

# Risk Management Practices Adopted by Banks and Their Effect on the Bank's Financial Performance: A Case of Ghanaian Banking Sector

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## Abstract

Risk management in bank servers is a crucial component of internal control in selecting which control actions to perform. It is the process of identifying and analysing major threats to the entity's objectives and determining the appropriate response. Risk is essential in the banking sector as it defines the ability for banks to sustain their profits in the midst of uncertainties. The purpose of the study was to assess the effect of risk management practices on the financial performance of Ghanaian banks. The study used an exploratory research methodology, with a target population of 20 banks, and a sample size of 676 respondents from the board and management committees and operational employees. The study relied on primary data gathered via questionnaires. The data gathered was analyzed using hierarchical linear regression. The study's findings indicate a strong positive relationship between risk management and financial performance which implies as risk management practices are increased financial performance also increased; it was also discovered that risk management had a significant positive effect on the performance of Ghanaian banks. This implies that risk management practices were effective and led to an increase in the financial performance of banks. Based on these findings, the banks should ensure that their risk management processes are carried out according to established rules and procedures and monitor to ensure that staff disclose deviations that require prompt attention.

## Keywords

Internal Audit, Risk Management, Bank of Ghana, Financial Performance

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## 1. Introduction

Organizational performance is founded on the premise that an organization is the voluntary association of productive assets, including human, physical, and capital resources, for the purpose of attaining a common goal [12]. Those that provide the assets will only commit them to the organization if they are pleased with the value they receive in exchange, in comparison to other uses for the assets. As a result, the generation of value is at the heart of performance.

The resources will remain to be readily accessible to the organization and the organization will continue to survive as long as the value generated by the utilization of the contributed resources is equal to or higher than the value expected by those providing the assets. As a result, value creation, as defined by the resource supplier, is the most important overall performance criterion for any company. The essence of most empirical study in this field is how that value is produced by management. The essence of this

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research, on the other hand, is how that value is quantified [5]. Risk assessment, as a component of internal control, is critical in determining which control actions to implement. It is the process of detecting and assessing significant risks to the entity's objectives, as well as deciding the right reaction. As a result, defining objectives is a prerequisite for risk assessment. Management must first establish the objectives in order to identify the risks to their success and take the required steps to mitigate those risks. That entails putting in place a continuing procedure for analysing and mitigating the impact of risks in a cost-effective manner, as well as having people with the necessary skills to identify and analyse the risks. This study seeks to examine the risk management practices adopted by universal banks in Ghana.

### 1.1. Research Problem

The banking sector in recent years has seen a number of banking sector reviews with the aim of streamlining the operations of the banking sector which has seek capital injections by the central bank. These injections although important cannot be continues as there are other pressing investments that need to be made by the government other equally important sectors such as the education, health just to mention a few. This raises questions on the risk management policies and practices and whether these have been adhered to by the banks as risk management policies and practices are expected to reduce or eliminate practices that reduce the profits of institutions for which the banking sector is no exception. Previous studies such as studies done on risk management such as studies done by [4] failed to show the effect of risk management of the entire banking sector of Ghana. Other studies such as studies done by [16] also failed to show the contribution of their study on the entire banking sector. Similarly other studies were contextually done in countries other than Ghana which is the main focus of this study such as the studies done by [1] and [3] failed to show the contribution of their studies on the banking sector of Ghana. In line with this, this study is positioned to examine the effect of risk management using the entire banking sector of Ghana as the focal point.

### 1.2. Research Objective

In this current research, the study examined the effect of risk management on the financial performance of banks in Ghana.

## 2. Literature Review

### 2.1. Theoretical Review

Ross [17] and Mitnick [15] were the first researchers to openly propose and begin developing a theory of agency,

both independently and approximately concurrently. Though the essential principles underpinning these approaches are similar, Ross is credited for the birth of the economic theory of agency and [15] for the institutional theory of agency. Indeed, the techniques are complimentary in their application of comparable principles under different assumptions.

Ross established the study of agency in terms of compensation contracts constraints; agency was viewed as essentially an incentives problem. [15] pioneered the now-common understanding that institutions emerge around and adapt to cope with agency in response to the inherent imperfection of agency relationships: The principle never refers to behavior as it occurs since it does not pay to make it flawless. However, society builds structures to address these flaws, whether by regulating or buffering them, adapting to them, or being chronically warped by them. To understand agency, we need to look at both the incentives and the institutional structures [15]. Agency Theory describes how to effectively arrange partnerships in which one party defines the task while another party does it. In this relationship, the principal engages an agent to do the labour or complete a task that the principle is unable or unable to do.

