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INFLUENCE OF INTERNAL CONTROLS AND STAFF COMPENSATION ON FRAUD OCCURRENCE IN COMMERCIAL BANKS BRANCHES IN KISUMU COUNTY, KENYA

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ABSTRACT

This study investigated the effect of internal control and staff compensation on fraud occurrence in commercial banks branches in Kisumu County, Kenya. This study adopted descriptive survey design and a sample size of 147 senior management staff of commercial banks branches located in Kisumu, Kenya were selected using stratified random sampling technique and structured questionnaires used to collect data. The study through descriptive and multiple regression analysis revealed that all the independent variables were significant predictors of fraud occurrence in commercial banks branches in Kisumu, Kenya. That is; Internal controls; $\beta = -0.316$*at* $p<0.01$*; Staff compensation;* $\beta = 0.373$ *at* $p<0.05$ *and from the model summary,* $R^2 = 0.779$*; which is a good model; because the model significantly explains 77.9% of the variations in fraud occurrence in commercial banks branches in Kisumu, Kenya. The study concluded that a commercial bank that invests heavily in secure internal controls can significantly reduce bank frauds that arise from weak and compromised banks internal control mechanisms. Further, staff compensation is very elusive issues since several studies had found that it significantly influence bank fraud; that is, bank fraud can only be reduced by viable staff compensation schemes. The study recommended that, while it is impossible to achieve zero fraud risk in the banking institutions because fraudsters will always find their ways, management of commercial banks should design independent, secure internal control systems with real time checks so as to tame both internal and external bank. On staff compensation, the study recommended that, viable risk-adjusted return metrics, prudential metrics, strategic metrics and conduct metrics should be wisely adopted while crafting prudential staff compensation schemes meant to reduce employee fraud in commercial banks fraudsters.*

Key Words: *internal controls, staff compensation, fraud occurrence, Kisumu County*

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INTRODUCTION

The rapidly expanding pace of globalization, driven by factors such as establishment of the World Trade Organisation (WTO) and subsequent lowering of market and competition barriers, has led to increased capital mobility and increased ability of financial services agencies to meet the needs of individuals and companies around the world (Busch, 2009).

Thus, the increasing rate of globalization, combined with the expansion of technology and other factors, has increased the rate of fraud and new fraud activities (Zagaris, 2010). These new fraud opportunities can often be extremely difficult to detect due to their technological sophistication; thus, banks spend considerable resources attempting to identify frauds and combat them (Kranacher, Riley & Wells, 2010). Banks face challenges in identifying fraud and preventing fraud and these difficulties can often be exacerbated by the political, regulatory, and institutional frameworks that are in place. However, even in the case of significant regulatory support, the regulatory framework of a given country cannot be expected to stop or even necessarily significantly reduce the incidence of fraud in the banking industry (Hoffman, 2002).

According to KPMG Barometer 2012, Nigeria, Kenya, Zimbabwe and South Africa make up 74 percent of all fraud cases reported in Africa. In the East African region, Kenya in standing out with 7.75 percent of reported fraud cases, well ahead of Uganda (2.98 percent) and Tanzania (2.78 percent). Most fraud in Kenya targets government and financial sectors as elsewhere on the continent. "Fraud and misappropriation is high, as is bribery and corruption (KPMG, 2012) In recent years, the volume and frequency of fraudulent practices in Kenyan banks have been on the increase. Fraud has become one of the most intractable and monumental problems in recent times. As a matter of fact, banks have become the main target of conmen for survival. It is not under statement that only well managed banks especially with respect to fraud prevention would survive in the coming years (CBK 2016).

