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Influence of Internal Control Systems on Fraud Risk Management among Commercial Banks in Kisii Town, Kenya

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Abstract: *The banking system in Kenya has increasingly reported losses arising from frauds. Prior studies investigating the cause of these frauds have failed to link the role of Internal Control Systems (ICS) on fraud risk management. This study sought to assess the influence of ICS on fraud risk management among banks in Kisii town. The study targeted all the 15 banks in the town and the respondents were stratified into three categories comprising of 15 branch managers, 74 departmental managers, and 68 clerks. Saturated sampling method was used for the branch managers while simple random sampling was employed to select a third of the rest of the respondents giving a sample size of 130 respondents. Interview schedules and questionnaires were used to solicit information from the respondents. Collected data was descriptively analyzed by using weighted means and standard deviations and inferentially by use of Pearson's correlation and regression analysis with the help of Statistical Package for Social Sciences (SPSS). The study findings revealed that ICS influence 67.7% of fraud risk management; control environment positively and significantly influences fraud risk management ($\beta = 0.391$; $p < 0.05$) and risk assessment positively and significantly influences fraud risk management ($\beta = 0.401$; $p < 0.05$). The study will be significant to policy makers, bank managers and academic researchers. The study recommends that the management of banks seal all loopholes that may create opportunities for undermining of internal control systems by putting in place tight fraud handling policies; put in place policies on lifestyle audits; report all employee related frauds to relevant investigative authorities and take a pro-active and dynamic risk assessment approach.*

Keywords: *Internal Control Systems, Fraud Risk Management, Banks.*

I. Introduction

The internal control system (ICS) is a major part in any organization. The Committee of Sponsoring Organizations (COSO, 1994) defines internal control thus: Internal controls are put in place to keep the company on course toward profitability goals and achievement of its mission, and to minimize surprises along the way. They enable management to deal with rapidly changing economic and competitive environments, shifting customer demands and priorities, and restructuring for future growth

According to Gamage et al. (2014), internal control is the process designed and affected by those charged with governance, management and other personnel to provide reasonable assurance about achievement of an entity's objectives with regard to reliability of financial reporting, effectiveness and efficiency of operations and compliance with applicable laws and regulations. The ICS is designed and implemented to address identified business risks that threaten the achievement of the organization's objectives

Abiola (2013), assert that the concept of internal control (IC) is very important for proper management of an organization's risk, which may constitute barriers to the attainment of its set objectives if neglected. Poor controls lead to scandals, losses, failures and damage,to an organization's reputation and that where new ventures are undertaken without a means of controlling risks, then problems are likely. ICS are regarded as effective when they promote efficiency, reduce risk of asset loss, deter and detect errors, fraud and theft and help to ensure the reliability of financial statements and compliance with laws and (Manass'eh, 1993)

Many of the previous studies have focused on finding the impact of ICS on performance of organizations in general without looking at the individual contribution of the ICS components. The current study looks at the ICS from the perspective of the control environment and risk assessment in relation to fraud risk management in banks.

Whittington et al (2001) observe that control environment is the attitude toward internal control and control consciousness established and maintained by the management and the employees of an organization.

Management philosophy and operating style, the integrity and ethical values of personnel that creates and administers controls and the board of directors' sets a basis upon which other controls operate hence determines the quality of controls. Palfi (2009), assert that it may be viewed as the foundation for all other components of internal control as it sets the tone of the organization, influencing the control consciousness of its people, providing discipline and structure. This environment is basically influenced by the integrity and ethical values of those in leadership positions within the organization and reflected in the tone set by top management.

Millichamp (2002) describes control environment as the overall attitude, awareness and actions of directors and management regarding internal controls and their importance in the entity. Factors affecting the control environment include management's philosophy and operating style, integrity and ethical values, a commitment to the competence, board of directors or audit committee, organizational structure, assignment of authority and responsibility and human resource policies and practices respectively (Gamage et al, 2014).

Palfi (2009), posit that risk assessment is the organization's identification and evaluation of how risk might affect its achievement of objectives hence determine the most appropriate internal controls required to manage these risks. According to Ofori (2011), since risks are the happenings that threaten the achievement of objectives, risk assessment is the process of detecting, assessing and determining how risk can be minimised in order to achieve the organization's mission. There are both internal and external risks that could prevent the achievement of established objectives at the every level in an organization. Therefore, management should take necessary actions to prevent these risks. But, sometimes management cannot avoid the risk from occurring. In these situations, management should determine whether to accept the risk, reduce it up to the acceptable levels, or avoid. So management should ensure each risk is assessed and handled properly to achieve its objectives (Millichamp, 2002).

