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THE IMPACT OF FINANCIAL LITERACY ON RISK PROPENSITY MEDIATED BY ACCESS TO FINANCE

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ABSTRACT

Purpose – Financial literacy has become an important area of research in recent years. Its significance in making wise financial choices has also been documented in recent studies. In developing economies, business sustainability is a major issue as has been identified in many prior studies. Most SMEs are unable to survive 3 years after establishment. Prior researchers have mostly attributed this to a lack of access to finance. Recently, it has been discovered that financial literacy tends to assist SMEs with the needed skills and knowledge such as understanding the various sources of finance and analyzing different financial choices accurately, in order to be able to make the right financial choices. This study hence examines the impact of financial literacy on risk propensity mediated by access to finance.
Methodology – Data for the study was collected from SME owners/managers through structured questionnaires. The questionnaires were administered to 432 SME owners/managers. Descriptive statistics was used in describing the demographic statistics of the respondents. PLS Structural Equation Modeling (SEM) was used for the data analysis.
Findings – The study's hypotheses were confirmed. The findings showed that access to finance partially mediates the association between financial literacy and risk propensity. The relationship between financial literacy and risk propensity was likewise strongly favorable, and it was further established that access to finance significantly impacts on risk propensity.
Conclusion – Financial literacy and access to finance both remain a significant aspect of SME sustainability, both have a positive and significant implication for risk propensity. SMEs should hence include financial literacy programs such as workshops and seminars in their annual programs to help improve their financial knowledge since financial literacy impacts both access to finance and risk propensity. Policymakers should also put in more effort in making policies such as financial literacy training compulsory to help improve the financial knowledge of SMEs.

Keywords: SMEs, financial literacy, risk propensity, access to finance, mediation
JEL Codes: D91, G11, G53

1. INTRODUCTION

Financial literacy has recently become a very important research area, with many emerging research in the area. Policymakers worldwide are also increasingly according the needed attention to the area in both developed and developing nations. One of the main objectives of financial literacy is to assist individuals in making sound monetary judgements when dealing with financial issues. SMEs are essential to economic development, mainly due to their contributions to employment and economic growth, as has been documented in prior studies (Aphu,2018; Khan et al.,2020). However, SMEs are burdened with many challenges which limit their contribution to economic development (Ackah and Vuvor,2011; Wang,2016).

These challenges include lack of access to finance, poor financial decision-making, poor record keeping, among others. Prior literature has established that financial literacy is a significant variable for quality decision-making. One essential attribute of entrepreneurs is their risk propensity. Risk propensity measures the attitude of individuals towards risk. Risk attitude has been identified to have major implications for business performance and sustainability (Ye and Kulathunga,2019). This study, therefore, examines the impact of financial literacy on the risk propensity of SME owners/managers mediated by access to finance. The study on the relationship between financial literacy and risk propensity has not been accorded the needed importance in developing economies, we therefore conduct this study in a developing economy, Ghana and introduce access to finance as a mediating variable between the two variables.

The findings of the study are significant for SMEs as it throws further light on the need for SMEs to acquire financial skills and knowledge relevant for running their business. Policymakers can also add financial literacy training as a policy requirement for SMEs to help improve their financial knowledge. The introduction of access to finance as a mediating variable introduces a new link through which financial literacy can impact on risk propensity. The study makes contributions to the knowledge base theory and the perking order theory. SMEs with financial literacy are able to consider different sources of finance when considering access to finance. Financial literacy is also considered a strategically significant resource relevant in obtaining competitive advantage. This study will be a significant guide in risk assessment for SME businesses since a comprehensive review has been done on financial literacy, risk propensity and access to finance. The rest of the study is structured as follows, section 2 includes the literature review and conceptual framework for the study, section 3 has the methodology and analysis for the study and sections 4 contains the conclusion for the study.

2. LITERATURE REVIEW

2.1. SMEs

Small and Medium Enterprises are businesses which maintain their assets, revenue and employees below a certain threshold. Even though definitions differ from country to country, the denominator for the purpose remains asset, turnover and employee. The International Monetary Fund describes enterprises employing between 10 and 249 employees as SMEs. The definition of SMEs in Ghana by the Ghana Statistical Service is enterprises employing between 6 and 100 employees. The contribution of SMEs to development has been documented in prior literature in both developed and developing economies (Khan,2022). Beck et al. (2005) found that SMEs play essential roles in the revolution process of transition economies. A study by Asare (2014) revealed that SMEs in Ghana contribute massively to employment and Gross Domestic Product (GDP), especially in the manufacturing sector. Despite all these contributions, the many challenges the sector face makes sustainability difficult (Asare,2014), hence this study's motivation.

