

## The Impact of Financial Literacy on Risk Propensity of SME Owners/Managers: The Mediating Role of Access to Finance in a Developing Economy

Selma Dzifa Addo<sup>1</sup>, Joseph Asantey<sup>2</sup>, David Mensah Awadzie<sup>3</sup>

<sup>1</sup>Accra Institute of Technology (AIT), Department of Business, Accra, Ghana

<sup>2</sup>ARB Apex Bank, Department of Risk and Compliance, Accra, Ghana.

<sup>3</sup>Accra Institute of Technology (AIT), Department of Business, Accra, Ghana.

**Abstract:** Financial literacy has been recognized as an essential tool for making informed financial decisions, and recent research has highlighted its role in promoting business sustainability. In developing economies, small and medium-sized enterprises (SMEs) often struggle to survive beyond their first few years, with limited access to finance frequently cited as a major contributing factor. However, emerging evidence suggests that financial literacy may play a critical role in equipping SME owners/managers with the necessary skills and knowledge to understand various sources of finance and make informed financial decisions. This study investigates the impact of financial literacy on risk propensity, mediated by access to finance, among SME owners/managers in a developing economy. Data were collected from 432 SME owners/managers using structured questionnaires, and analyzed using PLS Structural Equation Modeling (SEM). The findings confirm that financial literacy is positively associated with risk propensity and that access to finance partially mediates this relationship. The study concludes that financial literacy and access to finance are both essential elements for SME sustainability and should be prioritized in annual programs through training and education workshops for SME owners/managers. Policymakers are also encouraged to make financial literacy training a compulsory requirement to improve SMEs' financial knowledge and, ultimately, their access to finance and risk propensity.

**Keywords:** Financial literacy, Access to finance, Risk propensity, SME sustainability, Developing economy, Structural equation modeling.

### 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 Kihui (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

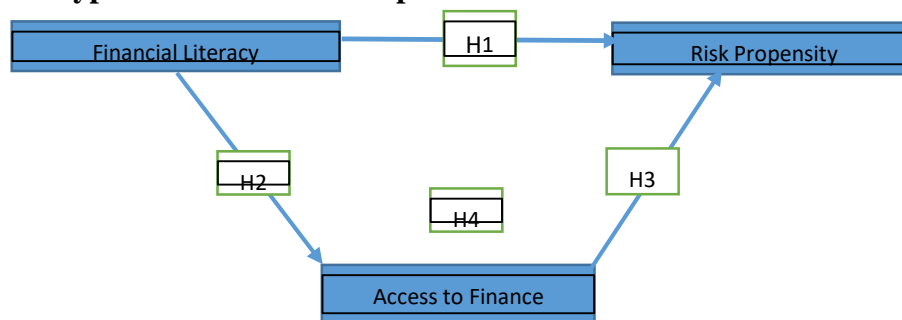
for the performance of the business. The study on the impact on access to finance on risk propensity must therefore be given enough attention by researchers. This study hence examines the effects of access to finance on the risk propensity of SME owners/managers.

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**

	<b>AF</b>	<b>FL</b>	<b>RP</b>
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**

<b>Variables</b>	<b>Cronbach's Alpha</b>	<b>Composite Reliability</b>
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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	<b><i>0.806</i></b>		
Financial Literacy	0.800	<b><i>0.892</i></b>	
Risk Propensity	0.804	0.779	<b><i>0.849</i></b>