Kenya has experienced major waves of banking crises that have affected the banking industry and encouraged fraudulent practices within the industry.As at 31st December 2016, the Kenyan banking sector comprised of the Central Bank of Kenya, as the regulatory authority, 43 banking institutions; (42) commercial banks and 1 mortgage finance company), 8 representative offices of foreign banks, 13 Microfinance Banks (MFBs), 3 credit reference bureaus (CRBs), 17 Money Remittance Providers (MRPs) and 77 foreign exchange (forex) bureaus. Out of the 43 banking institutions, 40 were privately owned while the Kenya Government had majority ownership in 3 institutions. Of the 40 privately owned banks, 25 were locally owned (the controlling shareholders are domiciled in Kenya) while 15 were foreign-owned (many having minority shareholding). The 25 locally owned institutions comprised 24 commercial banks and 1 mortgage financial institution. Of the 15 foreign-owned institutions, all commercial banks, 11 were local subsidiaries of foreign banks while 4 were branches of foreign banks. All licensed microfinance banks, credit reference bureaus, forex bureaus and money remittance providers were privately owned (CBK Report, 2016).

Statement of the Problem

Kenyan banking industry is highly regulated and supervised by Central Bank of Kenya in respect to various prudential guidelines derived from Basel Committee but despite these stringent prudential control mechanisms, amount of fraud loss and frequency of internal bank fraud typologies have been on the increase with decreasing fraud loss recovery rates (CBK, 2016).

That is, Bank fraud in Kenya has increased and will continue to increase because it is a part of everyday life. Recent research shows at least half of the crimes reported had a bank employee involved and bank investigation agency, in its monthly crime reports, cited identity theft, electronic funds transfer, bad cheques, credit card fraud, loan fraud, forgery of documents and online fraud as some of the ways used to defraud financial institutions. Growing cases of bank fraud and cyber-crime mean that financial institutions need to urgently invest in detection and preventive mechanisms as today's fraudsters are increasingly sophisticated (Kiragu *et al.,* 2015).

Further, existing literature on bank fraud shows inconclusive and inconsistent findings on effective measures to combat this ever mutating bank menace. For instance, Sang (2012) explored determinants of fraud control measures in Kenya commercial banks; Barra (2010) investigated the effect of penalties and other internal controls on employees' propensity to be fraudulent; Armstrong and Taylor (2014) stated that there are cautions of moral hazards associated with bonus payments, while a study conducted in the United States by Angeli and Gitay (2015) concluded that poorly aligned incentives facilitate excessive risk-taking behaviours by the executives; but Faulkender, Kadyrzhanova, Prabhala and Senbet (2010) stated that stock being a lavish compensation will induce top managers to manipulate accounting statements; thus stock based compensation motives unethical behavior including fraud among some bank executives. It is more interesting when Chan, Tsai and Li (2015), found that equity based compensation is linked to fraud especially financial reporting fraud and Hab, Tarsalewska and Zhan (2015) concluded in their study that manager's equity remuneration increases their propensity to commit fraud.

Therefore, the inconclusiveness and inconsistencies in existing bank fraud literature about what causes and deters bank frauds motivated this study to investigate the influence of banks' internal controls and staff compensation on fraud occurrence in Commercial banks in Kisumu County, Kenya.

Study Objectives

The general objective of this study was to investigate the influence of internal controls and staff compensation on fraud occurrence in commercial banks in Kisumu County, Kenya. The specific objectives were:

- To examine the influence of internal controls on fraud occurrence in commercial banks in Kisumu County, Kenya.
- To assess the influence of staff compensation on fraud occurrence in commercial banks in Kisumu County, Kenya.

Research Hypotheses

Ho_1: Internal controls do not significantly influence fraud occurrence in commercial banks in Kisumu County, Kenya.

Ho_2: Staff compensation does not significantly influence fraud occurrence in commercial banks in Kisumu County, Kenya.