Internal control systems are described in the theory as required structures for contract maintenance, and through internal control systems, it is able to exercise control that reduces opportunistic behavior of agents. When the shareholders (principal/business owners) and the management (agent) are two distinct people, it causes certain issues for the shareholders [9]. Because both persons aim to maximize utility, the agent may adopt a management conduct that is detrimental to the principal's interests [9]. According to [18], proper governance systems between the principal and agent would reduce the competing interests between them.

Agency theory also believes that an agent may use the resources of a principal in specific instances. As a result, even if the agent makes the choice, they bear little to no risk because all losses are borne by the principal. This is most prevalent when shareholders provide financial support to an entity that corporate leaders can utilize at their discretion. Because of the uneven distribution of risk, the agent's risk tolerance may differ from that of the principal. However, this is one of the theory's major flaws since it ignores the reality that, even if the agent is entrusted with taking care of the assets, the agent must be held accountable.

This theory was adopted for this research because "internal control is one of several techniques employed in business to solve the agency problem" [10], and "research has demonstrated that internal control decreases agency costs." According to the present study, the shareholders of universal banks are regarded the principals, while the Board, managers,

and other staff are agents tasked with diverse responsibilities of managing resources, which translates to financial performance in some way. As a result, measures such as risk management are required to protect resources.

## 2.2. Empirical Review

Ahmed, Mukhongo & Datche [1] assessed the effects of financial risk management on the financial performance of small and medium-sized enterprises in Hirshabelle State, Somalia. The researcher aimed to evaluate the influence of financial risk management on the performance of SMEs in Hirshabelle state, Somalia, as part of the study's goal. A cross-sectional survey approach was used for the investigation. The study's population consisted of 2,657 SMEs in Hirshabelle State, Somalia. A stratified random sampling approach was used by the researchers. The study's sample size was 348 participants. The study data were analyzed using both descriptive and inferential statistical techniques. According to the findings of the study, risk management in general had a substantial beneficial influence on the financial performance of small and medium-sized businesses. According to the researchers, the sample size was 348 people. The researchers conducted a pilot study on 10% of the respondents who did not participate in the final study. Cronbach's Alpha ( $\alpha$ ) was used to assess the internal consistency of the instrument and constructs, and values of 0.7, as suggested, were retrieved and utilized. Data analysis was carried out with the assistance of descriptive and inferential statistical methods. According to the findings of the study, risk identification, risk analysis, risk reduction, and risk monitoring had a statistically significant impact on the financial performance of SMEs in Hirshabelle state.

Andove [3] studied the effect of risk management on the financial performance of faith-based facilities in Kakamega County. The study was founded on attribution theory, agency theory, and procedural justice theory. The target audience was 550 personnel from Faith-based health care establishments in Kakamega County. Methodologies like stratified and simple random sampling were used. Using Fisher's method, a sample size of 226 respondents was estimated. There were both primary and secondary data collection equipment employed. To get first-hand information on internal control processes at respondents' facilities, a questionnaire was used as the primary data collection technique. Risk management, according to the findings, has a substantial impact on the financial performance of faith-based establishments in Kakamega

County. The study was done in Kenya and focused on an entirely other business other than banking.

Kumari & Weerasooriya [13] assessed the effects of effective internal control implementation on the financial performance of private commercial banks. For the study, the researchers used a stratified selection approach to choose 70 executive-level workers from private commercial banks in Kenya's central province. Data was gathered via structured questionnaires, and the study took a quantitative approach based on logical reasoning or a world view. The researchers used multiple regression to examine the data. The study's findings show that risk assessment has a significant influence on financial success. The researchers found that the risk management, which forecasts the financial outcomes of private banks in Kenya's central region, needed more attention to risk assessment, based on the study's findings.

Internal Controls and Performance of Selected Tertiary Institutions in Ekiti State, Nigeria, were investigated utilising the Committee of Sponsoring Organizations (COSO) Framework Approach by [2]. The research examined the effect of risk management on the performance of selected tertiary institutions in Ekiti as one of its particular aims. The study employed a survey approach, and the researchers used a group of 553 workers, which included both the bursary and internal audit departments. A random sampling approach was used to determine a sample size of 425 respondents. Questionnaires were used to collect primary data, which was then analysed using multiple regression analysis. Risk management has a substantial and beneficial impact on the performance of selected tertiary institutions in Ekiti state, according to the study's results.