2.2. Financial Literacy and Risk Propensity

A person's current inclination to take or avoid risks is their risk propensity (Sitkin and Pablo, 1992; Sitkin and Weingart, 1995). It can be characterized as the risk-seeking or risk-averse attitudes of the decision-maker. Risk propensity, therefore, can be seen as the extent to which a person is willing to pursue risky opportunities with unknown outcomes. SME owners/managers make many important decisions in the day-to-day running of their business, which has serious repercussions on the performance of their business. It is therefore necessary to have a wide range of knowledge in finance to enable them to make efficient and effective decisions. According to Hasan et al. (2021), knowledge of various financial services significantly impacts financial choices. De Mel (2011) found that financial literacy training obtained from financial knowledge, assists SMEs in making the right financial decisions for business growth.

Adomako (2015) discovered that lack of financial literacy has resulted in poor financial judgments causing business failures in many parts of the world. Other studies also found the quality of entrepreneurs' decision-making have similarities with financial literacy (Eniola and Etenbang,2017). According to Ye and Kulathunga (2019), risk attitude and the management of risk depends partly on attitude towards uncertainties. Kim (2011) described risk attitude as a competitive characteristic in the construction industry since a contractor's risk-taking attitude is an essential element of the construction business. Ye and Kulathunga (2019) found a direct positive effect of risk attitude on business sustainability. Caliendo and Fossen (2010) posits that the level of risk has a significant effect on entrepreneurial survival. The study by Wall and Dyer (1996) found risk-taking attitude substantially impacts the economic performance of petroleum firms. Implying that the attitudes exhibited in business can impact positively or negatively on the performance of the business, and having financial literacy has been found to impact significantly on the decision-making ability of SMEs (Adomako,2015; Ye and Kulathuga,2019; Buchdadi et al.2020). Thus, financial literacy has the tendency to influence SME owners/managers to exhibit the right attitude towards risk in business. We hypothesize that:

H1: Financial literacy has a significant effect on the risk propensity of SMEs

2.3. Financial Literacy and Access to Finance

Among the many challenges SMEs face, access to finance remains the major among them (Cressy, 2006; Beck et al., 2006). The findings from prior studies, have found access to finance as a significant determinant of firm growth (Beck et al., 2006; Malo and Norus,2009; Adomako, 2015; Bongomin, 2017). However, the challenge of most SMEs being unable to acquire finance for business is well documented (Beck et al., 2006; Bongomin, 2017). Recent studies have found that access to finance can be enhanced with financial literacy. Wachira and Kihiu (2012), discovered that the possibility of financial illiterates remaining financially excluded is significantly very high. According to Hasan et al. (2021), the knowledge of various financial service factors, like interest rate and different sources of finance substantially impacts on access to finance.

Hussain et al. (2018) found evidence suggesting that financial literacy enhances access to finance and has growth potential in business. According to Fatoki (2021), a significant relationship exists between access to finance and financial literacy. The findings of Adomako (2015) suggests that financial literacy has a positive significant effect on access to finance. Ye and Kulathunga (2019) also found financial literacy to significantly impact on access to finance. Measurement for the variables of access to finance in the study were adopted from Buchdadi (2020). The items measured SMEs' ability to access finance and utilize various financial services. Therefore, we state:

