Effects of Risk Assessment, Control Environment and Control Activities on Performance of Listed Banks in Ghana

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Authors' contributions

This work was carried out in collaboration among all authors. Author SAEM designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors RNA and DAA managed the analyses of the study. Author MKG managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Globally, internal controls serve many important purposes for public private and public help organizations. There is however an increasing call for better and improved internal control systems especially in firms that are listed on public market. However, internal control systems, irrespective of how well conceived and implemented cannot provide absolute assurance of management and boards regarding the achievement of objectives. This research focused on the three components of internal control systems namely control environment, risk assessment, and control activities. This study therefore formulated four objectives and investigated how risk assessment, control activities, and control environment affects the performance of Ghanaian banks. In this quantitative study, representatives from twelve listed banks were engaged. Descriptive and regression analysis was performed on the field data. The study result shows while Risk assessment has a strong significant

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effect on financial performance, Control environment and Control activities, have a weak significant effect on financial performance. The practical implication of the study is that, when assessing the performance of banks, risk areas must be examined critically to reduce or eliminate their impacts on bank performance.

1. INTRODUCTION

The service sector across the globe has become very competitive in recent times. In view of that sector players such as the financial institutions have constantly deployed systems to ensure smooth operations of business activities. Born out of the motive of ensuring high performance, publicly help financial institutions have deployed internal control measures. These internal control systems (ICS) include control environment, risk assessment, control activities, information and communication and monitoring. These systems when implemented efficiently improves performance such as profitability.

The system of internal control is divided into financial internal control and non-financial (administrative) internal control [1]. Reid and Ashelby (1) defined that financial internal control pertains to financial activities and may be exemplified by controls over company's cash receipts and payments financing operations and company's management of receipts and payments. On the other hand, administrative internal control encompasses controls over the personnel section and its operations, fixed assets controls and even controls of laid down procedure [1].

Several studies indicate that material weaknesses in internal controls over financial reporting are link with reduction in earnings quality, high equity cost, and external auditor's intensive work [2,3,4]. On the contrary, other studies reveal enormous benefits of internal controls to banks performance in Ghana [5]. Conversely, other researchers hold contrary views on the criteria of internal control forced on firms by SOX (Sarbanes-Oxley Act of 2002 SOX) Section 404. Scholars of the firm believe that the benefits of internal control is lower as compared to the cost of compliance [6,7]. It is therefore important to empirically investigate the relationship between internal control systems on financial performance. The objectives of this study therefore are to: (1) Assess the effect of Control Environment on financial performance of listed banks in Ghana. (2) Investigate the effect of Risk Assessment on financial performance. (3) Examine the influence of Control Activities on financial performance. (4) Assess the impact of three elements of internal controls (Risk Assessment, Control Environment and Control Activities) on bank performance.

2. LITERATURE REVIEW

2.1 Concept of Internal Control

The International Standard Organization (ISO 400) defined internal control system as a complex and integrated systems of financial control, carry out business in an orderly and efficient manner, ensure adherence to management policies, safeguard the company assets, to secure as far as possible the completeness and accuracy of records [8]. Internal control has the following five components; Control environment which sets the tone for the organization, influencing the control consciousness of its people. It is the foundation for all other components of internal control; Risk assessment involves the identification and analysis of relevant risks to the achievement of objectives, forming a basis for how the risks should be managed; Information and Communication Madawaki [9], takes into consideration the capturing, identification and sharing of information in manner that makes it easier for users to perform their assigned duties and responsibilities; Control Activities involves the procedures, policies, programmes, strategies and instructions that guide management to achieve their objectives; Monitoring involves a step by step evaluation to ensure that internal control systems performs effectively over a period of time [10]. From the forgoing, it is therefore clear that five essential systems are paramount in internal controls which include: control environment, risk assessment, control activities, information and communication and monitoring.

Studies have extensively affirmed five internal control systems which include: Control environment, risk assessment, control activities, information and communication and monitoring [11,8,12,13,14]. However, Ngugi [8] opined that other internal control systems exist such as:

Authorization and approval procedures, human resource policies and practices, assignment of authority and responsibility, ineligible expenditure, accountability obligations, segregation of duties, controls over access to resources, verification, reconciliation, review of operating performance and supervision.

