



Effect of Financial Risk Management Practices on the Financial Performance of Agricultural Value Chain SMEs in Kwara State, Nigeria

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Abstract

Original Research Article

This study examines the effect of financial risk management practices on the financial performance of agricultural value chain SMEs in Kwara State, Nigeria. The study specifically investigates the influence of risk assessment and planning, working capital management, financial analysis and performance monitoring, and credit risk management on SME financial performance. A quantitative cross-sectional survey design was adopted, and primary data were collected through structured questionnaires administered to owners and managers of agricultural SMEs. From a population of 839 registered agricultural SMEs, a sample size of 271 respondents was determined using the Yamane sampling formula. Descriptive statistics, and Ordered Logistic Regression were employed to analyze the data. The findings reveal that credit risk management has a positive and statistically significant effect on the financial performance of agricultural SMEs, while risk assessment and planning, working capital management, and financial analysis and performance monitoring show statistically insignificant effects. The result further indicates that effective credit risk management enhances SME financial performance by improving credit evaluation, reducing default risks, and strengthening financial decision-making. The study concludes that although financial risk management practices are important for business sustainability, credit risk management plays the most critical role in improving financial performance among agricultural value chain SMEs. The study therefore recommends strengthening credit risk assessment systems, expanding access to responsible agricultural financing, and providing financial management training for SME operators to improve risk management capabilities and enhance financial performance.

Keywords: Financial Risk Management, Financial Performance, Credit Risk Management, Agricultural SMEs, Ordered Logistic Regression.

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Introduction

Agricultural Small and Medium-sized Enterprises (SMEs) are widely recognized as engines of economic growth and rural transformation in developing economies. They contribute significantly to employment generation, income creation, poverty reduction, and food security (OECD, 2021; Zaridis et al., 2021). Globally, agricultural SMEs constitute a substantial proportion of business activities, particularly within agricultural value chains, and are estimated to account for over 90% of total SMEs worldwide (Aceli, 2020). In Africa, agribusiness SMEs represent more than half of all SMEs and contribute significantly to food production and agricultural employment (Aceli, 2020; Zada et al., 2021). Through value addition, processing, storage, and distribution, these enterprises stimulate inclusive economic development across rural and urban communities.

In Nigeria, agricultural value chain SMEs form a vital component of the national economy. The agricultural value chain encompasses interconnected activities such as production, aggregation, processing, transportation, marketing, and distribution of agricultural products to final consumers (Food and Agriculture Organization, 2021). This structured network facilitates the flow of goods, funds, and information among farmers, processors, wholesalers, retailers, and consumers (Fu et al., 2010; KPMG, 2013). As a result, agricultural value chain SMEs contribute significantly to food security, employment generation, and income growth (OECD, 2021; Zaridis et al., 2021). Efficient agricultural value chains are particularly important in developing economies where they help bridge the gap between rural producers and urban markets (Barrett et al., 2022; Alawode, 2025).

Despite their importance, agricultural value chain SMEs operate in a highly uncertain and volatile environment characterized by multiple forms of risk. Financial risks such as price fluctuations, credit constraints, cash flow shortages, and loan default risks significantly affect enterprise sustainability and profitability (Nanthuru et al., 2018; Sandhu & Hussain,

2021). Risk-taking and risk management have been identified as strategic approaches that influence SME competitiveness and financial outcomes (Civelek et al., 2023; Li & Abdullah, 2024; Civelek et al., 2022). Internal risks may arise from managerial inefficiencies, poor resource utilization, and weak compliance systems, while external risks stem from economic instability, political dynamics, market volatility, and regulatory changes (Eyinade et al., 2025; Ali, 2024; Jeje, 2020). In agriculture, environmental uncertainties such as climate variability, pest infestations, and soil degradation further compound financial vulnerability (Khatri et al., 2024; John, 2023).

In Nigeria, these challenges are exacerbated by structural constraints including inadequate infrastructure, limited access to credit, and inefficient supply chain systems (Inuwa & Ali, 2024). Agricultural markets are characterized by significant price volatility and unpredictable demand conditions, which directly impact revenue stability and profitability (Mustafa et al., 2024). Operational risks such as poor rural road networks, high transportation costs, and post-harvest losses further weaken SME performance (Abdulraheem, 2025). Furthermore, financing inadequacy remains a major obstacle for SMEs in developing economies, constraining their growth and competitiveness (Oyegbade et al., 2022; Khan, 2022).

Recognizing these challenges, the government of Nigeria has implemented various interventions aimed at improving access to finance and reducing agricultural sector risks. These include the Agricultural Credit Guarantee Scheme Fund, the Central Bank of Nigeria's Anchor Borrowers' Programme, and the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (Tong & Yang, 2021). These initiatives aim to de-risk agricultural lending, enhance credit access, and strengthen the financial stability of agribusinesses. Additionally, collaboration with the International Fund for Agricultural Development through value chain development initiatives has supported rural infrastructure and market access improvements (Ezeudu & Obimbua, 2024; Tomorri et al., 2022).