*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	2.5 <sub>sub</sub>

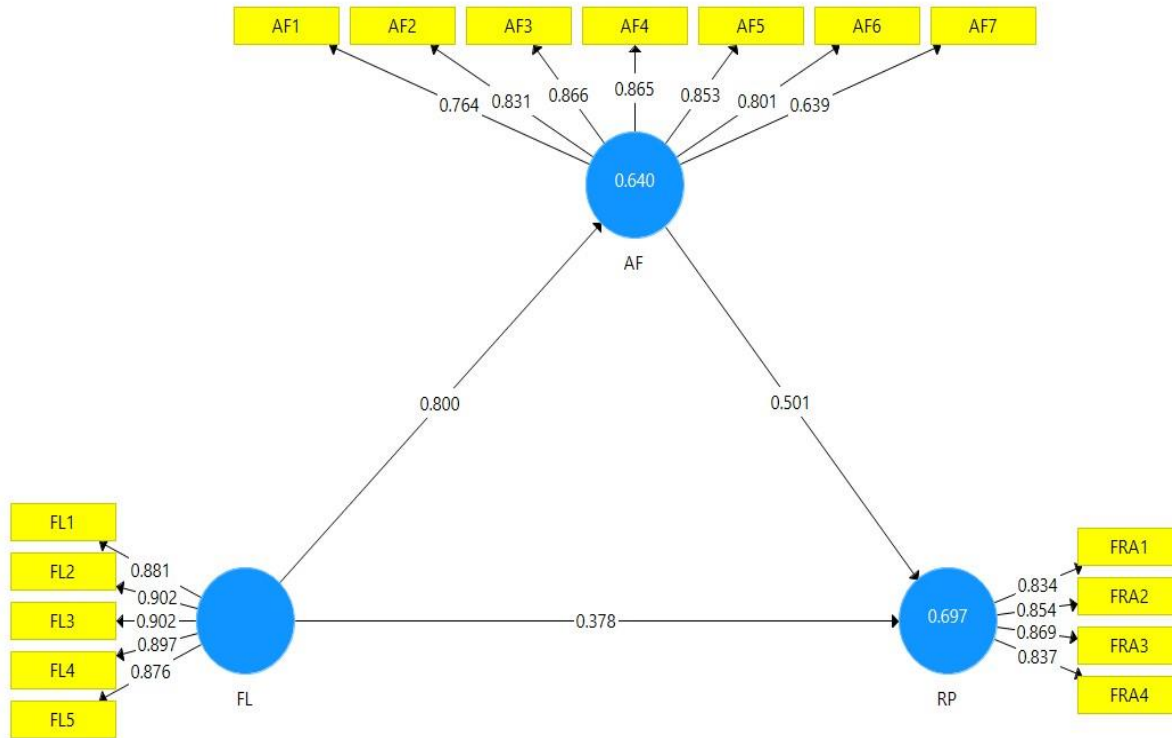
AF2	2.743
AF3	3.089
AF4	3.118
AF5	2.863
AF6	2.209
AF7	1.531
FL1	3.115
FL2	3.594
FL3	3.417
FL4	3.325
FL5	2.916
RP1	2.063
RP2	Şub.16
RP3	2.445
RP4	2.215

**The Goodness of Fit (Model's Predictive)** - The results disclosed an R<sup>2</sup> 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**

	<b>R Square</b>
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 ( $\beta = 0.378$   $t = 6.839$ ,  $p = 0.000$ ), 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 ( $\beta = 0.800$ ,  $t = 34.689$ ,  $p = 0.000$ ) 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 ( $\beta = 0.501$ ,  $t = 9.932$ ,  $p = 0.000$ ) 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 ( $\beta = 0.401$ ,  $t = 9.231$ ,  $p = 0.000$ ).

**Table 9. Indirect Relationship Result**

	<b>Beta Coefficient</b>	<b>T Statistics</b>	<b>P Values</b>
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.