2.2 Control Environment

Generally, control environment is the foundation of all the five components of internal controls as it improves higher discipline and structure, thus setting the pace for organizational control consciousness among the people in the organization [15]. Control Environment is a set of standards, processes, and structures that provide the foundation for the continuity of internal control within the organization [16]. The control environment generally defines the control consciousness of an organization; it is the atmosphere through which organizational element discharge and carry out their control responsibilities [8]. According to Ngugi [8] the control environment encompasses technical competence and ethical commitment which are essential intangible factors for effective internal control.

Previous researches showed that, providing proper control environment on Local Government is essential to the operational effectiveness of the Local Government [16]. Furthermore, Theophanous [17] in his research found that control environment is the most important aspect in managing the organization as it reflects management's policies and attitudes.

2.3 Control Activities

In every organization, control activities occur at all levels and in all functions [18] Control Activities involves the procedures, policies, programmes, strategies and instructions that guide management to achieve their organizational objectives [15]. Ngugi [8] further noted that Control activities are actions, supported by policies and procedures that, when carried out properly, timely manner, manage or reduce risks [10].

In view of the forms and significance of control activities, the objectives of the firm can be achieved through better control activities which mean that all necessary action should be taken with the aim to address risks [19].

2.4 Risk Assessment

In public listed firms, risk assessment represents one of the management's proactive responsibilities essential to reduce unwanted surprises. Risk assessment involves the identification and analysis of relevant risks to the achievement of objectives [9]. Management need to build control procedures that decrease risk to a level where management can accept the exposure to that risk. By performing this balancing act management can provide "reasonable assurance" about the report and activities of the institution.

Under COSO, Enterprise Risk Management Integrated Framework (2004) "risk assessment" is considered to consist of four elements: objective setting, event identification, risk assessment and risk response [5]. The central theme of internal control is (1) to identify risks to the achievement of an Organization's objectives and (2) to do what is necessary to manage those risks.

2.5 Internal Control and Financial Performance

Literature affirms that a properly instituted system of internal control will enhance financial performance [20,21,22]. Hanim Fadzil, Haron, and Jantan [23] determined the effects of internal control system on performance of audit work. They found that every component in internal control system positively influenced performance of audit work and audit reporting of the internal audit reporting. Besides that, Ayagre et al. [11] concluded that aggressive mechanisms of internal control systems have to adopt for achieving better performance over time.

Mawanda [21] conducted a research on effects of internal control systems on financial performance in institution of higher learning in Uganda. In his study he investigated and sought to establish the relationship between internal control systems and financial performance in an Institution of higher learning in Uganda. Internal controls were looked at from the perspective of control environment, internal audit and control activities whereas financial performance focused on liquidity, accountability and reporting as the measures of financial performance. He set out to establish the causes of persistent poor financial performance from the perspective of internal controls. The study established a significant

relationship between internal control system and financial performance. The investigation recommends competence profiling in the Internal Audit department which should be based on what the University expects the internal audit to do and what appropriate number staff would be required to do this job. The study therefore acknowledged role of internal audit department to establish internal controls which have an effect on the financial performance of organizations.

Amudo and Inanga [24] also carried out a study in Uganda to evaluate the internal control systems that the regional member countries of the African Development Bank Group institute for the management of the Public Sector Projects that the Bank finances. The study identified the following six essential components of an effective internal control system: control environment, risk assessment, control activities, information and communications, monitoring and information technology. The outcome of the evaluation process was that some control components of effective internal control systems were lacking in those projects. These rendered the control structures ineffective.

Jones [25] compared internal control, accountability and corporate governance in medieval and modern Britain. He used a modern referential framework (control environment, risk assessment, information and communication, monitoring and control activities) as a lens to investigate medieval internal controls used in the twelfth century royal exchequer and other medieval institutions. He demonstrated that most of the internal controls found today were present in medieval England. Stewardship and personal accountability were found to be the core elements of medieval internal control.

2.6 Agency Theory

Agency theory also known as principal agent or principal agency theory/model describes the relationship between two or more parties, in which one party designated as principal, engages another party designated as agent to perform some task on behalf of the principal [26]. Agency theory contends that internal auditing, in common with other intervention mechanisms like financial reporting and external audit, helps to maintain cost-efficient contracting between owners and managers.