Nevertheless, empirical evidence suggests that the financial performance of agricultural value chain SMEs remains suboptimal, particularly in Kwara State (Adesope et al., 2022). Persistent exposure to financial, market, operational, and environmental risks continues to undermine profitability and long-term sustainability. Although financial risk management practices such as diversification, cooperative participation, improved technology adoption, and credit management are expected to enhance financial performance (Omotesho et al., 2020; Boakye et al., 2024), limited empirical studies have specifically examined their effect on agricultural value chain SMEs in Kwara State.

Given this gap in the literature, there is a need for context-specific empirical investigation to determine how financial risk management practices influence the financial performance of agricultural value chain SMEs in Kwara State, Nigeria. This study therefore examines the effect of financial risk management practices on the financial performance of agricultural value chain SMEs in Kwara State, Nigeria.

Literature Review

The literature review examines the relationship between financial risk management practices and financial performance. Existing studies suggest that effective financial risk management enhances firm stability, profitability, and long-term survival, while weak risk structures expose firms to liquidity crises, credit defaults, and operational disruptions. This section explores theoretical and empirical perspectives on how financial risk management practices affect the financial performance of agricultural value chain SMEs in Kwara State, Nigeria.

Concept of Financial Risk Management

Financial risk management refers to the systematic process of identifying, analyzing, and controlling financial risks that may adversely affect a firm's performance (Chitta & Soni, 2023). These risks include credit risk, liquidity risk, market risk, operational risk, and interest rate risk. According to Ogunmokun et al. (2022), financial risk management involves structured

policies and strategies designed to minimize potential financial losses while maximizing firm value.

In the context of SMEs, especially agricultural value chain enterprises, exposure to financial risks is heightened due to price volatility, weather uncertainties, limited access to finance, and weak institutional support (Abdulraheem, 2025; Agbeyinka, 2025). Effective financial risk management practices help firms improve decision-making, reduce vulnerability, and enhance operational stability.

Financial Performance

Financial performance reflects a firm's ability to generate profit, maintain liquidity, and ensure sustainable growth. It is commonly measured using indicators such as profitability ratios, return on assets (ROA), return on equity (ROE), liquidity ratios, and sales growth (Tudose et al., 2022; Hasidi, 2025). For SMEs, financial performance is a critical indicator of survival and competitiveness. In agricultural value chains, performance is often influenced by external shocks, seasonal fluctuations, and access to working capital (Abdulraheem, 2025). Scholars argue that firms with structured financial risk management systems tend to record more stable earnings and improved financial outcomes compared to those without formal risk practices.

Financial Risk Management Practices and Financial Performance

Empirical studies indicate a significant relationship between financial risk management practices and firm performance. Hudáková et al. (2023) found that SMEs with formal risk assessment and monitoring systems demonstrated higher profitability and reduced financial distress. Similarly, Oppong et al. (2024) reported that internal control mechanisms and risk mitigation strategies positively influence SME financial outcomes.

Risk identification enables firms to anticipate potential financial threats, while risk assessment evaluates the likelihood and impact of such risks. Mitigation strategies, including diversification,

insurance, hedging, and credit control policies, reduce exposure to adverse financial events. Continuous risk monitoring ensures early detection of financial irregularities and enhances accountability (Kulshrestha, 2022; Nafiu et al., 2025).

In developing economies like Nigeria, weak risk management structures have been associated with high SME failure rates. Studies suggest that SMEs that adopt proactive financial risk management practices experience improved cash flow stability and enhanced investment capacity (Nasimiyyu, 2023).

Agricultural Value Chain SMEs in Kwara State

Agricultural value chain SMEs include enterprises engaged in production, processing, storage, distribution, and marketing of agricultural products. In Kwara State, agriculture remains a major economic activity and source of livelihood (National Bureau of Statistics, 2023). However, these enterprises face numerous financial risks such as price instability, credit constraints, post-harvest losses, and market uncertainties.

Limited access to structured risk management frameworks exposes many agricultural SMEs to financial vulnerability. Scholars emphasize the need for improved financial management systems, insurance schemes, and credit risk controls to enhance performance sustainability (Hamed, 2023).

Theoretical Framework

The study is anchored on the Risk Management Theory, which posits that firms can enhance performance by systematically identifying, evaluating, and controlling risks (Bromiley et al., 2015). The theory assumes that risk management is not merely defensive but strategic, contributing to value creation and organizational stability.

The theory highlights core processes such as risk identification, assessment, response, and monitoring as mechanisms through which firms protect assets and improve performance

outcomes. Despite criticisms that SMEs may lack the capacity to implement comprehensive risk systems, empirical evidence supports its relevance in improving financial outcomes in emerging markets (Adegbite & Ojo, 2022). This theory is particularly relevant to agricultural value chain SMEs in Kwara State, Nigeria, where exposure to financial volatility necessitates structured risk management approaches to enhance financial performance.