LITERATURE REVIEW

Theoretical Framework

Fraud triangle theory

This was originally developed by in 1973 by Donald Cressey (Cressey, 1973)), a criminologist, who established that for fraud to occur there must be a reason; that is related to three factors (pressure, opportunity and rationalization) that must be present for an offense to take place. He ascertained that the perpetrator must formulate some morally acceptable idea to them before engaging in unethical behavior and if fraud perpetrators are given the opportunity they are most likely to commit fraud. Lister (2007) in further stated that pressure is a significant factor to commit fraud and determined three types of pressure which are personal, employment stress, and external pressure; thus defined the pressure to commit fraud as "the source of heat for the fire."

Pressure is defined as motivation for commission of fraud, which is defined as the non-sharable problem at the source of the fraud (Cressey, 1973; Wells, 2005). Six non-shareable problems (sub-types) leading to pressure to commit fraud should not be considered to be mutually exclusive, as they often interact (Cressey, 1973). These six non-shareable problems include; (i) violation of obligations which refer to pressure created from failure to meet obligations caused by gambling, drinking, drugs, or excessive personal debt; (ii) personal failures which refer to failure of investments, losses caused by bad judgment, divorce or other relationship failure; (iii); business reversal which refer to failures of business that cause pressure for fraud, including increase in business rates, losses due to recession, or other financial factors; (iv) Isolation which refer to feelings that there is no one to share the problems with, including isolation at work as well as at home and in social life; (v) Status gaining which refer to behaviours that are focused on increasing the lifestyle status of the individual and allowing them to live beyond their means, such as purchase of luxury goods, houses, vehicles, or other high-status products;(vi) Employer-employee relations which refer to behaviours promoted by a perceived breakdown of the relationship between the employer and the employee and feelings of betrayal or lack of trust resulting from this relationship breakdown (Wells, 2005).

The Fraud Diamond Theory

Wolfe and Hermanson (2004) posited that in this theory, an element named capability has been added to the three initial fraud components of the Fraud Triangle Theory. Wolfe and Hermanson (2004) argued that although perceived pressure might coexist with an opportunity and a rationalization, it is unlikely for fraud to take place unless the fourth element (capability) is also present. Mackevicius and Giriunas (2013) further explained that not every person who possessed motivation, opportunities, and realization may commit fraud due to the lack of the capability to carry it out or to conceal it. Albrecht et al. (1995) also opined that this element is of particular importance when it concerns a large-scale or long-term fraud. Furthermore, Albrecht *et al.* (1995) believe that only the person who has an extremely high capacity will be able to understand the existing internal control, to identify its weaknesses and to use them in planning the implementation of fraud.

Therefore Fraud Diamond Theory applies in this research in that it brings in the ‘capability skill’ (the desired‘diamond’) to inform the study in assessing whether weaknesses in the banks internal controls framework presents an opportunity for unethical employees who have the capability (the most sought ‘diamond’) of manipulating the banking system engages in fraudulent bank activities that allows them siphon huge amounts of money from the bank.

White Collar Crime Theory

This is the foundation of fraud theories. Dorminey, Fleming, Kranacher and Riley (2012) stated that the 1940 work of Edwin H. Sutherland is credited with the term “white-collar crime”. While earlier criminologists and sociologists examined the broad topic of crime, focusing mainly on street and violent crime, Sutherland was the first to integrate crimes of the upper white-collar class with economics and business activity. White-collar offenses are viewed as equally serious as street crimes; there may be a tendency among some to view white-collar criminals as similar to street criminals (Woods, 1998).As well, focusing narrowly on white-collar offenders may result in individuals failing to recognize the interactions between the offenders‟ background characteristics and their offensive behavior. White-collar criminals are not like typical bank robbers/street criminals, who are often described as "young and dumb.'' Bank robbers and other strong-arm artists often make comic mistakes like writing the holdup note on the back of a probation identification card, leaving the getaway car keys on the convenience store counter, using a zucchini as a holdup weapon, and timing the holdup to get stuck in rush hour traffic. Then there is the classic about the robber who ran into his own mother at the bank (Robertson, & Timothy, 1999).