According to Rajkumar, (2009), an effective internal control system requires that all material risks, internal and external, controllable and uncontrollable that could affect the achievement of the bank's objectives are recognized and continually assessed. Management must establish mechanisms to identify, measure, analyze and manage the various kinds of risks faced by the bank at all levels and in all departments including credit risk, country and transfer risk, market risk, interest rate risk, operational risk, liquidity risk, legal risk, reputational risk among others. The management needs to continually evaluate the risk profile in order to be aware of the risks faced by the banks and hence come up with effective controls to address the risks (Rajkumar, 2009).

Banks in Kenya are regulated by the Central Bank of Kenya (CBK), the Companies Act and the Banking Act. CBK issues and continually conducts a comprehensive review of the Prudential and Risk Management Guidelines to proactively strengthen the regulatory framework for banks and other institutions licensed pursuant to the Banking Act (CBK, 2006). Despite the regulation, many banks have collapsed and others placed under receivership due to frauds attributed to either weak or undermined ICS. The latest examples are Imperial and Dubai banks in 2015. Between the year 2011 and the year 2012, financial institutions in East Africa lost almost KES four billion in fraud related cases (Nyamu, 2012) with Kenya recording the highest percentage (39%). Statistics by the banking fraud investigation department indicate that 75% of reported cases of fraud-related crimes during the years 2010 to 2012 affected banking institutions negatively in their operation (CBK, 2013). Of the total fraud reported cases from 2009 to 2012 electronic fraud constituted 28.07%; computer fraud, 8.77%; loan fraud, 36.84%; embezzlement, 15.79%; and cheque fraud 10.53% (CBK, 2013).

Problem Statement

Internal control systems (ICS) play a significant role in the governance of banks and other financial institutions. They are designed to ensure safe custody of all bank assets, avoid misuse or misappropriation of bank assets and to detect and prevent errors and frauds (Manas'seh, 1993). While banks have instituted ICS in their operations, several cases of fraud have been reported (CBK, 2013) leading to massive losses to either the banks or their customers. These increasing cases of fraud threaten the profitability and survival of banks (Wainaina, 2011). Prior empirical studies investigating the causes of these frauds have consistently not addressed the influence of the specific internal control system components on fraud risk management. Studies on the role of control environment indicate that while control environment is an important aspect of ICS (Gamage et al, 2014), its specific contribution on fraud management has not been established with certainty. Similarly, the role of risk assessment on fraud risk management has not been established since previous research has not investigated it. The present study investigated the relationship between internal control system components of control environment, risk assessment and fraud risk management using commercial banks in Kisii town as the sample.

Research Questions

1. What is the relationship between control environment and fraud risk management among banks in Kisii town?

2. What is the relationship between risk assessment and fraud risk management among banks in Kisii town?

Purpose of the Study

The aim of the study was to establish the influence of internal control systems on fraud risk management among commercial banks in Kisii town, Kenya.

Specific Objectives

- To establish the relationship between control environment and fraud risk management among banks in Kisii town.
- To examine the relationship between risk assessment and fraud risk management among banks in Kisii town.

Significance of the Study

It is hoped that the findings of the study may be useful to the management of banks and other organizations in their integral role of leading their employees towards maintaining effective ICS hence attain overall organizational objectives. Policy makers like the government and the CBK can use the recommendations to formulate policies and regulations. The study will also contribute new knowledge to the body of existing literature for academicians.

Limitations and Delimitations of the Study

Some respondents were not willing to respond to some issues to do with their internal control mechanisms due to the sensitivity of the matter while others feared victimization. This was overcome by assuring all the respondents of confidentiality of information given and strict adherence to research ethics and that the solicited information would be used purely for academic purposes only. Time constraints on the part of managers was also a hindrance, they were very busy. This was overcome by using interview guides hence saving their time.

