



INTERNAL CONTROL SYSTEMS AND FINANCIAL PERFORMANCE OF COMPANIES LISTED IN NAIROBI SECURITIES EXCHANGE

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Abstract:

Internal control systems involve various methods and measures the organisation takes to safeguard assets, accurately check financial reports, enhance operational efficiency and execute managerial policies to achieve their financial objectives. The study sought to determine how internal control systems influence the financial performance of Nairobi Securities Exchange (NSE) listed companies in Kenya. Specifically, the study sought to assess the effect of risk assessment, internal control environment and information and communication systems on the financial performance of the listed companies in NSE. The study adopted a descriptive research design. The target population comprised 63 listed companies in NSE as of 30th June 2023. A sample of 39 companies was drawn from the target population using a stratified random sampling technique. The study used primary data collected using structured questionnaires. Data analysis was carried out using descriptive and inferential statistical methods. The results were presented using tables and charts. The study found that internal control systems positively and significantly influenced the financial performance of the listed companies in NSE. The study recommended that to improve the financial performance of these firms, the management needs to determine and implement the optimal combination of effective and efficient internal control mechanisms.

JEL: G20; L10; L20; M10

Keywords: financial performance, internal control systems, risk assessment, internal environment, information and communication systems, listed companies in NSE

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1. Introduction

Internal controls have been a straightforward administrative process that entails document verification, asset tracking, and reporting to the board of directors, management, or external auditors (Ahmed & Muhammed, 2018). In the past, there was a requirement for companies to show accountability for how they utilized shareholders' capital and efficiency in providing services. Internal controls must meet high standards of competence and professionalism, and organizations must use their limited resources more wisely to reduce and manage risks. Technological innovation has increased the ability to gather and analyze as enterprises must receive sound advice and recommendations from the internal audit department, a key element of internal control. Internal auditing differs from company to business, and modernizing internal auditing is very important. The management must periodically provide timely, reliable, accurate, and informative corporate financial reports (Hayes, 2009).

It has been a requirement from the NSE that the listed companies provide performance reports regularly to maintain good management. A daily price list is also provided to provide timely information to the investors on the performance of their investments. The grouping as per the NSE as of June 2023 was as follows: Agricultural (6), Automobiles and Accessories (1), Banking (12), Commercial and Services (12), Construction and Allied (5), Energy and Petroleum (5), Insurance (6), Investment (5), Investment services (1), Manufacturing and Allied (8) Telecommunication and Technology (1), Real Estate Investment Trust (1), Exchange Traded Fund (1). The total number of listed companies was 63 companies.

The significant role that internal control processes play and even offer recommended practices for businesses to use when establishing an audit department is acknowledged by NSE's 2002 Corporate Governance Guidelines. In Kenya, all publicly traded companies are required to have an internal audit division as internal audits are crucial. The board of directors should establish an internal audit role, which must be impartial toward the actions it examines and transparent in its operations (Capital Markets Authority Act Cap. 485A). The Capital Market Authority Act stipulates that listed businesses must protect shareholders' interests and assets by maintaining a strong internal control framework. Several companies continue to experience financial distress, endangering their survival in the business environment, despite the existence of sophisticated internal controls and internal audit teams in quoted corporations.

According to Jensen (2003), internal control systems are intended primarily to enhance financial performance reliability directly or indirectly by increasing accountability among information providers in a company or organization. The internal audit department oversees the preparation of the audit reports and ensures that the business follows the established fraud and error prevention standards. According to the agency theory, the shareholders contract the management to operate the company and act on their behalf. The main objective is to increase profits and maximize the creation of shareholders' wealth. Companies listed on the NSE are publicly owned, and during the

annual general meetings, the public elects the company's executives and auditors. The auditor oversees the executive performance and presents the audited reports to the shareholder. Measures are put in place to direct managers' performance throughout daily tasks.

According to Ittner (2003), regular assessment of the consistency and integrity of financial information, evaluation of the controls employed to protect assets from losses, an assessment of management policies implementations and execution by the employees, an assessment as to whether management achieves its organizational objectives of productivity, efficiency and effectiveness are all the main components of the effective internal control for revenue generation.