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Empirical Review of Literature Relevant to the Study

Internal controls and fraud occurrence in commercial banks

To begin with, Ajala, Amuda and Arulogun (2013) examined the evaluation of internal control system as a preventive measure of fraud in Nigerian banking sector. Data was sourced from five commercial banks' audited and published financial statements and were analyzed with the use of product moment correlation coefficient and regression analysis. The study found out that internal control system has significantly prevented and curbed frauds in Nigerian banks. They concluded that bad corporate governance was responsible for improper designing of internal control systems which could have an effect on fraud occurrence in Nigerian banks.

Zuraidah, Mohd and Yusarina (2015) also investigated fraud schemes in the banking institutions and the preventive measure to avoid severe financial loss in Malaysia banking institutions. The study was conducted among management levels in Malaysia banking institutions, with a focus on branch managers and assistants' managers who handles mortgage loan and hire purchase loan. The study found out that perpetrators of fraud always have insight of the internal procedures and had taken advantage and capitalize on the process to penetrate the system and commit fraud. They concluded that it is impossible to achieve zero fraud risk in the banking institutions because fraudsters will always find their ways, therefore the fundamental functions of banking institutions' staffs should be better emphasized to make their roles more visible in combating fraud.

Further, Sang (2012) explored determinants of fraud control measures in Kenya commercial banks. Descriptive research design was used and data analyzed using descriptive and inferential statistics. The study concluded that the effectiveness of internal control measures was affected by non-adherence to dual control aspect and lack of sufficient time to undertake the various periodic tests with delight. The study recommended that comprehensive measures checking fraud be established and enforcement of compliance of fraud mitigation methods.

A study by Nyakarimi and Karwirwa (2015) also found that Internal Control System showed both positive and significant relationship with banks fraud occurrence. This implies that the control measures taken by the management of banks can be effective in the prevention of bank fraud. Adedoyin (2013) also studied the Internal Control measures and the detection of and prevention of fraud in banks. Using participants from the Main Street Bank Plc Aba branch in Nigeria and applying descriptive method showed that Internal Control system was significant in detection and prevention of fraud in banks in Nigeria.

Staff compensation and fraud occurrence in commercial banks

Olaoye and Dada (2014) in their research assessed the nature, causes, effects, detection and prevention measure for bank frauds in Nigeria. The methodology employed for data collection was majorly primary source, which involved the use of questionnaire. The researchers made use of the Nigerian Deposit Insurance Corporation (NDIC) annual reports for data relating to total amount involved in frauds and forgeries, ten banks with the highest fraud cases and categories of bank staff involved in frauds and forgeries. The researchers concluded that in the fight for the prevention of fraud, banks should have in place sound/effective internal control mechanism/checks and balances and provide adequate remuneration and reward for excellence and good conduct while the incessant and periodic downsizing of bank staff should be discouraged.

Eseoghene (2010) stipulates that "nowhere are frauds more serious and more pronounced than in the banking sector of the economy; they are one of