II. Literature Review

The relationship between ICS and performance of firms has been a subject of empirical investigation for a long time now. However, most of these studies have studied this role in general without breaking ICS into its components and therefore assessing the individual contribution of each component. Particularly, studies on the role of control environment have either failed to reach a consensus or failed to address its relationship with fraud risk management. For instance, Palfi and Muresan (2009) examined the importance of a well-organized system of internal control in regard the Romanian banking sector and established that the control environment significantly and positively influences the performance of banks. Wilson (2006) empirically investigated the collapse of Barring bank in Singapore and found that the failure was due to weak control environment and in particular poor management supervision, lack of segregation between front and back offices insufficient action by management in response to warning signals and absence of risk assessment or compliance functions. Khanna and Arora (2009) investigated the reasons for bank frauds and the implementation of preventive security controls in Indian banking industry and found that management's philosophy and operating style and the attention and direction of the board of directors towards organizational success positively influenced the effectiveness of internal control mechanisms. Kratz (2008) studied 100 companies in the US market between 2005 and 2007 in an analysis of the causes and effects of internal control outcomes and found a positive significant relationship between corporate governance structures and internal control outcomes.

In local studies, Olumbe (2012) in a study to establish the relationship between internal controls and corporate governance in commercial banks found that there was a strong positive relationship between internal control systems adapted by the banks and corporate governance. Atieno (2014) in a study on the influence of corporate governance in Kenya Commercial Bank established a positive correlation between corporate governance practices and banks' performance. Wanjohi (2014) in an assessment of fraud in the banking industry in Kenya found that fraud thrived because of availability of opportunities to commit fraud including weak control environment. Wainaina (2011) in an evaluation of the internal control function, a case of Kenya polytechnic university college in Nairobi Kenya, found that other than the prevention and detection of fraud, internal controls should reflect the strength of the overall accounting environment in an organization as well as the accuracy of its financial and operational records.

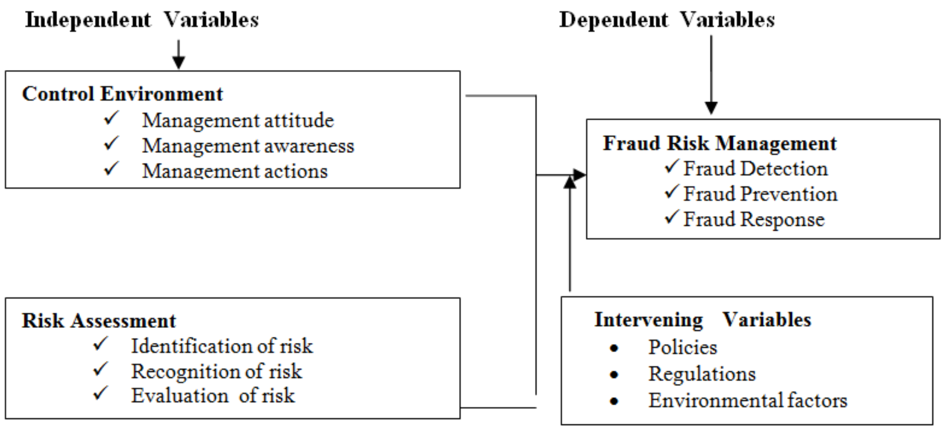
The review of literature in the foregoing section indicates that control environment has a general positive and significant relationship with the performance of firms. The review of literature also indicates that most of the studies have addressed control environment from the context of its influence on firm performance. Studies on how control environment influences fraud risk management are missing indicating that a study gap exists in the context of establishing this relationship.

A review of literature on risk assessment also indicates that while several studies on risk assessment among banks have been conducted, there are scanty studies on the influence of risk assessment on fraud risk management in Kenya which shows that the relationship between risk assessment and fraud risk management for the Kenyan context is unknown. Abiola and Oyewole (2013) evaluated the effects of internal control system on fraud detection in selected Nigerian commercial banks and showed a statistically significant positive relationship between risk assessment and fraud detection. Similarly, Akinyomi (2010) in a study on the effect of internal control systems on Nigerian banks found that there was a strong positive relationship between risk assessment and fraud management while studying fraud in Nigerian banks. Tunji (2013) in a study on effective internal controls system as antidote for distress in the banking industry in Nigeria revealed existence of ICS in most of the banks studied but which were deliberately being undermined by management indicating weak risk assessment practices.

Wanjohi (2014) found out that employee related frauds were the most common in banks indicating weak risk assessment practices and that employee fraud was perpetrated through the use of forged documents, card fraud, computer fraud and diversion of funds to suspense accounts, misappropriation of assets and claiming of unearned benefits. Sitienei, (2012) in a study on factors influencing credit card fraud in the banking sector established that the risk assessment factors that were considered important in influencing credit card fraud risk management in the banking sector included credit card skimming, system security, proper card management and systems integration. Wanjiru (2011) in a study on the strategic responses to increasing fraud related risks among banks in Kenya found that fraud is very sensitive and that it greatly impact on performance of firms. Wanemba (2010) in a study on challenges of fraud faced by commercial banks in Kenya concluded that it's necessary for a bank to have an anti-fraud unit that employs various strategies to curb fraud.

