy. Every business owner needs basic financial education and training as a guide in running their business to avoid various financial problems. Individuals with good financial literacy skills tend to be able to invest in assets to improve MSME performance. Financially literate

business owners tend to adopt financial management practices for business sustainability. Therefore, financial education is a factor that has a positive impact on business owners to improve MSME performance.

Model (M-3A) shows that the profitability of MSMEs is highly dependent on the financial behavior of business owners, ranging from working capital management to saving, borrowing, spending, and investment decisions. Business owners in Jember Regency tend not to be able to separate personal and business funds, resulting in uncontrolled spending. Good financial behavior leads to competitiveness in the global economy and the sustainability of MSMEs. Conversely, poor financial behavior will lead to business closure. With adequate financial behavior, business owners in Jember Regency can optimize their business performance. Financial planning needs to be considered perfectly as a measure of business sustainability. A decline in business performance in MSMEs will result in a loss of consumer confidence. Low financial skills will hurt the future of the

Model (M-3A) shows that the higher the financial inclusion of business owners will improve the performance of MSMEs. This means that the higher the business owner utilizes the available financial inclusion, the higher the business performance. And vice versa, the lower the financial inclusion of business owners will reduce business performance. Jember Regency is a city that has many micro, small, and medium enterprises so that they can improve the economy. However, there are still many gaps experienced by business owners, such as the lack of capital for business owners, many of whom use sufficient personal funds in their business. Access to financial institutions is a factor that business owners need to sustain their business. Lack of funds for business owners will reduce their business performance. Therefore, business owners in Jember district need access to financial institutions to support the performance of MSMEs. Financial inclusion is useful as a factor to support economic growth by optimizing the financial sector's contribution. It requires access to financial services to the capital community to grow their business. The (M-3E) model shows that the skills of business owners in Jember Regency in risk management are still low. Financial literacy and understanding the risks that business owners will face are skills that must be developed for the sustainability of business life, given the higher level of business competition and uncertainty in business owners' future. Business owners in Jember Regency with low financial literacy are less able to manage financial risk attitudes efficiently, which impacts problem-solving, namely inappropriate decision-making. Conversely, business owners in Jember Regency with a fairly high mastery of financial literacy can distinguish between opportunities and challenges.

Model (M-3E) shows that excessive financial behavior, such as saving, spending, and investing without financial considerations, can reduce business performance. The financial behavior skills of business owners in Jember Regency, when determining financial decisions, are

expected to be rational and relevant as a tool used in financial management to optimize business funds. Therefore, the financial behavior of business owners in Jember Regency can be seen from the management of business funds such as cash, savings, debt, expenses, and investment behavior. Business owners in Jember Regency who are literate in financial management practices tend to have good financial behavior. The high desire to fulfill personal desires rather than business needs can reduce business performance. Improving the performance of MSMEs is not only the amount of business turnover but also financial behavior skills, which are factors that need to be developed as a guide for business owners to minimize financial risk.

Model (M-3E) shows that the lack of access to financial institutions for business owners will reduce business performance. Business owners' financial access to financial institution services in Jember Regency needs to be supported with ease by the government and financial institutions to develop the economy, such as using credit for business capital for MSME owners. In addition to support from financial institutions, business owners need to be fully aware of proper financial management as a guideline to minimize the occurrence of financial risks such as swelling business debt. Many business owners who can take advantage of financial inclusion in financial institutions are less careful, they tend to be able to use these services without knowing the obstacles and risks that will be received in the future.

# 6. CONCLUSIONS

Based on the results of testing and analyzing research data and research results in the discussion previously presented, the conclusions of this study are as follows:

- a. Financial literacy significantly positively affects the performance of MSMEs in Jember Regency. This means that the better the financial literacy of MSME owners will further improve their business performance. And vice versa, the worse the level of financial literacy of MSME owners in Jember Regency, the worse their business performance. Business owners with adequate financial literacy can optimally improve the performance of MSMEs. Conversely, business owners with low financial literacy
- b. Financial behavior significantly negatively affects the performance of MSMEs in the Jember Regency. This shows that the more the financial behavior of business owners increases, the lower the performance of MSMEs in Jember Regency. Conversely, the lower the financial behavior of business owners, the better the performance of MSMEs. The high desire to meet one's needs results in suboptimal financial management, thus weakening the performance of MSMEs.
- c. Financial inclusion has a significant positive effect on the performance of MSMEs in Jember Regency. This shows that the higher the financial inclusion of