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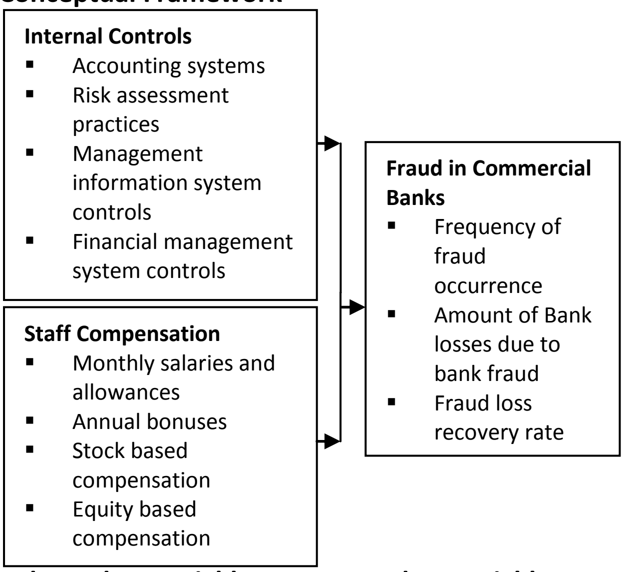
the biggest single causes of bank failure and distress in the Nigerian banking system." Eseoghene (2010) sought to find out the common types of bank fraud that are frequently carried out in the banking system, the underlying causes, level of staff involvement, consequences and possible means of ameliorating the problem. Analyses of data collated through questionnaire were tested for significance using the "t-test". The analysis revealed that respondents did not view unofficial borrowing and foreign exchange malpractice as forms of bank fraud since they were common and an industry wide practice. It also revealed that there was an equal level of staff involvement in initiating and executing fraud, with the concealment of fraud coming last in their agenda. Among the factors hypothesized to encourage bank fraud; the major individual based factors were staff greed, infidelity and poverty, while organizational factors were inadequate staffing, poor internal controls, inadequate training and poor compensation of bank staff.

Conceptual Framework



Independent Variables   Dependent Variable

Figure 1: Conceptual Framework

Source: (Author, 2019)

Internal controls and fraud occurrence in commercial banks

ICAN (2010) defines internal control as the whole system of control, financial or otherwise, established by the management in order to carry on the business of an enterprise in an orderly an efficient manner, ensuring adherence to management policies, safeguarding the assets and secure as far as possible the completeness and accuracy of records. Internal control as defined by the Commission of Sponsoring Organization [COSO] (2010) is the process established by an organization's board of directors and management, which is designed towards providing a reasonable assurance in order to achieve their aims and objectives in an efficient and effective manner, and ensuring reliability of their financial statement and in conformity with relevant rules and regulations. Campbell and Harther (2010) opined that internal control is established in order to put management on alert towards likely problems, to ensure they are being controlled before it got escalated to a big issue. Though these controls cannot totally eradicate all the errors and misappropriations but can minimize its occurrence.

Staff compensation and fraud occurrence in commercial banks

It is a human trait to want recognition and reward for positive performance and success. Continuous and rigorous assessment of employees performance, coupled with constant, timely and effective communication to the employee on the performance assessment has a huge bearing on the reduction of fraud. As part of the employee assessment process the organization must recognize and if possible reward any accomplishments of the employees, especially those whose performance require so. Furthermore, employees must feel that the reward is of value to them. Failure to do so will lead to guilt feelings, low motivation and demoralization of employees which might create rationalizations for acts of fraud.

Fraud Manifestations in Commercial Banks

Fraud can be defined as any deliberate deception, concealment, or any illegal act used to obtain illicit material gain, including embezzlement and asset misappropriation in banks (Pan et al., 2011). Fraud and fraudulent practices are in categories. Mitchell *et al (*1992) identified several categories of unethical behavior in banking business which include defrauding government, bribery of public officials, insider trading, bribery of private citizens, discrimination, socially questionable activities, bad judgment in management decisions, corporate politics, unfair trade practices, industrial espionage, environmental harm, safety, conflict of interest and invasion of privacy. Notably, a worrisome development in fraud and fraudulent activities is increased rate of bank staff involvement (Okpara, 2009). This study therefore assessed whether, weaknesses in commercial banks' internal controls and inadequate staff compensation perpetrate such bank frauds as; data theft, money laundering, siphoning funds from customers' accounts, procurement fraud, trading fraud, bank forgeries and breaches of policy.

METHODOLOGY

This study adopted descriptive survey design which according to Cooper and Schindler (2007) is used to obtain information concerning the current status of the phenomena to describe "what exists" with respect to variables or conditions in a situation. The study targeted 32 commercial banks having Branch managers, Operation managers, Procurement managers, Personal Banking managers, Security managers, ICT managers, Internal Audit managers of all commercial bank branches located in Kisumu.