Empirical Studies

Empirical evidence on risk management practices and financial performance increasingly shows that effective identification, assessment, and mitigation of risks significantly influence firm profitability, liquidity stability, and long-term sustainability. Prior studies across different countries and sectors demonstrate that enterprises adopting structured risk management frameworks tend to achieve better financial outcomes than those relying on informal or reactive approaches. Selected empirical studies relevant to this study are reviewed below.

Ojubanire and Dawodu (2021) investigated the relationship between enterprise risk management (ERM) and financial performance of MSMEs in Osun State, Nigeria. The study adopted a cross-sectional survey design and collected primary data from 273 SME owners and managers using structured questionnaires. Descriptive statistics and regression analysis were employed. The findings showed that market, financial, operational, and technological risks were prevalent; however, most respondents reported a weak perceived relationship between risk management practices and financial performance. The study concluded that ERM practices were not yet institutionalized among MSMEs. The study recommended increased awareness, training, and formalization of risk management systems among SMEs

Offiong et al. (2019) examined financial risk and SME performance in Nigeria using secondary time-series data obtained from the Central Bank of Nigeria. The study applied econometric techniques to analyze long-run and short-run relationships. The results revealed a negative and insignificant long-run relationship between

aggregate financial risk and SME performance, but exchange rate, liquidity, interest rate, and inflation risk significantly affected SMEs in the short run. The study concluded that financial risk components materially influence SME performance dynamics. It recommended improved macroeconomic stability policies and stronger internal liquidity management by SMEs.

Tong and Yang (2021) assessed agricultural financing and risk management on firm performance using panel data and ordered logistic regression analysis. The results showed that structured financial risk-sharing mechanisms significantly improved firm profitability and growth. The study concluded that formal risk management enhances financial outcomes in agricultural enterprises. It recommended strengthening agricultural credit guarantees and risk-sharing schemes.

Liu and Park (2021) analyzed agricultural supply chain financing and financial performance using regression analysis on panel data. The findings indicated that supply chain risk-sharing arrangements improved liquidity and operational stability. The study concluded that coordinated financial risk mechanisms enhance enterprise performance. It recommended expanding structured agricultural financing models.

Subagio and Saraswati (2022) used panel regression techniques to examine financial performance and corporate value in agricultural firms. The findings showed that improved financial performance positively influenced corporate valuation. The study concluded that financial stability strengthens enterprise sustainability. It recommended integrating risk management into corporate financial strategies.

Apaloo et al. (2022) conducted an empirical assessment of agricultural financing interventions using survey data and regression analysis. The results revealed that access to structured financial instruments reduced vulnerability and enhanced profitability. The study concluded that financial risk mitigation tools support enterprise sustainability. It recommended strengthening rural financial institutions.

Bettanti and Lanati (2023) employed panel data analysis to examine risk diversification strategies among European agricultural SMEs. The findings showed that firms adopting diversified risk management practices recorded higher revenue growth and return on investment. The study concluded that risk diversification is positively associated with financial performance. It recommended broader adoption of enterprise-wide risk frameworks.

Severine and Kessy (2022) utilized survey methodology and multiple regression analysis to study agricultural SMEs in East Africa. The findings revealed that credit risk management and financial planning significantly improved profitability. The study concluded that financial risk control is a determinant of SME sustainability. It recommended capacity-building programs for SME financial managers.

Adesope et al. (2022) conducted a value chain profitability analysis of shea butter production in Kwara State using structured questionnaires administered to 247 participants. Gross margin and profitability analyses were applied. The findings revealed that shea nut processing and marketing were profitable but constrained by limited access to credit and modern equipment. The study concluded that financial constraints limit performance potential. It recommended provision of affordable credit and improved processing facilities.

Westerburg (2019) applied panel regression techniques to analyze enterprise risk management adoption among agribusiness firms. The findings showed that comprehensive ERM frameworks improved return on investment and sales growth. The study concluded that structured risk management enhances financial resilience. It recommended wider ERM implementation across agribusiness sectors.

Chunrong and Yan (2020) used regression analysis to examine agricultural supply chain risk mitigation strategies. The results showed that contract-based risk-sharing arrangements improved liquidity and reduced default risk. The study concluded that coordinated risk-sharing strengthens financial performance. It recommended policy support for contract farming systems.