A review of previous studies indicate that little is known on the effect of risk management on the entire banking section of Ghana, it is also observed that previous studies failed to consider the entire banking sector, other studies also did not consider the Ghanaian context. This current study seeks to contribute to literature and empirical evidence taking the banks in the Ghanaian banking sector as the focal point.

## 2.3. Conceptual Framework

The conceptual framework used for this study is in line with similar studies that identified Risk management as independent variable and financial performance. In this study the conceptual framework is as indicated below;

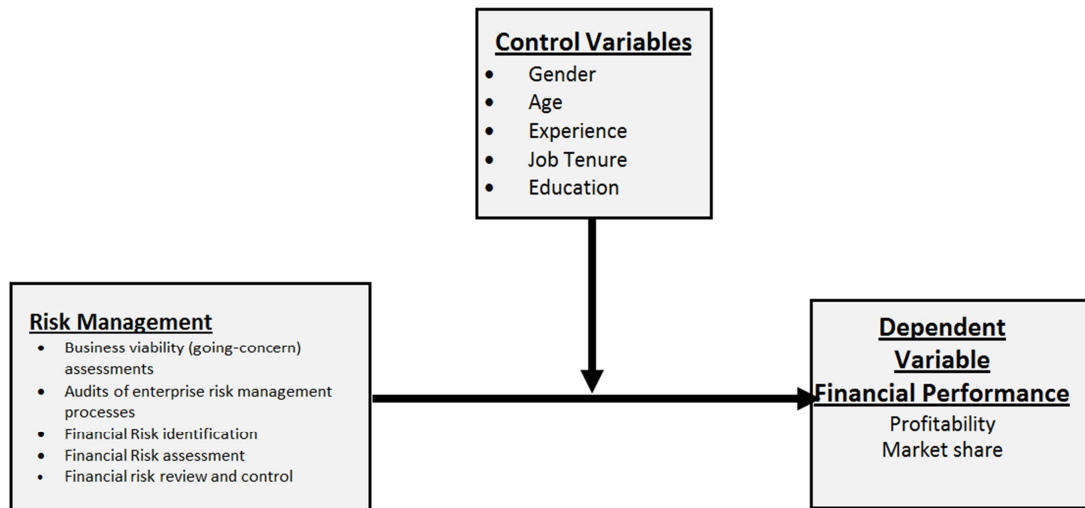


Figure 1. Researchers Framework.

## 3. Methods and Materials

### 3.1. Research Design

In this present study, the researcher utilized an exploratory research strategy to investigate the effect of risk management on bank financial performance. This design is necessary when the depth of a situation is unknown and there is the need for an understanding of the problem or situation. As a consequence, the data is being studied statistically using quantitative analytical approaches such as correlation and regression to gain a deeper understanding of the association presented in depth using qualitative data.

### 3.2. Sample and Sampling Procedure

The sample for the study consisted of 760 respondents drawn from 20 banks, with the following composition: 5 respondents from the board of directors, 8 respondents from the internal audit committee, 5 members from the risk management committee, 15 members from the operations department, and 5 respondents from the managers.

### 3.3. Data Collection and Instrumentations

The researcher made use of primary data, the data was collected using questionnaires, the questionnaire were pretested using 100 respondents drawn from the various banks, the instrument was revised based of few suggestions and difficulties encountered and finally self-administered to the respondents. The use of questionnaires is an effective way of collecting responses from respondents when the sample is large as indicated by [19].

### 3.4. Model Specification

To analyse the effect of risk management on the performance of banks in Ghana, the researcher made use of the regression

model as specified below;

$$FP = \beta_0 + \beta_1 RM + (\beta_1 Gen + \beta_2 Age + \beta_3 Exp + \beta_4 Ten + \beta_5 Edu)$$

Where;

FP = Financial Performance

RM = Risk Management at time t

Control Variables

Gen = Gender

Age= Natural age of respondents

Exp = Experience i.e No of years performing assigned role

Tenure = Tenure i.e number of years employed

Edu = Level of academic education

## 4. Results and Discussion

### 4.1. Descriptive Statistic

The table presents the descriptive analysis for the variables used in the analysis which are financial performance and risk management. The results are presented in the table below;

Table 1. Descriptive statistics.