H2: Financial literacy significantly impacts on access to finance

2.4. The Impact of Access to Finance on Risk Propensity

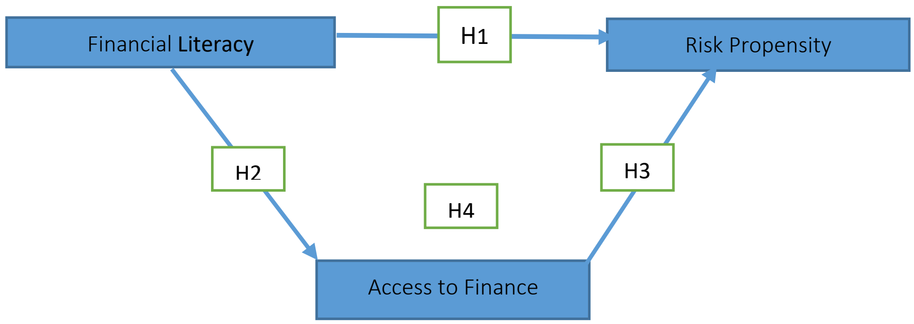
Risk propensity measures the tendency of a decision-maker to take or avoid risk. The impact of access to finance on risk propensity assesses the likelihood of a decision maker to take or avoid risk when access to finance has been obtained. Gaisie (2020) posits that being risk-averse has no significant effect on using debt financing in business. There are a few studies that examine the implications of financial literacy on risk attitude (Kim, 2011; Ye and Kulathunga, 2019; Buchdadi,2020). Others have also studied the impact of risk attitude on access to finance (Han et al., 2019; Ye and Kulathunga, 2019; Buchdadi et al., 2020). There have also been several studies on the effect of risk attitude on SME performance (Buchdadi,2020; Ajemunigbohun et al.,2020; Bandara and Ekanayake,2020). Researchers like Ye and Kulathunga (2019), assessed the effect of risk attitude on the sustainability of SME businesses. However, studies examining the effect of access to finance on risk propensity are scarce and have not been accorded much consideration. Both access to finance and risk attitude according to prior studies have significant effect on SME performance (Ye and Kulathunga, 2019), and risk propensity examines a decision makers' tendency to make or avoid risk (Sitkin and Pablo, 1992; Sitkin and Weingart, 1995), thus a decision maker's tendency to take or avoid risk after finance has been obtained has significant implication for the performance of the business. The study on the impact on access to finance on risk propensity must therefore be given enough attention by researchers. This study hence examines the effects of access to finance on the risk propensity of SME owners/managers.

Access to finance has been used as a mediating variable in various studies in recent times. Khyareh (2020) examined access to finance as a mediating variable in entrepreneurship and economic growth, while (Ye and Kulathunga,2019; Buchdadi et al.,2020) recorded a significant partial mediation between financial literacy and SME performance. Syahdan et al. (2020) found substantial mediation of access to finance in the link among market orientation, entrepreneur orientation, technological orientation, learning orientation and SME performance. Twumasi et al. (2022) recorded a significant result after examining access to finance in the relationship between financial literacy and household income. Even with all these studies, studies examining access to finance as a mediator between financial literacy and risk propensity remain vague. Access to finance is examined in this study as a mediating variable in the relationship between financial literacy and risk propensity. We therefore state:

H3: Access to finance significantly impacts on risk propensity

H4: Access to finance significantly mediates the relationship between financial literacy and risk propensity

Figure 1: The Hypothesized Relationships



3. DATA AND METHODOLOGY

Data for the study was collected from 432 SMEs with employees ranking from 6 to 100 per the definition of SMEs by the Ghana Statistical Service (GSS). Structured questionnaires were administered to SME owners/managers across the country. The respondents included members of the Ghana Enterprise Agency. We recorded 14 incomplete questionnaires and 18 questionnaires with errors. PLS- Structural Equation Modeling (SEM) was the primary analytical tool used for the study, while descriptive statistics was employed for the demographic description of the SMEs.

Financial literacy: The tool used to assess financial literacy were adapted from Adomako (2015). The following questions were asked to test the financial literacy of the respondents: (a) I prepare monthly financial statements, (b) I review monthly financial reports, (c) I analyze monthly financial statements, (d) I have an understanding of the company's gross profit margin. The last question was adapted from (Chen and Volpe,1998), (e) I am aware of the requirement for a bank loan. A seven-point Likert scale, from strongly agree to strongly disagree, was presented to the respondents.

Access to finance: Access to finance implies using accessible financial services. Respondents were asked to rate how satisfied they were with access to finance provided by their banks (Buchdadi et al., 2020). The questions were adapted from Buchdadi et al. (2020) and included questions such as whether the bank's financial services have increased business in our industry; whether our company is formally insured; whether the fee charged on the account opened is reasonable. The loan products offered are as needed for the business. The terms and conditions of the loans provided are good for us. The savings products offered are safe for business. These were evaluated on a seven-point Likert scale, from strongly satisfied to strongly dissatisfied.