Methodology

The study adopted a quantitative cross-sectional survey design to examine the effect of financial risk management practices on the financial performance of agricultural value chain SMEs in Kwara State, Nigeria. The population comprised 839 registered agricultural and agro-allied SMEs across Kwara North, Kwara Central, and Kwara South senatorial districts, as documented by the Nigerian Directory (2024). Using the Yamane (1967) formula at a 95% confidence level and 5% margin of error, a sample size of 271 SMEs was determined and proportionately allocated across the three districts (40% Kwara North, 30% Kwara Central, and 30% Kwara South). Primary data were collected through a structured questionnaire administered to SME owners, managers, and key financial officers, with sections covering demographic characteristics and financial risk management. Data were analyzed using descriptive statistics and multiple regression analysis to determine the strength and significance of the relationship between financial risk management practices and financial performance of agricultural value chain SMEs in Kwara State, Nigeria.

Model Specification

This study adapts and modifies the enterprise risk management (ERM) framework proposed by Yakob et al. (2019), which originally examined the relationship between ERM components and SME performance using variables such as internal environment, objective determination, risk identification, risk assessment, risk response, control activities, information and communication, monitoring, alongside firm-specific control variables. The original model conceptualized SME performance as a function of multiple ERM dimensions and firm characteristics.

$$PRES_i = a + b_1PD_i + b_2PO_i + b_3PPR_i + b_4PR_i + b_5TBR_i + b_6KA_i + b_7MK_i + b_8P_i + b_9U_i + b_{10}SP_i + b_{11}SM_i + b_{12}SZ_i + \epsilon_i \dots\dots\dots 1$$

Where: $PRES_i$ is representing SME performance (dependent variable) while enterprise risk management measurement consists of 8

elements which are PD_i : Internal Environment; PO_i : Objective Determination; PPR_i : Identification of Risk Events; PR_i : Risk Assessment; TBR_i : Risk Response; KA_i : Activity Control; MK_i : Information and Communication; and P_i : Monitoring. Control variables are characterized by U_i : Firm Age; SP_i : Legal Status; SM_i : Capital Source; SZ_i : Size are the control variables. Finally, a is the regression constant, b refers to regression coefficient and ϵ_i represents the error term.

However, in line with the objectives of this study, the original ERM components were streamlined and replaced with key risk categories more relevant to agricultural value chain SMEs in Kwara State, Nigeria. Specifically, the study focuses on Financial Risk (FR) as the major dimensions of risk management practices influencing financial performance. The modified functional model is expressed as:

$$Y_i = f (RAP_i, WCM_i, FAPM_i, CRM_i) \quad 2$$

$$Y_i = \beta_0 + \beta_1RAP_i + \beta_2WCM_i + \beta_3FAPM_{it} + \beta_4CRM_{it} + \mu_{it} \dots\dots\dots 3$$

Where:

Y = Financial Performance of Agric-SMEs “i”

RAP = Risk Assessment and Planning of Agric-SMEs “i”

WCM = Working Capital Management of Agric-SMEs “i”

$FAPM$ =Financial Analysis and Performance Monitoring of Agric-SMEs “i”

CRM = Credit Risk Management of Agric-SMEs “i”

β_0 = Constant Coefficient

$\beta_{(1-4)}$ = Parameters of the estimate

ϵ_i = Error term (5% significance level)

i = Agric-SMEs (cross sectional unit)

Model Estimation Techniques

The study employed both descriptive and inferential statistical techniques to analyze the effect of financial risk management practices on

the financial performance of agricultural value chain SMEs in Kwara State, Nigeria. Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize respondents’ characteristics and risk management practices, while Ordered Logistic Regression was applied as the main estimation technique because financial performance was measured on an ordinal scale. In addition, Principal Component Analysis (PCA) was used to construct composite indices for the various risk management dimensions and reduce multicollinearity among related variables before regression estimation. All analyses were conducted at a 5% level of significance.

Data Presentation, Analysis and Discussion of Findings

Descriptive Result

This section presents the descriptive statistics of the variables used in examining the effect of financial risk management practices on the financial performance of agricultural value chain SMEs. The result of the descriptive statistics provides preliminary insights into the pattern and general behavior of the data collected from the sampled SMEs.