Variable	Statistics	Statistic	SE	Shapiro-Wilk's	p
Financial Performance	Mean	53.11	0.28	0.96	0.211
	Skewness	-1.31	0.09		
	Kurtosis	2.52	0.19		
Risk Management	Mean	19.21	0.09	0.93	0.000
	Skewness	-0.91	0.09		
	Kurtosis	2.69	0.19		

According to [8], data normality and the lack of outliers are fulfilled if skewness and kurtosis are between -3 and 3. The calculated kurtosis or skewness should be less than 3 or larger than -3, according to this guideline. All of the variables in the above meet this criterion. As a result, the data for the

variables were normally distributed. The usage of kurtosis and skewness, on the other hand, can be deceptive. As a result, the Shapiro-test Wilk's was performed, which supports data normality at  $p > 0.05$  [8]. The aforementioned criterion was satisfied in terms of financial performance. Risk management was not distributed normally. According to [8], if the sample size is large (i.e.  $> 400$ ) and the skewness and kurtosis criteria are met, deviation from normalcy is not really a problem. The basis for moving on with the intended

parametric test is built with this knowledge.

### 4.2. Assessment of Data Reliability and Validity for Multidimensional Constructs

The reliability and validity of the multi-dimensional construct are assessed in this part, and the findings are shown in the table below.

**Table 2.** Psychometric properties of multi-dimensional constructs.

Construct	Domain	Item	CR	CA	AVE	MSV
Financial Performance	F1	Sales volume	0.567	7.432	5.630	2.315
		Profit levels	0.832			
		Return on investment (ROI)	0.499			
		Return on sales (ROS)	0.567			
		Market share	0.821			
	F2	Growth in sales	0.543			
		Growth in profitability	0.661			
		Growth in ROI	0.801			
		Growth in ROS	0.722			
		Growth in market share	0.555			
All scale	---	---	0.822	---	---	
RM	---	Business viability (going-concern) assessments	0.679	0.876	60.8	0.763
	---	Audits of enterprise risk management processes	0.679			
	---	Auditing of financial risks	0.548			
	---	Auditing of information risks	0.566			
---	---	Auditing of IT/ICT risks	0.643			

† CR – composite reliability; CA – Cronbach's alpha; AVE – average variance extracted; ASV – maximum shared variance; RM – Risk Management

The first component in the table above is financial performance, which yielded two variables. As suggested, factor loadings for each factor satisfied the criteria composite reliability 0.5. [7]. This criterion is also satisfied for each risk management aspect. The Cronbach's 0.7 criterion was likewise satisfied by the factors of the two constructions. That is, the factors and constructions' internal consistency was fulfilled. The average variance extracted (AVE) and maximum shared variance (MSV) are used to measure convergent and discriminant validity, which are indicators of

concept validity [11]. (MSV). The criteria CR/AVE ensures convergent validity, whereas the condition MSV/AVE ensures discriminant validity [11]. Both requirements are satisfied by the two constructions in the table. As a result, construct validity for the two scales was established.

### 4.3. Model Fit Indices

This section presents the model fit indices for the measurement models, the results of the assessment are presented in the table below.

**Table 3.** Model fit indices for the measurement models.

Variables	Chi-square( $\chi^2$ )	p	RMSEA	TLI	GFI	AGFI
Financial performance	1.271	0.132	0.021	0.984	0.971	0.991
RM	2.02	0.114	0.052	0.982	0.946	0.985
Recommended	$\leq 3$	$\geq 0.05$	$\leq 0.08$	$\geq 0.95$	$\geq 0.9$	$\geq 0.9$

† RMSEA – random mean square error of approximation; TLI – Tucker-Lewis Index; GFI – goodness-of-fit indices; AGFI – adjusted goodness-of-fit indices; RM- Risk Management

The model fit statistics for the two measurement models used to generate statistics in future Tables are shown in the table above. The recommended baselines or criteria are also listed in the table. As can be seen, all of the data matched the

necessary criterion, indicating that both models fit well. As a result, the results of the aforementioned exploratory study provide a solid foundation for data analysis using a parametric statistical technique like HLR analysis.

#### 4.4. Descriptive Statistics Showing Ratings on the Main Variables

Table 4. Descriptive statistics showing ratings of variables.