Risk propensity: A few changes were made to the instrument of risk propensity used by Ye and Kulathunga (2019). On a Likert scale from 1 to 7, respondents were asked to indicate how likely they were to take the following actions. Invest 10% of revenue annually for business development, invest 10% of your annual income to buy stocks / mutual funds, put 10% of monthly revenue into a business emergency fund and bet a day's revenue in a high-risk game.

3.1. Descriptive Statistics

For sectorial distribution, the service sector had a maximum frequency of 220, accounting for 55% of the population, the industrial sector with 116, accounting for 29%, and the agricultural sector had 64, accounting for 16% of the population. Enterprises with employees ranging from 61 to 100 were 104, accounting for 26% of the population, and those from 6 to 30 had 111, which is 27.8% of the population. Enterprises with employees from 31 to 60 recorded the highest population of 185 accounting 46.3%. We recorded 32.8% of the businesses with a frequency of 131 had been in existence for less than three (3) years, companies above ten (10) years had a frequency of 113 accounting for 28.2%, companies in existence for seven (7) to ten (10) years were 108 accounting for 27%, and those in existence between three (3) and six (6) years were 48 representing 12% of the population. (See Table 1 below).

Table 1: The Profile of the Sample

Sector	Frequency	Percentage
Agriculture	64	16%
Industrial	116	29%
Service	220	55%
Company Size		
6 – 30 employees	111	27.8%
31 – 60 employees	185	46.3%
61- 100 employees	104	26%
Age of the Company		
Below 3 years	131	32.8%
3 – 6 years	48	12%
7 – 10 years	108	27%
Above 10	113	28.2%

4. FINDINGS AND DISCUSSIONS

The chapter on data analysis and results presents the findings in great depth. Basic statistics were performed, and PLS-SEM analysis comprising the assessment of measurement and structural model was performed. The measurement model establishes the reliability and validity of the construct. The structural model ascertains the significance of hypothesized relationships. Different hypotheses were proposed to evaluate the association of predictors with the outcome.

H1: Financial Literacy has a significant effect on the risk propensity of SMEs

H2: Financial Literacy significantly impacts on Access to Finance

H3: Access to Finance significantly impacts on Risk Propensity

H4: Access to Financial significantly mediates the relationship between Financial Literacy and Risk Propensity

Measurement Model - Based on the model's evaluation, the study's constructs are rated for quality. The quality criteria assessment starts with factors loadings and establishes the construct reliability and construct validity.

Factor Loading - Factor loading refers to the extent to which each item in the correlation matrix correlates with the given principal component. According to Pett et al. (2003), factor loading can range from -1.0 to + 1.0, with higher absolute values indicating a higher correlation of the item with the underlying factor. The factor loading is presented in table 2.

Table 2: Factor Loading

	AF	FL	RP
AF1	0.764		
AF2	0.831		
AF3	0.866		
AF4	0.865		
AF5	0.853		
AF6	0.801		
AF7	0.639		
FL1		0.881	
FL2		0.902	

FL3		0.902	
FL4		0.897	
FL5		0.876	
RP1			0.834
RP2			0.854
RP3			0.869
RP4			0.837

Reliability - The degree of a measuring instrument's stability and consistency is measured by its reliability. Cronbach alpha and composite reliability are mostly used in determining the stability and consistency of an instrument. According to Hair et al. (2011), a criterion of 0.70 or higher is considered acceptable. Reliability was therefore established since both Cronbach alpha and composite reliability results in the table below were above 0.7.

Table 3: Cronbach's Alpha Evaluation Results and Composite Reliability

Variables	Cronbach's Alpha	Composite Reliability
Access to Finance	0.908	0.928
Financial Literacy	0.936	0.951
Risk Propensity	0.870	0.911

Convergent validity - The degree to which various attempts to measure the same concepts are in agreement is referred to as convergent validity. The average variance extracted (AVE) indicates that items converge to measure the underlying construct and demonstrate convergent validity when AVE is greater than or equal to 0.50 (Fornell and Larcker, 1981). The AVE in table 4 below indicates that items converge to measure the underlying construct.

Table 4: Construct Convergent Validity (AVE)

Variables	Average Variance Extracted (AVE)
Access to Finance	0.650
Financial Literacy	0.795
Risk Propensity	0.720

Discriminant Validity - Following Fornell and Larcker's (1981) criterion, discriminant validity is established when the square root of AVE for a construct is greater than its correlation with all other constructs. In this study, the square root of AVE (in Bold Italic) for each construct was found greater than its correlation with other constructs (Table 5), hence discriminant validity was established.