It is apparent from the review of literature on the role of risk assessment that there is a research gap in studies relating to the relationship between risk assessment and fraud risk management since no known studies have established this relationship especially for banks operating in Kisii town.

Figure 2.1 Conceptual Framework



Source: Researcher 2015

III. Methodology

Research Design

The study adopted correlational research design because correlational research design determines the degree to which two variables are related (Kombo and Tromp 2006).Pearson correlation coefficient was used to measure the direction and strength of the relationship between variables.

Population and Sample

The target population of the study was 15 banks that were within Kisii town. The banks had a total of 357 employees: 89 management staff (15 branch managers and 74 departmental managers) and 268 clerks. Saturated sampling method was employed to include all the 15 branch managers. Simple random sampling technique was used to select one third of the departmental managers and clerks. This translated to a sample size of 130 respondents.

Research Hypothesis

$H_0 1$: There is no relationship between control environment and fraud risk management among banks in Kisii town.

H_02: There is no relationship between risk assessment and fraud risk management among banks in Kisii town.

IV. Data Analysis

Descriptive Statistics

Table I: Extent of use of Internal Control System Practices

Variable	N	Mean	Std. Deviation	Std. Error Mean
Control Environment	109	**2.865**	**1.519**	**0.636**
Risk Assessment	109	**3.521**	**0.310**	**0.081**

Descriptive statistics indicated that control environment is used to a moderate extent among banks operating in Kisii town as shown by the grand mean of 2.865 and a standard deviation of 1.519; the extent of risk assessment in the banks is large as indicated by the mean of 3.521 and a standard deviation of 0.310. This implies that the control environment among the banks as an ICS practice is not widely used indicating weak controls which may facilitate fraud. The findings are in line with Willson (2006) and Khanna and Arora (2009), who found that implementation of various internal control mechanisms, were not up to the mark, indicating weak control environment in banks. The findings on risk assessment, however, contradict those of Willson(2006) who found no risk management and compliance functions in banks.

Inferential Statistics

The main objective of the study was to establish the influence of ICS on Fraud Risk Management among commercial banks in Kisii,. The specific objectives were to establish the relationship between the control environment and fraud risk management, examine the relationship between risk assessment and fraud risk management. To establish the relationship between the variables, both correlation and regression analyses were conducted. The test of relationship was based on the following model:

$$FRM = \beta_0 + \beta_1X_1 + \beta_2X_2 + \alpha \qquad (1)$$

Where: FRM = the dependent variable of Fraud Risk Management

β_0 = Regression constant

β_1, β_2 = slopes of the regression equation,

X_1 = Control Environment

X_2 = Risk Assessment

α is an error term normally distributed about a mean of 0 (for purposes of computation, the α was assumed to be 0).

Before establishing the relationship between the variables, the model was tested for suitability and results are shown in Table II:

Table II: Model Suitability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.823[a]	.677	.702	.319
a. Predictors: (Constant), X_1, X_2				

Information in Table II reveals that there is a high positive correlation between ICS and fraud risk management. This is indicated by the correlation coefficient of 0.823 indicating a high positive correlation. The result in Table II also shows that the model is a good predictor of fraud risk management in banks. This is shown by the R square value of 0.677. This further shows that ICS practices of control environment and risk assessment predict 67.7% of fraud risk management while other variables not considered in the present study can predict 32.3% of fraud risk management in banks.

Testing Relationship between Variables

To test the statistical significance of the model, analysis of variance (ANOVA) was used. The null hypothesis was set at there being no relationship between ICS and fraud risk management. The results are shown in the table III.

Table III: ANOVA

Model		Sum of Squares	Df	Mean Squares	F	Sig.
1	Regression	2.117	3	.4234	4.888	.001[a]
	Residual	1.213	105	.0866		
	Total	5.240	108			

a. Predictors: (Constant), X1, X_2

b. Dependent Variable: FRM

The model regression relationship shown in Table III confirms that that the relationship between ICS and fraud risk management is strong. The p-value of 0.01 ($p < 0.05$) indicates that the null hypothesis of no significant relationship between ICS and fraud Risk management should be rejected. By the help of an F-test table, the tabulated value for F is 2.96 which was less than 4.888 meaning that the model was statistically significant.