Variable	Maximum	Mean	Mean (% of Maximum)	SE	SD
Financial Performance	50	38.75	77%	0.20	5.24
Risk Management	25	19.21	77%	0.09	2.44

The purpose of the table above is to assess the relevant variables' perceived levels. The level of a variable (i.e. whether a variable is high or low) is determined by the magnitude of the mean score relating to that variable, because the 5-point scale was connected with a continuum of descriptive anchors. Similarly, a variable's average score rises as it approaches its maximum value. The standard error (SE) and standard deviation (SD) are measures of the estimate's accuracy [8]. As the SE and SD of the variable decrease, the accuracy of the variable improves. All of the factors in the table are considered high since they contribute for more than 70% of the total score. The relative mean score for financial performance was the highest (Mean = 38.75; SD = 5.24), accounting for 77 percent of the maximum score. This indicates that financial performance was evaluated at the highest degree of excellence. The relative mean scores for risk management were 77% of the maximum score with (Mean = 19.21; SD = 2.44). These data indicate that financial performance, as well as the other variable, were excellent.

#### 4.5. Correlation Results

Table 5. Correlation Results.

Variable	#	1	2
Financial Performance	1	1	.299**
Risk Management	2		1

\*\*p<0.001; \*p<0.05.

The correlation matrix of important variables, including covariates, is shown in the table above. Financial performance ( $r = 0.299$ ;  $p = 0.000$ ; two-tailed) is positively correlated with Risk Management (see table). This finding shows that the bank's financial performance improves as the risk management improves.

#### 4.6. Regression Results

This section presents findings on the specific objective and hypotheses as recalled as follows:

*Risk management has a significant effect on financial performance among the banks.*

Table 6. Regression results.

Model	Predictor	Coefficients			Collinearity Statistics		
		B	SE	$\beta(t)$	Tolerance	VIF	Dubin Watson
1 <sup>a</sup>	(Constant)	12.408	1.469	(8.45)			
	Risks management	.256	.070	0.12(3.68**)	0.75	1.34	1.67
	(Constant)	10.443	1.800	(5.80)**			1.65
	Risks management	.243	.071	0.11(3.44)**	0.70	1.43	
2 <sup>b</sup>	Covariate	1.384	.323				
	Gender (reference – male)	.069	.225	0.13(4.28)**	0.88	1.13	
	Age	1.376	.443	0.01(0.31)	0.84	1.20	
	Experience	-1.397	.426	0.33(3.10)**	0.17	4.64	
	Job tenure	.157	.218	-0.35(-3.28)**	0.17	4.72	
	Education	12.408	1.469	0.02(0.72)	0.87	1.15	

\*\*p<0.001; \*p<0.05; <sup>a</sup>baseline model without covariates; <sup>b</sup>ultimate model with covariates; SE – standard error; VIF – variance inflation factor

The hypothesis' outcomes are summarised in the table above. The researcher used this table to look at the direct effects of risk management on financial performance. Two regression models are used to test these effects. The first model did not take into account confounders, but the second did. Though the second (ultimate) model is the source of the final results, a comparison of the two models is required to understand the impact of the confounding factors in the second model. After adjusting for variables, risk management ( $= 0.12$ ;  $t = 3.68$ ;  $p = 0.000$ ) shows a positive effect on financial performance in the final model, confirming that the bank's financial performance improves as risk management procedures improve. The model's Durbin-Watson statistic is likewise

about 1.7, which is within [8] suggested range of 1.5-2.4. As a result, the Durbin-Watson statistic denotes a lack of autocorrelation in the data. Furthermore, each predictor has a variance inflation factor (VIF) value of 5 (Garson, 2012), suggesting that the model meets the multi-collinearity condition.

The present findings of the study back up previous research that looked at the impact of risk management and concluded that it had a positive effect on financial performance, such as by [14]; [13]; [1]. The findings show that as risk management activities increase, financial performance improves as well. One reasonable explanation is that banks have risk

management committees and departments in charge of risk management activities; these committees or departments are fully resourced and follow established guidelines in identifying and managing risks that are likely to occur. This also supports COSO's assertion that risk management is an important component of [6]. According to the corporate Governance guidelines released in 2018, all banks implement the directions by establishing risk management committees and putting in place processes and structures to guarantee that risk coming from the banks is managed in accordance with the directive requirements.

## 5. Findings and Recommendations

The study objective was to determine the effect of risk management practices on the financial performance of banks in Ghana controlling for the effect of confounding variables such as gender, age, education etc. From the analysis there was a significant positive influence of risk management on the performance of banks in Ghana after adjusting for demographic characteristics such as age, gender, educational background, tenure, and so on. This means that when risk management techniques are improved, bank performance also improves. This implies that banks must verify that their risk management methods adhere to established rules and procedures, as well as monitor to ensure that staff disclose any deviations that require prompt attention.

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