Agency theory may not only help to explain the existence of internal controls and internal audit in firms but can also help explain some of the characteristics of the internal audit department, for example, its size, and the scope of its activities, such as financial versus operational auditing. Agency theory can be employed to test empirically whether cross-sectional variations between internal auditing practices reflect the different contracting relationships emanating from differences in organizational form.

2.7 Contingency Theory

Contingency theory is basically about an approach to the study of organizational behavior in which explanations are given as to how contingent factors such as technology, culture and the external environment influence the design and function of organizations. The assumption underlying contingency theory is that no single type of organizational structure is equally applicable to all organizations. Rather, organizational effectiveness is dependent on a fit or match between the type of technology, environmental volatility, the size of the organization, the features of the organizational structure and its information system. Contingency theories were developed from the sociological functionalist theories of organizational structure such as the structural approaches to organizational studies by Jones, [25].

Therefore, the idea of contingency theory is that the selection and use of a management control system is contingent on a variety of internal and external factors. It is therefore clear that, factors such as external environment, technology, structure and size, strategy and national culture impact management control systems. The theory suggests that the demands imposed by technical tasks in the organization encourage the development of strategies to coordinate and control internal activities. Bakibinga [27] stated that, "Contingency means: one thing depends on other things" and "Contingency theory means: it depends".

2.8 Performance Measures

Performance is the measure of attainment achieved by an individual, team, institution or process. Hitt, Hoskisson, Johnson, and Moesel [28] believes that many firms low performance is the result of poorly performing assets. However, appropriate performance measures are those which enable organizations to direct activities and programmes for the attainment of the desire

results. Verschoor [29], indicated that there are some financial measures which comprises the use of cooperate assets, financial wellbeing and the value of long term investment. Innovation, ability to attract, improvement in quality of management, developing and keeping talented personnel, improved products and service delivery and also being environmentally responsible were factors associated to non-financial performance measures.

Bakibinga [27] stated that corporate law needs a separation between ownership and managements of an entity. Owners normally entrust their resources in the hands of managers. Managers are required to use the resources entrusted to them in the furtherance of the entity's objectives. Managers normally report to the owners on the result of their stewardship for the assets under their care by means of financial statement which reveals the financial performance of an entity. According to Ejoh and Ejom [20], accountability can be political, social or financial accountability.

3. METHODOLOGY

3.1 Conceptual Framework

Based on the theoretical and empirical analysis the study presents a conceptual Framework (Fig. 1). The conceptual framework presents three internal control systems comprising; Risk assessment, control environment and control activities (independent variables) and Performance.

3.2 Research Hypothesis

The researcher seeks to postulate three hypotheses in the conduct of this study. They are:

H1: Control environment significantly affects Ghanaian listed banks performance.
H2: Risk Assessment significantly affects Ghanaian listed banks performance.
H3: Control Activities significantly affects Ghanaian listed banks performance.

3.3 Study Methods

The study conducts a field survey of listed banks using questionnaire as collection instruments. The study adopts a method of quantitative assessment: descriptive and regression analysis to arrive at the study findings. Purposive sampling techniques were adopted to sample twelve (12) banks that are listed on Ghana Stock Exchange. Twelve financial institutions comprising 101 respondents were used for the study. This size was informed by Hair, Sarstedt, Ringle, and Mena [30] who advocated that, in a survey study a sample of 100 is enough to generate the statistical strength of the study. The respondents include Managers, Account officers, Auditors and Chief Executive officers of the respective Banks.