2. Problem Statement

The NSE's 2002 Corporate Governance Guidelines acknowledge the significant role internal control processes play and even offer recommended practices for businesses to use when establishing an audit department. In Kenya's public sector, internal audits play a key role in the company's internal control. Therefore, all publicly traded companies are required to have an internal audit division. The board of directors should establish an internal audit role, which must be impartial toward the actions it examines and transparent in its operations (Capital Markets Authority Act Cap. 485A). The Capital Market Authority Act stipulates that the management of the listed companies must protect shareholders' interests and assets. This is done by maintaining a strong internal control framework. Several companies continue encountering financial challenges, endangering their survival in the business environment, despite having internal controls and internal audit departments in quoted corporations.

Most of the NSE-listed companies have been registering continuous losses. Since 2013, Kenya Airways has been reporting losses despite the government's continuous bailouts. In the fiscal year 2021, they reported a loss of \$130.5 million. Eveready East Africa LTD, a company listed in the NSE, reported net losses in the fiscal years 2021 and 2022 of Ksh 34.7 million and 50.9 million, respectively. Uchumi supermarket also reported a net loss of Ksh 3.2 billion in 2021. Kenya's Competitiveness Rank 93.00 in 2021 and 95.00 in 2022, according to the econometric models prepared by Trading Economics among 140 economies. One of the reasons for the ranking is significant fraud in organizations

Cherutich (2018) found that internal controls play a significant role in the good financial performance of three-star hotels in Nairobi County. Mathew (2019) established a considerable correlation between the financial performance of SACCOs in Kenya and the internal control system. Ibrahim *et al.* (2017) found a favourable correlation between internal audit controls and the monetary performance subset of Nigerian stock market companies. Eniola and Akins (2016) also found that organizational corruption and weak internal control are significantly related. Eniola (2021) concluded that the internal control oversight was statistically significant, demonstrating its importance as a component of

COSO's internal control system for return on assets. The results had a positive coefficient and supported the hypothesis that better internal audit regulations boost the return on assets of the listed companies in southwest Nigeria. The outcome showed that internal audit control considerably and favourably affects return on assets, which is a measure of financial performance. Nyaga and Kamau (2018) found a relationship between internal audit independence and internal audit effectiveness in the Kirinyaga County Government. The study indicated that internal audit independence positively and significantly affected internal control effectiveness. The study concluded that good internal control process is an essential predictor of the effectiveness of the audit function in the county government.

This research is different from the above studies as it evaluates internal control systems as a factor affecting the financial performance of NSE-listed companies. The researchers mentioned above majored in managing risks and corporate governance. This study focused on the effectiveness of internal control systems in affecting the financial performance of companies listed in the NSE.

2.1 Purpose and Objectives

This study aimed to determine the influence of internal control systems on the financial performance of Nairobi Securities Exchange (NSE) listed companies in Kenya.

The following specific objectives guided the study:

- 1) To determine the effect of risk assessment on the financial performance of companies listed in NSE.
- 2) To evaluate the effect of the control environment on the financial performance of companies listed in NSE.
- 3) To analyze the effect of information and communication systems on the financial performance of companies listed in NSE.

2.2 Scope and Significance of the Study

The study aimed to investigate how internal control systems affect the financial performance of NSE-listed companies. The target population comprised 63 Nairobi Securities Exchange-listed companies. The respondents were the managers of the internal audits for the NSE-listed companies. The study was necessitated by the need to evaluate and investigate how internal control systems affect the financial performance of NSE-listed companies.

3. Literature Review

This section reviews the relevant theoretical and empirical literature and provides the conceptual framework showing how the study's variables are interrelated.

3.1 Theoretical Literature

The study was anchored on the Agency Theory developed by Jensen and Meckling (1976), which emphasizes management behaviour, agency cost, and the ownership hierarchy of the firm. Maximizing shareholder wealth is the main objective of the company's management. In a connection between a principal and an agent, known as agency theory, managerial duties are delegated to maximize profits. The agents (management) and the principals (shareholders) aim to maximize gain while utilizing the available resources. Senior management's support is crucial to the business for internal audit quality to be achieved. However, problems may arise in the agency relationship that link the management and the shareholders as a result of a conflict of interest

Agency theory also addresses the problem of conflicting principal and agent interests due to different risk profiles. The agents may fail to maximize the shareholders wealth and pursue their own self-interested goals resulting to a conflict of interest between the two parties. The risk tolerance of the agent and the principal may vary, which could explain their opposing inclinations. Since the agents may choose to follow pathways that benefit their interests, the ultimate goal of maximizing shareholder value may not be pursued (Cherutich,2018). Therefore, this theory links up with this study on how the shareholders' relationship with the agents affects their performance.