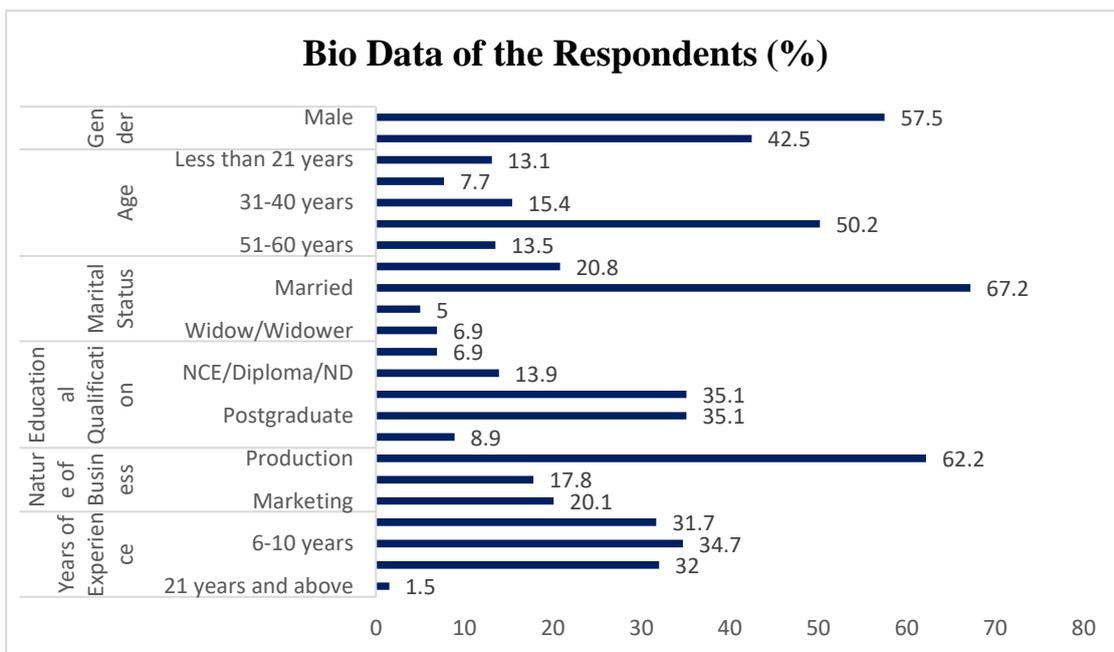


Figure 1: Biodata of the Respondents
 Source. Authors’ Computation, (2025)

The result in Figure 1 indicates that the majority of respondents (67.2%) are married, while 20.8% are single, 5% are divorced, and 6.9% are widowed, suggesting that most participants may have family responsibilities that could influence business decisions. In terms of business nature, 62.2% are engaged in production activities, 20.1% in marketing, and 17.8% in processing, indicating that production dominates the

agricultural value chain among the sampled SMEs. Regarding work experience, 34.7% of respondents have 6–10 years of experience, 32% have 11–20 years, and 31.7% have 0–5 years, while only 1.5% have over 21 years of experience, showing that most respondents possess moderate to substantial experience, which strengthens the reliability of their responses on risk management practices.