3.4 Data Analysis

The raw data was analyzed by selecting, comparing, categorizing, creating and interpreting the data. The researcher's hypotheses are sensitive and thus establishing viable results would demand varied and effective analytical tools. Completed semi-questionnaires are edited coded and entered into SPSS version 20 for analysis. The data is analyzed and interpreted with descriptive statistics such as the use of mean and frequency, and Analysis of variance (ANOVA), regression coefficient. Before performing the actual analysis of the main data, preliminary data analysis was done. During PDA, 101 research questionnaires were considered valid and usable for the study.
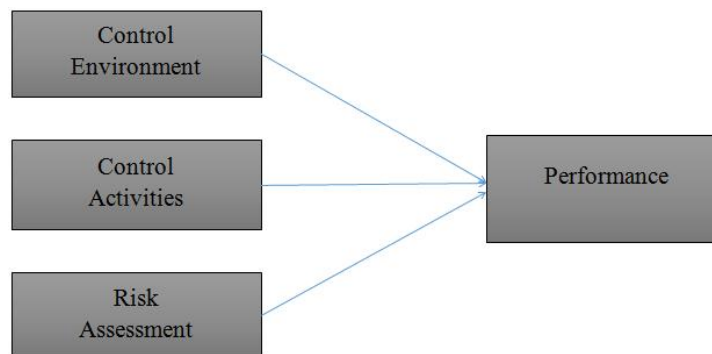

Fig. 1. Conceptual framework for internal control and performance

4. RESULTS AND INTERPRETATION

4.1 Descriptive Statistics of Measurement Statements

The findings revealed that the majority of the indicators have modest to high mean value and standard deviation (SD). In Table 2, the highest mean score recorded was 4.10 (Managements usually devised methods of assessing which fraud-related risks are most critical to the organization), while the lowest mean value recorded was 3.25 (Departments have budget reviews where actual expenditure is compared with budgeted expenditure and explanations for the variances given). The high mean score means that means that listed banks in Ghana, management of the banks have effective mechanism to detect fraud-related risk. On the other hand, the least mean value shows that there are weak internal audit systems in the internal control measures of listed Banks in Ghana.

4.2 Exploratory Factor Analysis

This analysis involves the assessment of the measurement model by means of rigorous tests to explore the data for Adequacy, Reliability and Validity. These tests are important because the general construct may not give accurate and preferred meaning unless it is well established that the statement holds [31].

4.3 Test for Adequacy

In this research, adequacy tests were carried out based on four main criteria: Goodness-of-fit Test, Kaiser-Meyer-Olkin Measure of Sampling Adequacy, Bartlett's test of sphericity and Total variance explained (AVE). Table 3 therefore presents the composite results of adequacy tests. From table 3, KMO Measure of Sampling Adequacy revealed .881>.70 which implies the factors are appropriate for the study. Bartlett's Test of Sphericity indicated a chi-square of 2671 at a significant value of .000 depicting a suitable factor analysis.

4.4 Test for Validity and Reliability

The five variable tests which includes dependent and independed showed fairly good results for the adequacy test. The other CFA critical step was Validity and Reliability tests. Reliability test involves Cronbach alpha (CA) [32].

Table 5 revealed that, among the revised measurement model, the reliability method in the study was above the satisfactory levels (Cronbach's alphas >.70) as recommended by scholars Hair et al. [30]. However, 70 is acceptable but lower thresholds can be used in literature. The inference of CA is that the internal consistency of our theories is reliable and perfect for the study. Having confirmed the dependents and independent variable statistically fit for the study, the study next discusses the findings of the study based on the research objectives and study hypotheses.

4.5 Analysis of Study Objectives

Objective/Hypothesis (H1): Control Environment and Financial performance of listed banks?

Table 1. Measurement of variables

Variables	Description	Measurements
Financial Performance	Ability to operate efficiently, profitably, survive, grow and react to environmental opportunities and threats	Will be measured using ratio of the following financial indicators; Return on Assets (ROA); Net Income/Assets, profitability and Sales.
Control Environment	Presence of integrity and ethical values, commitment to competence human resource practices and organization structure.	This will be measured by the level of integrity, ethical values, and competence of.
Risk Assessment	Entails risk identification, risk evaluation and risk response	This will be measured by level of risk carefully to be accepted and maintained determined levels
Control Activities	These are the policies, procedures and mechanisms put in place to ensure management directive are properly followed	Will be measured by the number of effective policies, procedures and mechanisms put in place to ensure directives of the management are properly carried out.