## REFERENCES

- Ackah, J., & Vuvor, S. (2011). The Challenges faced by Small & Medium Enterprises (SMEs) in Obtaining Credit in Ghana. Master's Thesis, The Blekinge Institute of Technology.
- Adomako, S., Danso, A., & Ofori Damoah, J. (2015). The moderating influence of financial literacy on the relationship between access to finance and firm growth in Ghana. *Venture Capital*, 18(1), 43-61. DOI: 10.1080/13691066.2015.1079952
- Ajemunigbohun, S. S., Isimoya, O. A., & Elegunde, A. F. (2020). Risk Attitude, Insurance Patronage and SMEs Performance: Empirical Evidence from Lagos, Nigeria. *Annals of the University Dunarea de Jos of Galati: Fascicle: I, Economics & Applied Informatics*, 26(2), 71-78. DOI: <https://doi.org/10.35219/eai15840409108>
- Aphu, E. S., & Adator, S. W. (2018). Challenges and Sustainable Development of Small and Medium-sized Enterprises: Evidence from a Local Processing Company in Ghana (Nkulenu). *Advances in Social Sciences Research Journal*, 5(5), 298-306. DoI: 10.14738/assrj.55.4572.
- Asare, A. (2014). Challenges affecting SME's growth in Ghana. *OIDA International Journal of Sustainable Development*, 7(06), 23-28. <https://ssrn.com/abstract=2499555>
- Bandara, D., & Ekanayake, A. (2020). Mediating effect of risk management practices on the relationship between owner's risk attitude and business performance of small and medium enterprises: evidence from the north central province of Sri Lanka. *International Journal of Accounting & Business Finance*, 6(1), 53-67. DOI: <http://doi.org/10.4038/ijabf.v6i1.51>
- Beck, T., Demirgüç-Kunt, A. and Maksimovic, V. (2005). Financial and legal constraints to growth: does firm size matter? *The Journal of Finance*, 60 (1), 137-177. DOI: <https://doi.org/10.1111/j.1540-6261.2005.00727.x>
- Beck, T., & Demircuc-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & Finance*, 30(11), 2931-2943. DOI: <https://doi.org/10.1016/j.jbankfin.2006.05.009>
- Bongomin, G. O. C., Ntayi, J. M., Munene, J. C., & Malinga, C. A. (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: <https://doi.org/10.1108/RIBS-04-2017-0037>
- 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.
- Caliendo, M., Fossen, F., & Kritikos, A. (2010). The impact of risk attitudes on entrepreneurial survival. *Journal of Economic Behavior & Organization*, 76(1), 45-63. DOI: <https://doi.org/10.1016/j.jebo.2010.02.012>
- Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial services review*, 7(2), 107-128. [https://doi.org/10.1016/S1057-0810\(99\)80006-7](https://doi.org/10.1016/S1057-0810(99)80006-7)
- Cressy, R. (2006). Why do most firms die young? *Small business economics*, 26(2), 103-116. DOI: <https://doi.org/10.1007/s11187-004-7813-9>