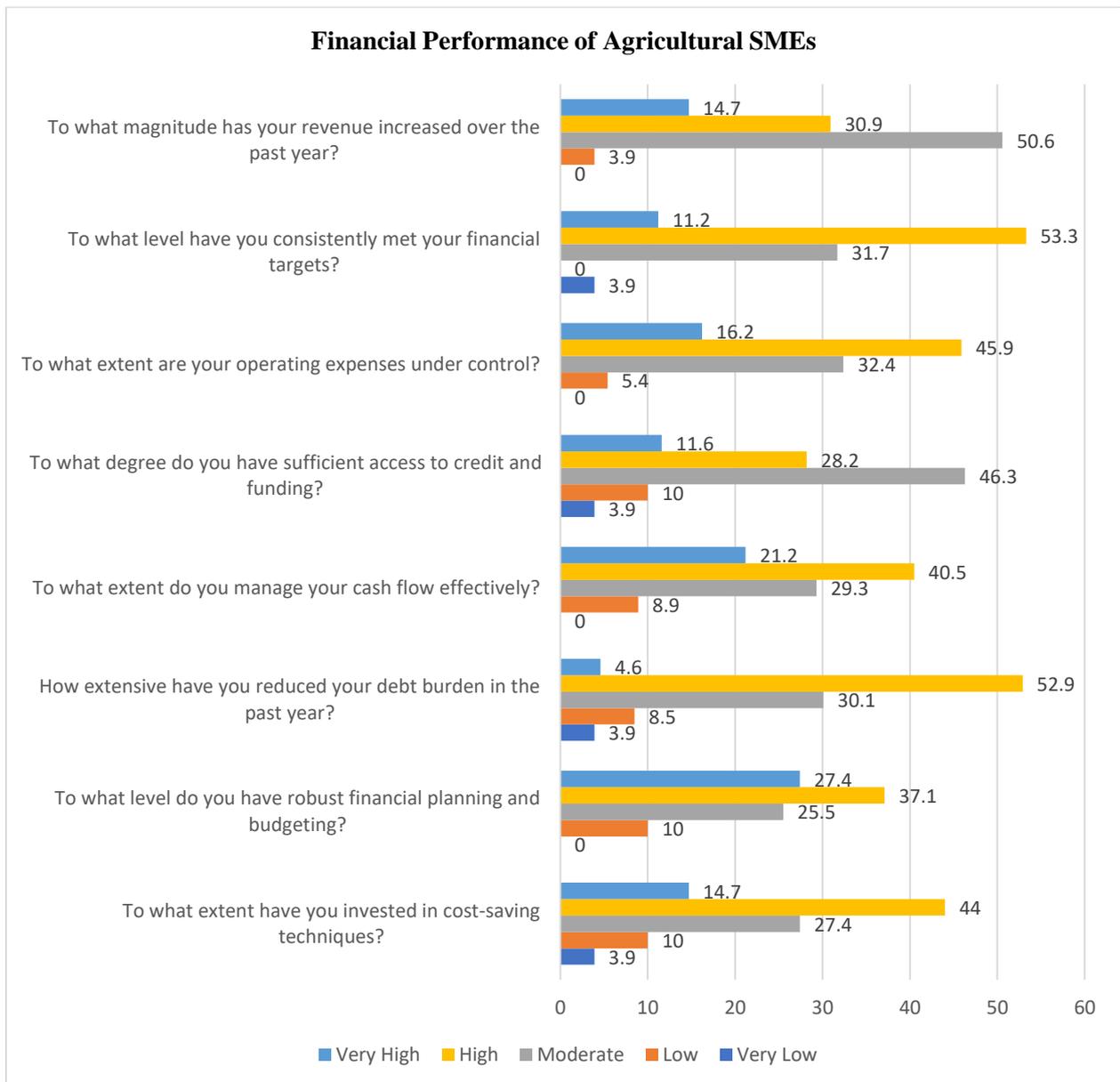


Figure 2: Financial Performance of Agricultural SMEs
 Source. Authors' Computation, (2025)

Figure 2 shows that agricultural value chain SMEs in Kwara State generally exhibit positive financial performance and sound financial management practices. A considerable proportion of respondents report high investment in cost-saving techniques (44%) and strong commitment to financial planning and budgeting (37.1% rated high). Efforts to reduce debt burden are notable, with 52.9% indicating high improvement, while 40.5% report effective cash flow management and 21.2% rate it very high.

Although 45.9% of SMEs indicate good control over operating expenses and over half consistently meet financial targets, access to credit remains a challenge, with 46.3% reporting only moderate access and just 28.2% indicating high access to funding. Overall, the findings suggest encouraging financial performance among the SMEs, but highlight the need to improve access to finance and reduce reliance on external funding sources.



Figure 3: Responses on Exposure to Different Risks
 Source. Authors' Computation, (2025)

Figure 3 indicates that agricultural value chain SMEs in Kwara State are exposed to multiple forms of risk, with marketing risk being the most prevalent, as 46.3% of respondents experience it occasionally and 47.1% report encountering it most times or always. Financial risk is also significant, with 33.2% experiencing it most times and 22.4% indicating it occurs always,

reflecting persistent financial challenges such as cash flow constraints and debt management issues. Operational risk is moderately experienced, with 39% reporting occasional exposure and 23.9% encountering it most times, while environmental risk appears less frequent, with 30.5% indicating occasional exposure and only 10.8% reporting it as always occurring.

Table 1: Components of Financial Risk Management Practices

Items	Mean	Standard deviation	Skewness	Kurtosis	Cronbach's alpha	Convergent Validity
Risk Assessment and Planning						
RAP1	3.67	0.719	-0.227	-0.100	0.814	0.775
RAP2	3.81	0.872	-0.25	-0.672		
RAP3	3.68	1.021	-0.77	0.458		
RAP4	4.03	0.832	-0.228	-1.13		
Working Capital Management						
WCM1	4.24	0.74	-0.414	-1.078	0.758	0.742
WCM2	3.66	0.763	-0.025	-0.401		

WCM3	4.23	0.849	-0.807	-0.255		
WCM4	3.52	1.139	-0.971	0.181		
Financial Analysis and Performance Monitoring						
FAPM1	3.99	0.854	-0.136	-1.277	0.701	0.637
FAPM2	3.97	1.001	-0.444	-1.041		
FAPM3	3.87	0.771	-0.178	-0.492		
FAPM4	3.79	0.779	-0.607	1.278		
Credit Risk Management						
CRM1	3.78	0.923	-0.897	0.512	0.829	0.793
CRM2	3.33	1.19	-0.319	-0.932		
CRM3	3.43	1.059	-0.649	-0.047		
CRM4	3.65	0.963	-0.455	0.145		

Source: Authors' Computation, (2025). Explanatory Notes: RAP1 to RAP 4 are questions on Risk Assessment and Planning; WCM1 to WCM4 are questions on Working Capital Management; FAPM1 to FAPM4 are questions on Financial Analysis and Performance Monitoring; CRM1 to CRM4 are questions on Credit Risk Management.

Table 1 presents the summary statistics and reliability analysis of the four dimensions of financial risk management practices: Risk Assessment and Planning (RAP), Working Capital Management (WCM), Financial Analysis and Performance Monitoring (FAPM), and Credit Risk Management (CRM), measured using 16 items (four items per construct). For RAP, all mean scores exceed the midpoint of 3, with RAP4 recording the highest mean (M = 4.03), indicating general agreement among respondents on risk assessment practices; the Cronbach's Alpha (0.814) and convergent validity (0.775) confirm good internal consistency and reliability. Similarly, WCM items show strong agreement, particularly WCM1 (M = 4.24), with reliability statistics ($\alpha =$

0.758; convergent validity = 0.742) indicating acceptable consistency.