Table 2. Descriptive statistics of measurement statements (Item Code, Mean, Std. Dev Skewness, Kurtosis)

Questionnaire measurements items	Items code	Mean	Std. Dev.	Skewness	Kurtosis
		Statistic	Statistic	Statistic	Statistic
Management has defined appropriate objectives	Rsk_As1	3.95	1.27	-1.15	.287
Management identifies risks that affect objectives	Rsk_As2	4.02	1.09	-1.17	.904
Management has a criteria for ascertainment of which fraud-related risks to the organization are most critical	Rsk_As3	4.10	1.15	-1.37	1.208
Management has put in place mechanisms for mitigation of critical risks that may result from fraud	Rsk_As4	4.03	1.13	-1.17	.651
There are structures to eliminate potential threat	Rsk_As5	4.04	1.06	-1.18	1.14
Every employee's work check on the others	CT_At1	4.00	1.24	-1.22	.497
Corrective action is taken to address weaknesses	CT_At2	3.51	1.35	-.463	-1.07
Staff are trained to implement the accounting and financial management system	CT_At3	3.51	1.34	-.428	-1.11
Our organization has a well-developed Chart of Accounts	CT_At4	4.06	1.01	-1.05	.741
It is impossible for one staff to have access to all information without the consent of senior staff	CT_At5	4.10	1.05	-1.08	.389
Controls are in place to exclude incurring expenditure in excess allocated funds	CT_At6	3.98	1.22	-1.05	.034
Departments have budget reviews where actual expenditure is compared with budgeted expenditure and explanations for the variances given	CT_At7	3.25	.869	-.198	-.046
Return on Assets Ratio	FP1	3.63	.98	-.502	-.030
Sales Turnover Ratio	FP2	3.39	.99	-.385	-.033
Profitability Ratio	FP3	3.49	1.05	-.383	-.374
Efficiency Ration	FP4	3.47	1.03	-.401	-.172
Our organization has an accounting and financial management systems	CT_Ev1	3.68	1.01	-.662	-.012
Management is committed to the operation of the system	CT_Ev2	3.71	1.20	-.659	-.546
Management closely monitors implementation of Internal control systems in our institution	CT_Ev3	3.79	1.15	-.585	-.814
Management provides feedback to junior officers about the operation of the system	CT_Ev4	3.53	1.15	-.577	-.300
Appropriate measures are taken to correct misfeasance in operation of our Accounting & Finance Mgt System	CT_Ev5	3.54	1.10	-.726	.020
Management acts with a great degree of integrity in execution of their Roles	CT_Ev6	3.50	1.20	-.531	-.491
Ethical values are upheld in all management decisions	CT_Ev17	3.47	1.18	-.495	-.644
Valid N (listwise)	0				

Table 3. Test of adequacy

KMO measure of sampling adequacy		.884
Bartlett's Test of Sphericity	Approx. Chi-Square	5104.736
	Df	496
	Sig.	.000
KMO Measure of Sampling Adequacy.		.884

Objective one of this study sought investigate the effect on control environment on performance of listed banks in Ghana. Tables 6-8 shows the result of the data analysis based on objective one.

Table 6a, showed a positive effect between the studied variables as revealed by the R figure of 0.431. Coefficient of determination (Adjusted R squared) indicated an Adjusted R_2 = 0.186. The result means there is a fairly weak significant variation of Control environment and final performance of listed banks in Ghana.

Table 6b-6c shows the coefficient of the connection between Control environment and financial performance (H1). The study results elucidate that there is a significant effect of Control Environment as an Internal control system and firm performance (H1: t=7.380, $β$ = .431, p<0.000) indicating that objective one has been achieved.

Objective Two (H2): Risk Assessment and Financial performance of listed banks in Ghana? The study objective two sought to investigate the effect of Risk assessment on financial performance of listed banks (H2). Table 7a-7c shows the results between relationship of Risk Assessment and Financial performance.

The second objective (H2) of this study was to investigate the influence of Risk Assessment and performance of Listed Banks. In Table 7c, the results showed a figure of 0.512. From the results in the Table 7a, Adjusted R2 =0.259, which shows that there is a fairly strong significant variation between Risk Assessment and financial performance of listed banks. This suggest that, there is a significant degree of certainty of risk assessment to financial performance of listed banks by 25.9% at a confidence level of 95%.