- De Mel, S., McKenzie, D., & Woodruff, C. (2011). Getting credit to high return microentrepreneurs: The results of an information intervention. *The World Bank Economic Review*, 25(3), 456-485. DOI: <https://doi.org/10.1093/wber/lhr023>
- Eniola, A. A., &Entebang, H. (2017). SME managers and financial literacy. *Global Business Review*, 18(3), 559-576. DOI: 10.1177/0972150917692063
- Fatoki, O. (2021). Access to finance and performance of small firms in South Africa: The moderating effect of financial literacy. *WSEAS Transactions on Business and Economics*, 18, 78-87. DOI:10.37394/23207.2021.18.9
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50. DOI: <https://doi.org/10.2307/3151312>
- Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing research*, 19(4), 440-452. DOI: <https://doi.org/10.2307/3151718>
- Gaisie, D. A. (2020). Risk Attitudes, Entrepreneurship Decision and Financing Preference: Evidence from Non-Farm Household Enterprises in Ghana, Doctoral dissertation, University of Ghana.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152. DOI: <https://doi.org/10.2753/MTP1069-6679190202>
- Han, L., Xiao, J. J., &Su, Z. (2019). Financing knowledge, risk attitude and P2P borrowing in China. *International Journal of Consumer Studies*, 43(2), 166-177. DOI: <https://doi.org/10.1111/ijcs.12494>
- Hasan, M., Le, T., & Hoque, A. (2021). How does financial literacy impact inclusive finance? *Financial Innovation*, 7(1), 1-23. DOI: <https://doi.org/10.1186/s40854-021-00259-9>
- Hussain, J., Salia, S., & Karim, A. (2018). Is the knowledge that powerful? Financial literacy and access to finance: An analysis of enterprises in the UK. *Journal of Small Business and Enterprise Development*. 25 (6), 985-1003. <https://doi.org/10.1108/JSBED-01-2018-0021>
- Kim, H. J., & Reinschmidt, K. F. (2011). Effects of contractors' risk attitude on competition in construction. *Journal of Construction Engineering and Management*, 137(4), 275-283. DOI: [https://doi.org/10.1061/\(ASCE\)CO.1943-7862.0000284](https://doi.org/10.1061/(ASCE)CO.1943-7862.0000284)
- Khan, K.U., Atlas, F., Ghani, U., Akhtar, S. and Khan, F. (2021), Impact of intangible resources (dominant logic) on SMEs innovation performance, the mediating role of dynamic managerial capabilities: evidence from China, *European Journal of Innovation Management*, Vol. 24 No. 5, pp. 16791699. DOI: 10.1108/EJIM-07-2020-0276
- Khyareh, M. M. (2020). Entrepreneurship and economic growth: The mediation role of access to finance. *JANUS. NET e-journal of International Relations*, 11, 98-111. DOI: <https://doi.org/10.26619/1647-7251.11.1.7>
- Malo, S., & Norus, J. (2009). Growth dynamics of dedicated biotechnology firms in transition economies. Evidence from the Baltic countries and Poland. *Entrepreneurship & Regional Development*, 21(5-6), 481-502. DOI: 10.1080/08985620802332749

- Pett, M. A., Lackey, N. R., & Sullivan, J. J. (2003). Making sense of factor analysis: The use of factor analysis for instrument development in health care research. sage. Thousand Oaks, CA.
- Sitkin, S. B., & Pablo, A. L. (1992). Reconceptualizing the determinants of risk behavior. *Academy of management review*, 17(1), 9-38. DOI: <https://doi.org/10.2307/258646>
- Sitkin, S. B., & Weingart, L. R. (1995). Determinants of risky decision-making behavior: A test of the mediating role of risk perceptions and propensity. *Academy of Management Journal*, 38(6), 1573-1592. <https://doi.org/10.2307/256844>
- Syahdan, R., Djaelani, Y., & Mahdi, S. (2020). Strategic orientation and the performance of SMEs in Indonesia: The mediating role of access to finance. *Management Science Letters*, 10(5), 1151-1160. DOI: 10.5267/j.msl.2019.10.026
- Twumasi, M. A., Jiang, Y., Ding, Z., Wang, P., & Abgenyo, W. (2022). The Mediating Role of Access to Financial Services in the Effect of Financial Literacy on Household Income: The Case of Rural Ghana. *Sage Open*, 12(1), DOI: <https://doi.org/10.1177/21582440221079921>
- Wachira, I. M., & Kihui, E. N. (2012). Impact of financial literacy on access to financial services in Kenya. DOI: 10.4236/ib.2010.22024
- Wang, Y. (2016). What are the biggest obstacles to growth of SMEs in developing countries?—An empirical evidence from an enterprise survey. *Borsa Istanbul Review*, 16(3), 167-176. <https://doi.org/10.1016/j.bir.2016.06.001>
- Walls, M. R., & Dyer, J. S. (1996). Risk propensity and firm performance: A study of the petroleum exploration industry. *Management Science*, 42(7), 1004-1021. DOI: <https://doi.org/10.1287/mnsc.42.7.1004>
- Ye, J., & Kulathunga, K. M. M. C. B. (2019). How does financial literacy promote sustainability in SMEs? A developing country perspective. *Sustainability*, 11(10), 2990. DOI: <https://doi.org/10.3390/su11102990>