For FAPM, mean scores range from 3.79 to 3.99, suggesting positive adoption of financial analysis and monitoring practices, although the reliability is moderate ($\alpha = 0.701$; convergent validity = 0.637). In the case of CRM, all items also record mean values above 3, with CRM1 having the highest mean (M = 3.78), while the Cronbach's Alpha (0.829) and convergent validity (0.793) demonstrate strong reliability. Overall, the results indicate that respondents generally practice sound financial risk management strategies, and the measurement scales used in the study exhibit satisfactory reliability and validity.

Preliminary Analyses

Table 2: Pairwise Correlation Matrix

Variables	FPER	RAP	WCM	FAPM	CRM
FPER	1.000				
RAP	0.319 (0.000)	1.000			
WCM	0.395 (0.000)	0.638 (0.000)	1.000		
FAPM	0.051 (0.410)	0.145 (0.019)	0.253 (0.000)	1.000	

CRM	0.522 (0.000)	0.660 (0.000)	0.678 (0.000)	0.090 (0.147)	1.000
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Source: Authors' Computation (2025), Explanatory Notes: RAP = Risk Assessment and Planning; WCM= Working Capital Management; FAPM= Financial Analysis and Performance Monitoring; CRM = Credit Risk Management.

Table 2 shows that none of the correlation coefficients among the variables exceeded the 0.8 threshold, indicating that multicollinearity is not a problem in the model. The relationships among the predictors are within acceptable limits, suggesting that the regression estimates

will not be distorted by high intercorrelations. Consequently, all variables were retained in the analysis, and the Variance Inflation Factor (VIF) was further employed to confirm the absence of multicollinearity issues.

Table 3: Variance Inflation Factor Results

Financial Risk Management Variables	N	VIF	Tolerance Value
RAP	259	2.01	0.49
WCM	259	2.23	0.44
FAPM	259	1.08	0.92
CRM	259	2.24	0.45
Average VIF		1.89	

Source: Authors' Computation (2025),

The Variance Inflation Factor (VIF) and tolerance values reported in Table 3 show that all variables have VIF values below 5, confirming the earlier correlation results and indicating no presence of multicollinearity among the independent variables. This suggests that the predictors are sufficiently independent for

reliable regression estimation. Following this confirmation, the study proceeds with factor analysis on the financial performance items of agricultural SMEs in Kwara State to extract the most relevant component for use in the ordered logistic regression analysis.

Table 4: Total Variance Explained Result for Financial Accountability

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Var	Cumulative	Total	% of Var	Cumulative
Component 1	5.235	65.439	65.439	5.235	65.439	65.439
Component 2	0.846	10.574	76.014			
Component 3	0.641	8.008	84.022			
Component 4	0.433	5.411	89.433			
Component 5	0.331	4.140	93.573			
Component 6	0.260	3.245	96.818			
Component 7	0.131	1.640	98.458			
Component 8	0.123	1.542	100.000			

Source: Authors' Computation, (2025)

Table 4 presents the Total Variance Explained from the principal component analysis conducted on the financial performance items. The results show that only one component has an eigenvalue greater than 1 (5.235), and it explains 65.439% of the total variance, indicating that a single dominant factor sufficiently represents the financial performance construct. Since the cumulative variance explained exceeds 60%, the retained component captures a substantial proportion of the overall variability in the data.

The communalities result further reveal that all eight items have extraction values above the 0.40 threshold, meaning none of the items were weak or unsuitable for factor analysis. However, for regression purposes, the item with the highest extraction communality (0.779), which is “How extensive have you reduced your debt burden in the past year?”, was selected as the most representative indicator of financial performance for the ordered logistic regression analysis.

Table 5: Component Matrix^a

Financial Accountability	Component 1
To what magnitude has your revenue increased over the past year?	0.703
To what level have you consistently met your financial targets?	0.833
To what extent are your operating expenses under control?	0.807
To what degree do you have sufficient access to credit and funding?	0.746
To what extent do you manage your cash flow effectively?	0.805
How extensive have you reduced your debt burden in the past year?	0.883
To what level do you have robust financial planning and budgeting?	0.849
To what extent have you invested in cost-saving techniques?	0.832
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

Source: Authors’ Computation, (2025)

The result of the component matrix in Table 4.8 for the financial performance constructs further buttress that question six (6) stated as “How extensive have you reduced your debt burden in the past year” is the most important component among all the items with the highest absolute value of 0.883, which is greater than other items. This component is therefore employed in the regression model as the dependent variable for

financial performance of agricultural SMEs in Kwara state.