- business owners, the better the performance of MSMEs. And vice versa, the lower the financial inclusion of business owners, the lower the performance of MSMEs in Jember Regency. This study also found that financial risk attitude significantly positively affects the performance of MSMEs in the Jember Regency. This means that any increase in financial risk attitude will improve the performance of MSMEs. And vice versa, any decrease in financial risk attitude will reduce the performance of MSMEs.
- d. Financial risk attitude cannot moderate the effect of financial literacy on the performance of MSMEs in the Jember Regency. The higher percentage of financial literacy of business owners will not affect the performance of MSMEs. And vice versa.
- e. Financial risk attitude moderates the relationship between the significant negative effects of financial behavior on MSME performance. This means that any increase in financial behavior with the interaction variable financial risk attitude will reduce the performance of MSMEs. Any change in the percentage of business owners' financial behavior will affect the performance of MSMEs.
- f. Financial risk attitude moderates the relationship between the significant negative effects of financial inclusion on MSME performance. This means that any increase in financial inclusion with the interaction variable financial risk attitude will reduce the performance of MSMEs. Any change in the percentage of business owners' financial behavior will also affect the performance of MSME.

#### **References:**

- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324.
- Banthia, D., & Dey, S. K. (2022). Impact of Financial Knowledge, Financial Attitude and Financial Behaviour on Financial Literacy: Structural Equitation Modeling Approach. *Universal Journal of Accounting and Finance*, 10(1), 327–337.
- Bapat, D. (2020). Antecedents to responsible financial management behavior among young adults: moderating role of financial risk tolerance. *International Journal of Bank Marketing*, 38(5), 1177–1194. DOI: 10.1108/IJBM-10-2019-0356
- Mabula, J. B., & Han, D. P. (2018). Financial literacy of SME managers' on access to finance and performance: The mediating role of financial service utilization. *International Journal of Advanced Computer Science and Applications*, 9(9).
- Christianty, R., Latupapua, C. V, & Assyatri, S. (2022). Effect of Financial Inclusion and Financial Literacy on the Financial Performance of Micro, Small, and Medium Enterprises in Ambon City. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 5(3), 19518–19526.
- Colasante, A., & Riccetti, L. (2021). Financial and non-financial risk attitudes: What does it matter? *Journal of Behavioral and Experimental Finance*, 30, 100494. DOI: 10.1016/j.jbef.2021.100494
- Cossa, A., Madaleno, M., & Mota, J. (2022). Financial literacy environment scan in Mozambique. *Asia Pacific Management Review*, 27(4), 229–244.
- Buchdadi, A. D., Sholeha, A., & Ahmad, G. N. (2020). The influence of financial literacy on SMEs performance through access to finance and financial risk attitude as mediation variables. *Academy of Accounting and Financial Studies Journal*, 24(5), 1-15.
- ElDeeb, M. S., Halim, Y. T., & Kamel, E. M. (2021). The pillars determining financial inclusion among SMEs in Egypt: service awareness, access and usage metrics and macroeconomic policies. *Future Business Journal*, 7, 1–19.
- Esiebugie, U., Richard, A. T., & Emmanuel, A. L. (2018). Financial literacy and performance of small and medium scale enterprises in Benue State, Nigeria. *International Journal of Economics, Business and Management Research*, 2(4), 65–79.
- Esubalew, A. A., & Raghurama, A. (2020). The mediating effect of entrepreneurs' competency on the relationship between Bank finance and performance of micro, small, and medium enterprises (MSMEs). *European Research on Management and Business Economics*, 26(2), 87–95.
- Eton, M., Mwosi, F., Okello-Obura, C., Turyehebwa, A., & Uwonda, G. (2021). Financial inclusion and the growth of small medium enterprises in Uganda: empirical evidence from selected districts in Lango sub-region. *Journal of Innovation and Entrepreneurship*, 10(1). DOI: 10.1186/s13731-021-00168-2
- Ferli, O. (2023). Financial Literacy for Better Access to Finance, Financial Risk Attitude, and Sustainability of MSMEs in Indonesia. *Jurnal Manajemen*, 14(1), 111. DOI: 10.32832/jm-uika.v14i1.9792
- Gunawan, A., Jufrizen, J., & Pulungan, D. R. (2023). Improving MSME performance through financial literacy, financial technology, and financial inclusion. *International Journal of Applied Economics, Finance and Accounting*, 15(1), 39-52.
- HC, R. H.-K. (2022). The Role of Financial Literacy, Access of Finance, Financial Risk Attitude on Financial Performance. Study on SMEs Jogjakarta. *Jurnal Keuangan Dan Perbankan*, 26(4), 805–819.