Table 5: Discriminant Validity – Fornell and Larcker Criterion

	Access to Finance	Financial Literacy	Risk Propensity
Access to Finance	***0.806***		
Financial Literacy	0.800	***0.892***	
Risk Propensity	0.804	0.779	***0.849***

Note: Bold and Italics represent the square of AVE

Indicator Multicollinearity - The Variance Inflation Factor (VIF) statistic is used to assess multicollinearity in the indicators (Fornell and Bookstein, 1982). According to Hair et al. (2011), multicollinearity is not a severe issue if VIF values are below 5. Table 6 presents the VIF values for the indicators in the study and reveals that the VIF for each indicator is within the recommended threshold.

Table 6: VIF

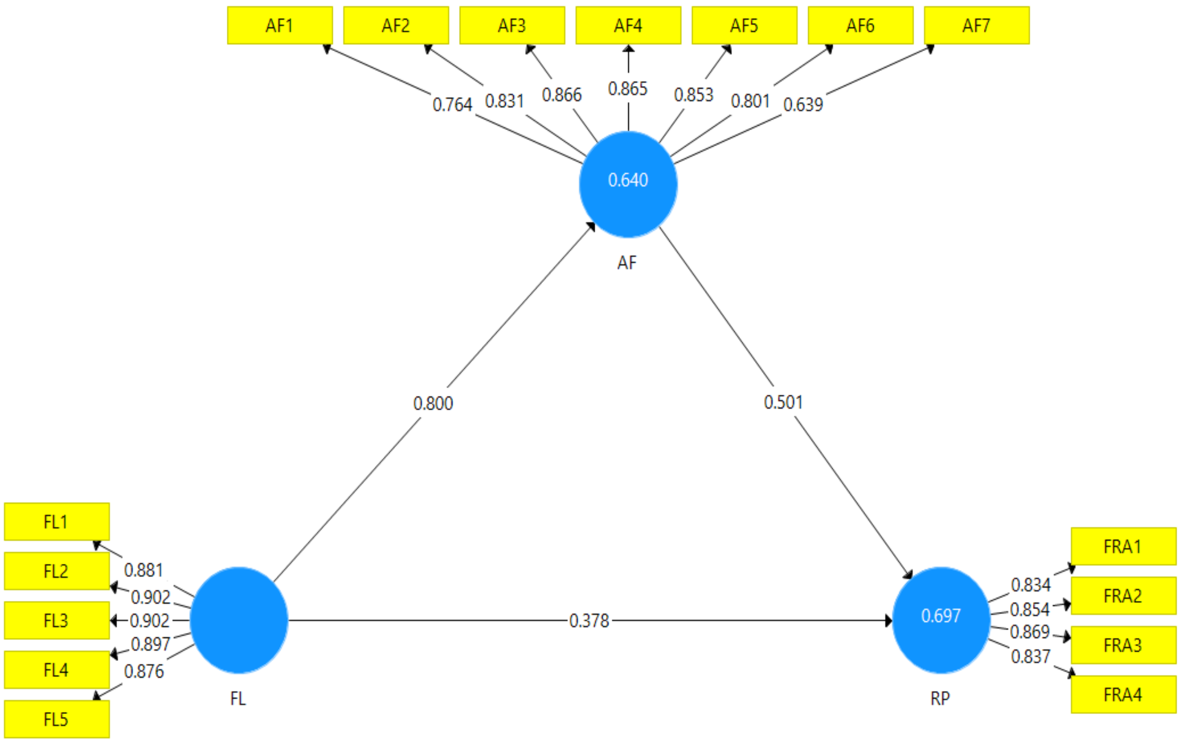
	VIF
AF1	2.Şub
AF2	2.743
AF3	3.089
AF4	3.118
AF5	2.863
AF6	2.209
AF7	1.531
FL1	3.115
FL2	3.594
FL3	3.417
FL4	3.325
FL5	2.916
RP1	2.063
RP2	Şub.16
RP3	2.445
RP4	2.215

The Goodness of Fit (Model's Predictive) - The results disclosed an R2 value of 0.640 for access to finance and 0.697 for risk propensity indicating that 64% variation in access to finance can be attributed to financial literacy. In comparison, the 69.7% variation in risk propensity can be credited to both financial literacy and access to finance. These results indicate that other predictive variables contribute to access to finance and risk propensity.