3.2 Empirical Literature

The COSO framework (2013) identifies control environment, risk assessment, control activities, information and communication and monitoring as the five main elements of internal control. COSO (2011) defines risk assessment as identifying and investigating applicable dangers related to accomplishing the association's destinations. Risk control matrices are a tool used in risk assessment that assists organizations in identifying the risks that exist between objectives and controls.

According to Ahmed and Muhammed (2018), the risk assessment process involves identifying and analysing management-relevant risks to prepare financial statements that would be fairly reported in conformity with generally accepted accounting principles. Risk assessment consists in using rigorous procedures to identify and analyze relevant risks, followed by managing such risks. Risk identification, evaluation, and reaction are all components of risk assessment. The organization's ability to conduct credit risk assessment, fraud risk assessment, customer risk assessment, and operational risk assessment is primarily assessed by the presence or absence of these procedures.

According to COSO (2013), a control environment is a group of norms, procedures, and structures that are the foundation for implementing internal control throughout an organization. Organizational integrity and ethical values make up the control environment, along with the constraints that allow the board of directors to carry out its governance oversight duties, the organizational structure and delegation of authority, the procedure for attracting, developing, and retaining qualified personnel, and the rigour surrounding performance measures, incentives, and rewards to encourage performance accountability

Ewot and Mutembei (2023) studied the effect of internal audits on commercial banks' financial performance in the Nairobi Securities Exchange in Nairobi County, Kenya. The study employed a descriptive research design. The target population comprised 10 listed commercial banks, and the response units were 86 employees from various departments in these banks. Primary and secondary data were collected and analysed. The study concluded that internal audit systems impact the financial performance of commercial banks. The study recommends that commercial banks listed on the NSE reassess their internal audit systems and strengthen any identified weaknesses to enhance their financial performance.

Sandimba and Ndede (2023) investigated the impact of internal controls on the financial performance of Savings and Credit Cooperative Societies (SACCOs) operating in Nairobi County, Kenya. The study was anchored on agency, stakeholder, and systems theories. The study employed a descriptive survey design. A census survey technique was also used where all 42 registered deposit-taking SACCOs in Nairobi County were incorporated. The study findings concluded that all internal control variables considered significantly impact the county's deposit-taking SACCOs' performance. The study recommends that the Sacco Societies Regulatory Authority (SASRA) in Kenya develop policies to improve deposit-taking SACCOs' segregation of duties, approval of accounting transactions, physical controls, arithmetic controls, and organizational plans.

Eniola (2021) found that the internal control oversight was statistically significant, demonstrating its importance as a component of COSO's internal control system for return on assets. Since the division keeps track of all actions pertinent to the sector, the internal audit is called the company's core. As the financial reports reflect, the performance of the internal audit team and internal audit success aid in developing the company's work. The results had a positive coefficient and supported the hypothesis that better internal audit regulations boost the return on assets of the listed companies in southwest Nigeria. The outcome showed that internal audit control considerably and favourably affects return on investments, which is a measure of financial performance.

According to Nyaga and Kamau (2018), a relationship exists between internal audit independence and internal audit effectiveness in the Kirinyaga County Government. The study indicated that internal audit independence positively and significantly affected internal control effectiveness. The study concluded that an excellent internal control process is an essential predictor of the effectiveness of the audit function in the county government.

Cherutich (2018) found that internal controls play a significant role in the good financial performance of three-star hotels in Nairobi County. The study found that internal controls are vital in attaining satisfactory performance. Internal controls help detect and prevent errors and fraud in the company. They are also accountable for properly attaining good workers' relationships with management.