Effect of Financial Risk Management Practices on Financial Performance

This sub-section presents the ordered logistic regression results of the effect of financial risk management practices on financial performance of agricultural SMEs in Nigeria. This is presented in Table 6.

Table 6: Ordered Logistic Regression Result for Financial Risk Management Practices

Variables	Coefficien			
	t	Std. Err.	T	p-value
Risk Assessment and Planning	-0.384	0.272	-1.41	0.158
Working Capital Management	0.371	0.351	1.06	0.29
Financial Analysis and Performance Monitoring	-0.001	0.205	0.000	0.996
Credit Risk Management	1.271	0.235	5.42	0.000
LR chi2(4) =	64.000			
Prob > chi2 =	0.000			
Pseudo R2 =	0.105			
LL =	-272.510			

Source: Authors' Analysis, (2025)

Table 6 presents the ordered logistic regression results examining the effect of financial risk management practices on financial performance of agricultural value chain SMEs in Kwara State. The findings reveal that Credit Risk Management (CRM) has a positive and statistically significant effect on financial performance ($\beta = 1.271$, $p = 0.000$), indicating that improvements in credit risk management significantly increase the likelihood of SMEs achieving higher financial performance levels. Specifically, a one-unit increase in CRM increases the log-odds of being in a higher performance category by 1.271, holding other variables constant. Although Working Capital Management (WCM) shows a positive coefficient ($\beta = 0.371$), and Risk Assessment and Planning (RAP) and Financial Analysis and Performance Monitoring (FAPM) show negative coefficients, none of these variables are statistically significant ($p > 0.05$). The Likelihood Ratio Chi-square value of 64.000 ($p = 0.000$) indicates that the model is jointly significant, while the Pseudo R^2 of 0.105 suggests that the explanatory variables account for about 10.5% of the variation in financial performance.

Discussion of Findings

The findings indicate that financial risk management practices generally have an

insignificant effect on the financial performance of agricultural value chain SMEs in Kwara State. This suggests that the overall adoption of financial risk management practices alone may not directly translate into improved financial outcomes for agricultural SMEs. However, credit risk management, which is a component of financial risk management, was found to have a positive and statistically significant effect on financial performance. This finding supports the principles of Risk Management Theory, which emphasizes that identifying, assessing, and controlling specific risks can enhance organizational stability and performance. The implication is that improvements in credit risk management practices contribute significantly to the financial performance of agricultural SMEs.

The significant influence of credit risk management can be attributed to its role in reducing loan default risk, improving access to credit, and strengthening financial decision-making within firms. Effective credit assessment allows lenders and businesses to properly evaluate borrowers' creditworthiness and manage potential financial losses. This aligns with studies such as Scott et al. (2024) and Bello (2023), which highlight the importance of credit risk evaluation in minimizing financial distress. As credit risk management practices improve, agricultural SMEs are better able to manage financial uncertainties associated with lending and borrowing activities. Consequently, this

enhances financial sustainability, strengthens investor confidence, and improves overall performance across the agricultural value chain.

Conclusion and Recommendations

The study concludes that financial risk management practices have a mixed effect on the financial performance of agricultural value chain SMEs in Kwara State. While components such as risk assessment and planning, working capital management, and financial analysis and performance monitoring show insignificant effects on financial performance, credit risk management has a positive and statistically significant influence. This implies that although financial risk management is important for business operations, not all its components directly translate into improved financial outcomes for agricultural SMEs. However, effective credit risk management plays a crucial role in enhancing financial performance by improving credit evaluation, reducing default risks, and strengthening financial decision-making. Therefore, strengthening credit risk management practices is essential for improving the financial sustainability and performance of agricultural SMEs. Based on the findings, the following recommendations are made:

- i. Since risk assessment and planning show an insignificant effect on financial performance, agricultural SME operators should improve their risk identification and planning processes by adopting structured risk assessment tools and training programs. Government agencies and financial institutions should also provide capacity-building initiatives to help SME owners better understand and manage potential financial risks.
- ii. Given that working capital management has a positive but insignificant effect on financial performance, SME managers should strengthen their cash flow monitoring, inventory control, and short-term financial planning. Financial advisory services and training programs should be promoted to help agricultural businesses adopt more efficient working capital management practices.

- iii. As financial analysis and performance monitoring show an insignificant effect on financial performance, SME owners should be encouraged to adopt regular financial reporting, budgeting, and performance evaluation practices. Support institutions and development agencies should provide financial management training and simple digital accounting tools that can help SMEs monitor their financial activities more effectively.

Since credit risk management has a positive and statistically significant effect on financial performance, financial institutions and policymakers should strengthen credit risk assessment systems and expand access to responsible credit facilities for agricultural SMEs. Improved credit screening, flexible collateral requirements, and supportive agricultural financing programs will help SMEs access funds while minimizing default risks, thereby enhancing their financial performance and long-term sustainability.

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