Table 7: Goodness Fits

	R Square
AF	0.640
RP	0.697

Figure 2: Path Coefficients of Structural Model



Structural Model - The next step in structural modelling is assessing the hypothesized relationship to substantiate the proposed hypotheses.

Hypothesis Testing - H1: Financial Literacy significantly impacts Risk Propensity. The result revealed a significant positive impact of financial literacy on risk propensity (β = 0.378 t = 6.839, p = 0.000), indicating that the hypothesis was accepted. H2: Financial Literacy significantly impacts Access to Finance. The result also revealed a positive and significant impact of financial literacy on access to finance (β = 0.800, t = 34.689, p = 0.000) indicating that the hypothesis was accepted. Finally, H3: Access to Finance significantly impacts Risk Propensity. The result showed that access to finance has a positive significant impact on risk propensity (β = 0.501, t = 9.932, p = 0.000) indicating that the hypothesis was accepted. Table 8 shows the direct relationship results:

Table 8: Direct Relationship Result

	Beta Coefficient	T Statistics	P Values
FL -> RP	0.378	6.839	0.000
FL -> AF	0.800	34.689	0.000
AF -> RP	0.501	9.932	0.000

Mediation Relationship - H4: Access to Finance significantly mediates the relationship between Financial Literacy and Risk Propensity. The result for H4 was positive and significant, indicating that access to finance mediates the relationship between financial literacy and risk propensity. Therefore, the hypothesis was accepted (β = 0.401, t = 9.231, p = 0.000).

Table 9. Indirect Relationship Result

	Beta Coefficient	T Statistics	P Values
FL -> AF -> RP	0.401	9.231	0.000

4. DISCUSSION AND CONCLUSION

The study examined the effect of financial literacy on the risk propensity of small and medium enterprises (SMEs) mediated by access to finance. SMEs are essential for the growth of every nation's economy, and leaders of both developed and developing nations over the years have made issues that concern SMEs top priority. De Mel (2011), stated that financial literacy is helpful when making financial decisions and each financial decision in business comes with risk (Adomako,2015). SME owners/managers are usually responsible for decision-making in business; hence they must have the necessary financial knowledge that will assist them to make the right choices while considering risk. This study hence examined financial literacy's effect on the risk propensity of SME owners/managers mediated by access to finance. The main analytical tool used was PLS-Structural Equation Modelling (SEM). The findings of H1 indicated that financial literacy has a positive significant impact on risk propensity. This implies that SME owners/managers with financial literacy can determine and analyze all risky impacts likely to affect their business before making decisions. This confirms the knowledge base view theory that businesses centered on knowledge acquisition have strategically significant strategy for attaining competitive advantage.

The findings of H2 also shows that financial literacy positively and significantly impacts access to finance, this finding is in line with prior findings (Adomako,2016; Ye and Kulathunga, 2019; Buchdadi et al.,2020) indicating that SMEs with financial literacy can consider different sources of finance and requirements for access to finance, hence, have a better chance of obtaining finance as compared to those without financial literacy. This also confirms the pecking order theory that businesses consider different levels and sources of finance when making decisions for acquiring finance. H3 also indicated a positive and significant result, showing that access to finance has a positive and significant effect on risk propensity. This finding proves that when SMEs have access to finance, their risk-taking attitude is impacted positively. Risky situations are therefore well assessed before choices are made. This result has a significant policy implication, in the sense that, with the right policies in place to assist SMEs to have easy access to finance, owners/managers will be more careful when making risky choices for businesses, thus, leading to growth and sustainability.

Finally, the result for H4 was significantly positive indicating that access to finance partially mediates the relationship between financial literacy and risk propensity, this is because the direct relationship between financial literacy and risk propensity is positive. However, access to finance still mediates the relationship between financial literacy and risk propensity. The hypothesis is therefore confirmed, this shows that even though financial literacy significantly impacts on risk propensity, some elements of financial literacy still go through access to finance to impact on risk propensity. Policymakers must therefore not relent on their effort to make access to finance for SMEs more accessible. Access to finance as a mediating variable also introduces a new link through which financial literacy can impacts on risk propensity. The study's mediator, access to finance, partially mediates the relationship between financial literacy and risk propensity. This implies that other variables may be able to link the relationship between the two variables fully. Future researchers can extend and test other mediation variables such as risk perception and manager's negotiation skills.

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