ANOVA was also performed to determine the significance or otherwise of the relationship between Risk Assessment and financial

performance. From Table 7b the study found a significant effect (F=85.096, P<0.001) of Risk Assessment control system and Performance. The hypothesis was tested at 5% significance level (i.e., α = 0.05).

Consequently, coefficient Table 7c shows significant effect of Risk Assessment and Bank performance (H2: t= 9.225, $β$ = .512, p=0.000<0.05). The findings however, implies that despite the fair predictability between dependent and independent variable our second hypothesis (H2) has been confirmed.

Objective Three (H3): Control Activities and Financial performance of listed banks in Ghana.

The study objective 3 sought to investigate the effect of Control activities and financial performance (H3). Table 8a-8c shows the result from the data analysis.

From Table 8a, the model summary of the study shows that there was a weak and positive relationship between the Control activities and performance as showed by R figure of 0.446. Adjusted R squared (coefficient of determination) showed an Adjusted R2 = 0.195, P = 0.000<0.001 which shows that there is a fairly significant variation between control activities and firm performance. This implied that, there is a fairly weak significant variation of 19% of performance of listed banks at a confidence level of 95% confidence interval.

In table 8b the ANOVA result shows the effect of Control activities and financial performance. On hypothesis (H3), our result expounds that, there is a significant effect of Control Activities and financial performance (H3: F=59.243, p=0.000 < 0.001) at 5% significance level (α = 0.05).

Coefficient table 8c shows a significant effect of Control activities and Bank performance (H3: t= 7.697, β = .0.446, p=0.000<0.001). These findings showed that the third hypothesis (H3) of the study has been confirmed.

Table 4. Total Variance Explained for (control environment, risk assessment, control activities and Performance). Results of three main variables which show strong significant explanation of phenomenon understudy with a score of 72.8

Component	Initial eigenvalues			Extraction sums of square loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumul. %	Total	% of variance	Cumul. %	Total	% of variance	Cuml %
1	10.801	33.753	33.753	10.801	33.753	33.753	5.458	17.056	17.056
2	2.653	8.291	42.044	2.653	8.291	42.044	3.947	12.335	29.391
3	2.311	7.221	49.264	2.311	7.221	49.264	3.144	9.824	39.216
4	1.839	5.746	55.011	1.839	5.746	55.011	3.130	9.782	48.998
5	1.776	5.549	60.560	1.776	5.549	60.560	2.483	7.760	56.758
6	1.466	4.582	65.142	1.466	4.582	65.142	2.187	6.833	63.591
7	1.397	4.365	69.507	1.397	4.365	69.507	1.808	5.651	69.242
8	1.060	3.313	72.820	1.060	3.313	72.820	1.145	3.578	72.820
9	.876	2.738	75.558						
10	.660	2.063	77.621						
11	.625	1.952	79.573						
12	.582	1.819	81.392						
13	.553	1.729	83.121						
14	.498	1.557	84.677						
15	.484	1.511	86.189						
16	.464	1.449	87.638						
17	.443	1.383	89.021						
18	.395	1.235	90.256						
19	.385	1.203	91.459						
20	.355	1.108	92.568						
21	.331	1.035	93.602						
22	.306	.955	94.557						
23	.272	.849	95.406						
24	.253	.791	96.197						

Component	Initial eigenvalues			Extraction sums of square loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumul. %	Total	% of variance	Cumul. %	Total	% of variance	Cuml %
25	.226	.705	96.902						
26	.198	.618	97.520						
27	.188	.586	98.106						
28	.153	.478	98.584						
29	.142	.444	99.028						
30	.125	.389	99.418						
31	.100	.312	99.729						
32	.087	.271	100.000						

Table 5. Validity and reliability test result

Construct	Factor loading	Cronbach alpha
Control Environment		0.945
CT_Ev1	0.810	
CT_Ev2	0.825	
CT_Ev3	0.846	
CT_Ev4	0.834	
CT_Ev5	0.682	
CT_Ev6	0.772	
CT_Ev7	0.823	
Risk Assessment		0.911
Rsk_Ass1	0.729	
Rsk_Ass2	0.811	
Rsk_Ass3	0.798	
Rsk_Ass4	0.792	
Rsk_Ass5	0.737	
Control Activities		0.855
Act_At1	0.719	
Act_At4	0.820	
Act_At5	0.785	
Act_At6	0.671	
Financial Performance		0.741
PF_2	0.862	
PF_3	0.590	
PF_4	0.764	