- Hoirul Ummah, Siti Rosyafah, & Masyhad. (2021). Pengaruh Pengetahuan Akuntansi Dan Perilaku Keuangan Terhadap Kinerja Manajerial Umkm Makanan Di Sidoarjo. *Akuntansi '45*, 2(1), 38–43. DOI: 10.30640/akuntansi45.v2i1.104
- Irfany, M. I., Wulan, N., Fitri, R., & Irfany, M. I. (2022). The Impact of Islamic Financial Inclusion on Micro-Enterprises Capital: The Case of Sumedang Regency. *Iqtishoduna*, 18(2), 141–153.
- Irman, M., Budiyanto, B., & Suwitho, S. (2021). Increasing financial inclusion through financial literacy and financial technology On MSMEs. *International Journal of Economics Development Research (IJEDR)*, 2(2), 126–141.
- Kadoya, Y., & Khan, M. S. R. (2020). What determines financial literacy in Japan? *Journal of Pension Economics & Finance*, 19(3), 353–371.
- Maulana, R., Murniningsih, R., & Prasetya, W. A. (2022). Pengaruh Literasi Keuangan, Inklusi Keuangan, Dan Fintech Terhadap Keberlangsungan Bisnis Umkm. Procuratio: *Jurnal Ilmiah Manajemen*, 10(4), 440–452.
- Offiong, A. I., Udoka, C. O., & Bassey, J. G. (2019). Financial risk and performance of small and medium enterprises in Nigeria. *Investment Management and Financial Innovations*. 16(4), 110–122). DOI: 10.21511/imfi.16(4).2019.10
- Okello Candiya Bongomin, G., Mpeera Ntayi, J., Munene, J. C., & Akol Malinga, C. (2017). The relationship between access to finance and growth of SMEs in developing economies: Financial literacy as a moderator. *Review of International Business and Strategy*, 27(4), 520–538. DOI: 10.1108/RIBS-04-2017-0037
- Rasheed, R., Siddiqui, S. H., Mahmood, I., & Khan, S. N. (2019). Financial inclusion for SMEs: Role of digital microfinancial services. *Review of Economics and Development Studies*, 5(3), 571–580.
- Ratnawati, K. (2020). The influence of financial inclusion on MSMEs' performance through financial intermediation and access to capital. *The Journal of Asian Finance, Economics and Business*, 7(11), 205–218.
- Sajuyigbe, D. A. S., Odetayo, T. A., & Adeyemi, A. Z. (2020). Financial Literacy and Financial Inclusion as Tools to Enhance Small Scale Businesses' Performance in Southwest, Nigeria. *Finance & Economics Review*, 2(3), 1–13. DOI: 10.38157/finance-economics-review.v2i3.164
- Saurabh, K., & Nandan, T. (2018). Role of financial risk attitude and financial behavior as mediators in financial satisfaction: Empirical evidence from India. *South Asian Journal of Business Studies*, 7(2), 207–224. DOI: 10.1108/SAJBS-07-2017-0088
- Septiani, R. N., & Wuryani, E. (2020). Pengaruh Literasi Keuangan Dan Inklusi Keuangan Terhadap Kinerja Umkm Di Sidoarjo. *E-Jurnal Manajemen Universitas Udayana*, 9(8), 3214. DOI: 10.24843/ejmunud.2020.v09.i08.p16
- Singh, M. P., Chakraborty, A., & Roy, M. (2018). Developing an extended theory of planned behavior model to explore circular economy readiness in manufacturing MSMEs, India. *Resources, Conservation and Recycling*, 135, 313–322.
- Song, C. L., Pan, D., Ayub, A., & Cai, B. (2023). The Interplay Between Financial Literacy, Financial Risk Tolerance, and Financial Behaviour: The Moderator Effect of Emotional Intelligence. *Psychology Research and Behavior Management*, 16, 535–548. DOI: 10.2147/PRBM.S398450
- Sriary, B. D. A., & Nyoman, Y. N. (2020). Strategy for improving the performance of MSMES through access to financial institutions. *Eurasia: Economics and Business*, 12, 17-28.
- Srisusilawati, P., Fasa, M. I., Nurhayat, S., Anugrahwanto, R. B., Hidayat, A. W., Sulaimawan, D., Fitri, A., Rahmayuni, S., & Zahra, D. N. (2021). The Nexus Between Dynamic Capability and Islamic Financial Literacy Towards Innovation of Small Medium Enterprises (SMEs) in Indonesia. 1st Paris Van Java International Seminar on Health, Economics, Social Science and Humanities (PVJ-ISHESSH 2020), 36–39.
- Sudindra, V. R., & Naidu, J. G. (2018). Financial Behaviour and Decision-Making. *International Journal of Creative Research Thoughts*, 6(1), 1427–1435. DOI: 10.1729/IJCRT.17236
- Wati, C. R., Sumiati, S., & Andarwati, A. (2021). The effect of financial knowledge on firm performance: The role of financial risk attitude as moderation. *International Journal of Research in Business and Social Science*, 10(8), 236–249.
- Yanti, W. I. P. (2019). Pengaruh inklusi keuangan dan literasi keuangan terhadap kinerja UMKM di kecamatan moyo utara. *Jurnal Manajemen Dan Bisnis*, 2(1).
- Ye, J., & Kulathunga, K. M. M. C. B. (2019). How does financial literacy promote sustainability in SMEs? A developing country perspective. *Sustainability (Switzerland)*, 11(10). DOI: 10.3390/su1110299

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