Mathew (2019) established a considerable correlation between the financial performance of SACCOs in Kenya and the internal control system. The study found that in Tharaka Nithi County, Kenya, SACCOs with internal solid control systems

outperformed those with weak internal control systems regarding their financial performance. Ibrahim *et al.* (2017) investigated the impact of internal control procedures on the monetary performance of a subset of Nigerian stock market companies. There was a favorable correlation between internal audit controls and economic performance. Eniola and Akins (2016) examined the effect of internal control on company financial production in Nigeria. According to the study, organizational corruption and weak internal control are significantly related.

Kinyua, Gakure, Gekara and Orwa (2015) studied the effect of the Internal Control Environment on the Financial Performance of Companies Quoted in the Nairobi Securities Exchange. The study had a target population of 62 companies quoted in NSE, and a stratified random sampling technique was used to draw a sample of 38 companies. The study relied on primary data from structured questionnaires and secondary data from audited annual reports, publications and document analysis. The study's findings concluded that there was a significant association between the internal control environment and financial performance. It also recommends that enhancement of the internal control environment is required to improve the financial performance of companies quoted in NSE.

4. Research Methodology

4.1 Research Design

This study adopted the descriptive survey research design. In descriptive research, information is gathered about the topic to explain the current circumstances in a way that offers proof of the actual state of the subject areas being studied (Goosen, L., 2018). Cross-sectional data representing the respondents' opinions were used, so the descriptive research design was considered fit for this study. Quantitative data was collected using a Lickert scale questionnaire.

4.2 Target Population

The study population comprised the 63 listed companies on the NSE (Nairobi Securities Exchange) website as of June 2023.

Table 3.1: The Groupings of the Company by NSE

Sector	Number of Companies
Agricultural	6
Automobiles and Accessories	1
Banking	12
Commercial and Services	12
Construction and Allied	5
Energy and Petroleum	4
Insurance	6
Investment	5
Investment Services	1
Manufacturing and Allied	8

Telecommunication and Technology	1
Real Estate Investment Fund	1
Exchange Traded Fund	1
Total	63

3.4 Sample and Sampling Technique

The sample was obtained using a stratified random sampling technique. By separating the population into homogeneous subgroups, stratified random sampling enables the generation of accurate estimates for each stratum and the population (Kinyua, 2016).

The Taro Yamane's formula (1967) is used to determine the sample size,

$$n = \frac{N}{1+Ne^2}$$

n = sample size,

N = total population,

E = desired margin error,

$$n = \frac{63}{1+63*0.05^2} = 38.65$$

The sample size was 39 companies.

From the above stratification, the study used simple random sampling to draw the number of NSE listed companies to be studied within each stratum as follows:

Table 3.2: Number of Sampled Listed Companies

Sector	Number of Companies	Number of Companies
Agricultural	6	3
Automobiles and Accessories	1	1
Banking	12	7
Commercial and Services	12	7
Construction and Allied	5	3
Energy and Petroleum	4	2
Insurance	6	4
Investment	5	3
Investment Services	1	1
Manufacturing and Allied	8	5
Telecommunication and Technology	1	1
Real Estate Investment Fund	1	1
Exchange Traded Fund	1	1
Total	63	39

4.4 Research Data and Instrument

Primary data was collected using a structured questionnaire based on the study's variables. The questionnaire was designed using an ordinal Likert-type scale, with 5 being for strongly agreeing and 1 representing strongly disagreeing.

4.5 Data Analysis & Model Estimation

Descriptive statistics such as mean and standard deviation were obtained to describe quantitative data. A multiple linear regression analysis was employed to determine whether internal control systems affect the financial performance of the listed firms in the NSE. The study was at a 95% confidence level.

The following multiple linear regression model was employed;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Financial performance,

X₁ = Risk assessment,

X₂ = Control environment,

X₃ = Information and communication systems,

β₀, β₁, β₂ and β₃ = partial regression coefficient for the independent variables, respectively,

ε = Standard error.

5. Results and Discussions

5.1 Response Rate

The sample comprised 39 managers from NSE-listed companies. Only 28 of the questionnaires were duly filled out and returned, for a 68% response rate.