Table 6a. Model summary result for control environment and performance

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.431[a]	.186	.182	2.36935

a. Predictors: (Constant), Control Environment

Table 6b. ANOVA for control environment and performance

Model		Sum of squares	Df	Mean square	F	Sig.
1	Regression	305.775	1	305.775	54.468	.000[b]
	Residual	1341.706	239	5.614		
	Total	1647.481	240			

a. Dependent Variable: Organizational Perf
b. Predictors: (Constant), Control Environment

Table 6c. Coefficients table for control environment and performance

Model		Unstandardized coefficients		Standardized coefficients	T	Sig.
		B	Std. error	Beta		
1	Constant	7.185	.589		12.188	.000
	Control Environment	.223	.030	.431	7.380	.000

a. Dependent Variable: Organizational Performance

Table 7a. Model summary for risk assessment and performance

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.512[a]	.263	.259	2.25462

a. Predictors: (Constant), Risk Assessment

Table 7b. ANOVA for risk assessment and performance of listed banks

Model		Sum of squares	Df	Mean square	F	Sig.
1	Regression	432.568	1	432.568	85.096	.000[b]
	Residual	1214.913	239	5.083		
	Total	1647.481	240			

a. Dependent Variable: Organizational_Perf; b. Predictors: (Constant), Risk Assessment

Table 7c. Coefficients for risk assessment and performance

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
	(Constant)	6.061	.595		10.180	.000
1	Risk Assessment	.315	.034	.512	9.225	.000

a. Dependent Variable: Organizational–perf

Table 8a. Model summary for control activities and performance

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.446[a]	.199	.195	2.35031

a) Predictors: (Constant), Control Activities

Table 8b. ANOVA for control activities and performance

Model		Sum of squares	Df	Mean square	F	Sig.
1	Regression	327.257	1	327.257	59.243	.000[b]
	Residual	1320.224	239	5.524		
	Total	1647.481	240			

a. Dependent Variable: Organizational_Perf; b. Predictors: (Constant), Control_Activties

Table 8c. Coefficients for control activities and performance

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Std. error	Beta		
	(Constant)	6.268	.682		9.190	.000
1	Control Activities	.258	.034	.446	7.697	.000

a. Dependent Variable: Organizational_Perf

Table 9. Model summary for control environment, risk assessment and control activities and Performance

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.593[a]	.352	.338	2.13

a. Predictors: (Constant), Control_Environment, Monitoring, Control_Activities, Info and Comm, Risk Assessment

Table 10. Control environment, risk assessment and control activities and financial performance

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	580.190	5	116.038	25.550	.000[b]
	Residual	1067.291	235	4.542		
	Total	1647.481	240			

a. Dependent Variable: Organizational_Perf
b.Predictors: (Constant), Control_Environment, Monitoring, Control_Activities, Info and Comm, Risk_Assessment

Objective Four: Control Environment, Risk Assessment and Control Activities on Financial Performance

The last objective of this study seeks to investigate the combined impact of control environment, risk assessment and control activities and financial performance of listed banks in Ghana. Table 9 and 10 shows the result of the relationship between control environment, risk assessment and control activities and firm performance.

Table 9 shows that internal systems generally show a strong R = 0.593. Again, R2 =-0.352 indicating a significant varaition and predictability in the three internal control systems of listed banks. This implied that, 33.8 percent variations of financial performance were explained by the internal control systems of the firm at confidence level of 95%.

Furthermore, the study ANOVA (Table 10) result found that significant effect (F = 25.550, P<0.001) of control environment, risk assessment and control activities and financial performance at a 5% significance level (α = 0.05).

This section therefore presents the summary of the five hypotheses tested. It is recalled that the prime purpose of this study was to test effect of control environment, risk assessment and control activities on financial performance. The summary result means that while four hypotheses (H1; H2; H3 and H4) were supported one hypothesis (H5) was not supported based on the *p*-values and alpha values (α = 0.05).