Table IV: Test of Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	
		Beta	Std. Error	Beta	Sig.
1	(Constant)	0.576	.286		.002
	X_1	.391	.395	.308	.038
	X_2	.401	.154	.401	.021

The purpose of this study was to assess the influence of internal control systems on fraud risk management in banks in Kisii town. To achieve this objective, the study postulated three hypotheses that were tested to determine the relationship between ICS and fraud risk management in banks. The hypotheses were tested at 95% confidence level ($p = 0.05$). After substituting the values in table IV, the multiple regression equation took the form: FRM $= 0.576 + 0.391X_1 + 0.401X_2$

Where X_1 = Control Environment

X_2 = Risk Assessment

All the variables were positive and significant ($p < 0.05$). Hypothesis one (H_{o1}) postulated that there is no significant relationship between control environment and fraud risk management in banks in Kisii town. Findings from the regression run showed that this variable had a positive significant relationship with fraud risk management ($\beta_1 = 0.391$, $p < 0.05$) implying that the null hypothesis should be rejected. It was therefore concluded that control environment has a significant positive influence on fraud risk management in banks in Kisii town. This indicates that improvement in the quality of the control environment will likely lead to improved management of fraud risk among banks in Kisii. The findings that control environment had a positive significant relationship with management of fraud risk is in line with findings by Wilson (2006), Kratz (2008), Atieno (2014), Khanna and Arora (2009) Olumbe(2012), who found a positive influence of control environment and management of fraud risk in banks.

Hypothesis two (H_{o2}) postulated that there is no relationship between risk assessment and fraud risk management among banks in Kisii town. Findings showed that risk assessment has a positive significant relationship with fraud risk management ($\beta_2 = 0.401$, $p < 0.05$) implying that the null hypothesis should be rejected. Therefore, there is a positive and significant relationship between risk assessment and fraud risk management in banks in Kisii town. This implies that the quality of risk assessment is directly related to the quality of fraud risk management. The findings are in line with those of Wilson (2006), Khanna and Arora(2009), Tunji (2013),Abiola and Oyewole (2013) Sitienei (2012), and Wanjohi (2014) who found similar results.

V. Findings Of The Study

The first objective was to establish the relationship between the control environment and fraud risk management among banks in Kisii town. Statistical inference revealed that the control environment had a positive significant influence on fraud risk management. The second objective was to examine the relationship between risk assessment and fraud risk management among banks in Kisii town. Statistical inference revealed that risk assessment has a positive significant relationship with fraud risk management.

VI. Conclusion

Based on the objectives of the study, test of hypotheses and study findings, the study generally concluded that ICS has the greatest influence on the management of fraud risk among banks in Kisii town. The study found out that there was a positive linear relationship between the independent variables of control environement, risk assessment and information and communication, and the dependent variable of fraud risk management in banks. This means that if the qualities of control environment, risk assessment and information and communication in the banks are strong then fraud risk management in the banks will be strong and if the variables are weak then it will translate to increased fraud.

The finding that there is a significant positive relationship between control environment and fraud risk management implies that control environment is a significant contributing factor to the success or failure of fraud risk management. It can then be concluded that if the management of banks ensure that the control environment is extensively, effectively and objectively applied, then the success of fraud risk management objectives in banks will be sure since any loopholes leading to undermining of ICS will be sealed. Past studies have shown that laxity by management in enforcing controls create avenues for fraudulent activities.

The finding that risk assessment has a positive significant relationship with fraud risk management in banks implies that risk assessment contributes towards the effectiveness of fraud risk management processes in banks. It can therefore be concluded that if risk assessment process is extensively, pro-actively and dynamically enhanced especially through employee training and capacity building workshops on risk assessment and recognition, then internal control systems in banks will be effectively applied to achieve intended objectives. This will greatly reduce fraud instances in banks.

VII. Recommendations

Based on the findings of this study, the following recommendations are made: i) The management of the banks to seal all loopholes that may create opportunities for undermining of internal control systems thus: put in place tight fraud handling policies, report all employee related frauds to the relevant investigative authorities and ensure compulsory annual leave and staff rotations policies are strictly adhered to; have a policy on lifestyle audits on their employees so as to check from time to time any discrepancy between their earnings and lifestyles and conduct independent background check on potential employees before hiring them,
iii) The management of banks to take a pro-active and dynamic approach on risk assessment and recognition in order to effectively determine the most appropriate internal controls required to handle the risks and also incorporate adequate and tamperproof security controls into their systems.

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