Table 5.1: Response Rate

Factor	Frequency	Percentage Rate
Response	28	72%
Non-response	11	28%
Total	39	100%

5.2 Descriptive Statistical Analysis

This study sought to establish the effect of internal control systems on the financial performance of Nairobi Securities Exchange-listed companies. The respondents were asked to rate the extent to which they agreed or disagreed with the statements relating to the effect of risk assessment, control environment, and information and communication systems on the financial performance of the NSE-listed companies. A scale of 1-5 was used, 5 representing strongly agree and 1 representing strongly disagree.

Table 5.2 below represents the descriptive analysis results for risk assessment, control environment, information and communication systems, and financial performance

Table 5.2: Descriptive Statistics Summary

Variable	Item	Mean	Standard Deviation
Independent variables	Risk assessment	4.65	0.178
	Control environment	4.25	0.184
	Information and communication systems	4.08	0.183
Dependent variable	Financial Performance	4.42	0.421

Table 5.2 shows the extent to which risk assessment affects the financial performance of the NSE-listed companies, having a mean value of 4.65 and a standard deviation of 0.178. This was an indicator that the respondents agreed with the statement. The findings show that the risk assessment systems in the NSE-listed companies are present and working properly, efficiently, and effectively. From the above analysis, it can also be concluded that the respondents largely agreed that the control environment affects the financial performance of the NSE-listed companies, with a mean value of 4.65 and a standard deviation of 0.184. The respondents also agreed that Information and communication systems affect the financial performance of the NSE-listed companies, with a mean value of 4.08 and a standard deviation of 0.183. It can be established that the internal control systems implemented by the management are critical in improving companies' financial performance (mean agreement of 4.42 and standard deviation of 0.421).

5.3 Multiple Linear Regression Analysis

The linear regression analysis was used to determine the effect of internal control systems on the financial performance of Nairobi Securities Exchange listed companies. The regression output is given in Table 5.3.

Table 5.3: Regression Analysis Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.842	1.54		5.487	.000
Risk assessment	.429	.074	.559	5.778	.002
Control environment	.448	.132	.438	3.395	.001
Information communication systems	-.312	.072	1.416	4.360	.000
a. Dependent Variable: Financial performance					

The analysis results in Table 5.3 show that all independent variables, the risk assessment, control environment and information communication systems, were positively related to the financial performance of the listed companies in NSE. The relationship between the independent variables and dependent variables was all statistically significant at a 5% significance level. This indicates that the sample used gives enough evidence that internal control systems affect a company's financial performance in NSE. These findings align with Ewot and Mutembei (2023), whose study concluded that internal audit systems impact the financial performance of Commercial Banks Listed in the Nairobi Securities Exchange in Nairobi County, Kenya. Also, the findings concur with Sandimba and

Ndede (2023), who concluded that internal controls have significantly impacted the performance of deposit-taking SACCOs in Nairobi County. Further, the study results also concur with Kinyua, Gakure, Gekara and Orwa (2015) as their findings concluded that there was a significant association between the internal control environment and financial performance. The study findings match the conclusions drawn by Muthusi (2017) that information and communications systems are positively and significantly related to the financial performance of firms. Asiligwa (2017) asserts that information communication systems generate reports including operational, financial, non-financial, and compliance-related data that enable business management.

The coefficient of determination (R^2) results is presented in the table below.

Table 5.4: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.725 ^a	.532	.345	3.38165

Note: Independent variables (Constant), Risk assessment, Control environment and Information communication systems.

The results in Table 5.4 indicate that the coefficient of determination (R^2) is 53.2%. This implies that in this study, 53.2% of the variation in financial performance is explained by internal control systems, which comprise Risk assessment, Control environment, and Information and communication systems. Therefore, risk assessment, Control environment, and Information and communication systems have a positive and significant effect on the financial performance of the listed companies in the NSE.

6. Conclusions and Recommendations

Based on the findings above, the study concluded that internal control systems positively and significantly affect the financial performance of Nairobi Securities Exchange listed companies. The study recommends that publicly traded firms' management work together to determine the optimal combination of effective and efficient internal control mechanisms that best suit their corporate needs and enhance them. To optimize the financial compensation of internal control systems, managers need to embrace risk management strategies, a sound control environment and an information communication system.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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