5. DISCUSSION OF RESULTS

Objective one of this study sought to investigate the effect of control environment on bank performance. The study result showed internal control systems such as ethical values, fraud detectors, effective accounting and financial systems contribute to financial performance of listed banks in Ghana. This is evident owing to the fact that the management of public held companies must be up to the task to ensure that possibility of fraud or negative consequences on the company's fortunes are effectively dealt with. The result support previous studies Amudo & Inanga [24] and Olumbe [33], who found a significant relationship between control environment and financial performance.

Regarding objective two, the study sought to investigate the effect of risk assessment as an internal control measure and bank performance. The study result shows a strong significant effect of risk assessment and financial performance of listed banks. Our study finding is consistent with previous findings Barra, Savage, & Tsay, [34] and Sarens & De Beelde, [35] who found that prompt strategy of assessing risk positively influence performance. The implication of this result therefore means that control environment, risk assessment and control activities to perceive, prevent, detect, control risk is an essential element to improve the financial returns of listed banks.

The third objective of the study sought to investigate whether control activities of listed firms of GSE affect performance. The study result reveled that indeed clear line of control, corrective actions and feedback, clear accounting chart, training of accounting standards including expenditure control positively influence financial performance. Although the result of R2 showed a weak predictability, the relationship was significant. The result of this study confirms previous studies Olumbe, [33] and Ratcliffe & Landes, [15] that found that control activities positively affect financial performance.

Regarding objective four, the study result shows that there is a significant effect of Control Environment, Risk Assessment and Control Activities on financial performance of listed banks in Ghana. This result therefore confirms previous studies who found a significant effect of internal control on financial performance [36,11,20].

6. CONCLUSIONS

This study examined the effect Control Environment, Risk Assessment and Control Activities on financial performance. The methodology employed in the study was descriptive and quantitative research design and data was collected using closed ended questionnaires. The sample population was 101 representatives of 12 listed banks in Ghana. The data analysis made use of regression tables.

Regarding objective one of this study, the study found that there is a significant effect of control environment as an internal control system on financial performance of listed banks in Ghana's stock Exchange market. The study result showed a fairly weak level of predictability between

Control environment and financial performance of listed banks in Ghana. Regarding objective two, the study found that risk assessment as an internal control measure directly influence financial performance measures of listed banks in Ghana. The study result showed a strong level of predictability of Risk Assessment on Financial Performance of listed banks in Ghana. The results of objective three reveled that Control activities of listed banks have a direct effect on financial performance of listed banks in Ghana. However, the study found a weak positive predictability of control activities on financial performance. The last objective of the study showed that there is a significant effect of Control Environment, Risk Assessment and Control Activities on Financial Performance of listed banks in Ghana. The result under this objective shows a strong predictability of internal control system to financial performance of listed firms in Ghana.

From the analyses made on the data collected, it can be concluded that there is a positive significant effect of control environment, risk assessment and control activities on financial performance of listed banks in Ghana.

7. RECOMMENDATIONS

In view of the findings that evolved from the study, the following recommendations have been made for policy considerations in improving financial performance through internal controls.

Management of listed banks in Ghana's Stock Exchange must improve their investment in ensuring risk assessment control measure. This recommendation is given because Risk Assessment appeared as the strong predictor of financial performance.

Management of listed companies must intensify their investment in their environment and control activities to improve contribution to performance. This recommendation is given because, they have weak predictability of financial performance despite their high level of significance. To industry regulators, the study recommends that industry regulators such as Bank of Ghana, Ministry of finance, Security and Exchange Commission and GSE among others should be awakened to take pragmatic steps to ensure that listed firms have strong internal measures. This would help protect investment of that move in and out of the market. Again it will improve the

integrity of the Exchange and encourage more investors to boost the national economy.

8. SUGGESTIONS FOR FUTURE RESEARCH

Future studies may consider other listed banks and also undertake a comparison effect of listed and non-listed banks.

CONTRIBUTION AND ORIGINALITY

The paper contributes to policy by bringing to light the positive impact of control environment, risk assessment, control activities on financial performance on listed banks in Ghana. The paper strongly advocates that Risk Assessment, Control Environment, and Control Activities if backed by policies can turn the fortunes of firms in Ghana. The findings of this paper are novel and worthy of consideration by all firms.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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