The study used structured questionnaire as the main research instrument. Kothari (2008) defines a questionnaire as that consisting of a number of questions printed or typed in a definite order on a form or set of forms. A pilot study was conducted on 20 senior management staff in commercial banks in Kakamega County. The data collected was adopted and coded for completeness and accuracy of information at the end of every field data collection day and stored. Analysis of the data was done using quantitative analysis. Computer software of Statistical Package for Social Sciences (SPSS) version 24 was used in data analysis. The multiple regression model equation adopted was;

$$Y=\alpha+\beta_1X_1+\beta_2X_2+\varepsilon;$$

Where;

Y is the dependent variable (fraud occurrence in commercial banks)

α is the constant

β_1………β_2 are beta coefficients

X_1………X_2 are independent variables (internal controls and staff compensation)

ε is the error term.

FINDINGS

The study investigated the influence of internal organization mechanisms on fraud occurrence in commercial banks branches in Kisumu County, Kenya. Descriptive statistics were summarized in form of frequencies, percentages, means and standard deviation which summarized respondents perceived responses to each of the statements on the study variables using likert scale of values ranging from 5 to 1; that is; 5=strongly agree, 4=agree, 3= Uncertain, 2=disagree and 1= strongly disagree. Descriptive statistics are summations of responses based on independent variables (internal controls and staff compensation) on the dependent variable (fraud occurrence in commercial banks branches). The results were presented in table forms showing frequencies of responses as per each statement plus its corresponding percentage score in brackets.

Internal Controls and Fraud occurrence in Commercial Banks Branches in Kisumu County

This section analyzed and presented data relating to the first objective of the study; the influence of internal controls on fraud occurrence in commercial banks branches in Kisumu County, Kenya. The researcher was interested in knowing the influence of internal control issues such as; secure, working accounting and financial management Information system in the bank; employee feedback and rotation, open communication channels; internal mechanisms or conducting independent spot checks on fraud occurrence in the bank. Respondents were asked eight questions and their responses summarized in table 1.

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Table 1: Descriptive Statistics; Internal Controls

	Frequency and Percentage (%)						
Statement	**5**	**4**	**3**	**2**	**1**	**Mean**	**Std.Dev**
1. There are secure, working accounting and financial management Information system in the bank	22(22.4)	57(58.2)	6(6.1)	9(9.2)	4(4.1)	3.86	.805
2. Management provides instant feedback to the junior officers about any failures in the bank's financial and information system	12(12.2)	47(48.0)	13(13.3)	20(20.4)	6(6.1)	3.40	.728
3. The management has a system of rotating employees' duties and requiring employees to take vacations especially those responsible for cash and other valuable bank assets	5(5.1)	55(56.1)	13(13.3)	18(18.4)	7(7.1)	3.34	.964
4. Existing communication channels are open to employees to report any suspected fraud case	13(13.3)	54(55.1)	10(10.2)	15(15.3)	6(6.1)	3.54	.895
5. There are risk assessment practices to detect occurrence of any fraud	14(14.3)	54(55.1)	5(5.1)	15(15.3)	10(10.2)	3.48	.812
6. There is an internal mechanism to assess the number of fraud incidences on a monthly basis so as to capture the trends in the numbers, nature and types of frauds	12(12.2)	52(53.1)	8(8.2)	20(20.4)	6(6.1)	3.45	.834
7.The management always conduct independent spot checks on bank employees handling cash and those responsible for financial information management system	10(10.2)	48(49.1)	7(7.1)	22(22.4)	11(11.2)	3.24	.936
8. Corrective action is timely taken to address internal control weaknesses	16(16.3)	57(58.2)	6(6.1)	11(11.2)	8(8.2)	3.63	.734
Valid N (listwise) 98							
Grand mean = 3.493							

First respondents were asked whether there were secure, working accounting and financial management information system in the bank. Most respondents agreed 57(58.2%) and strongly agreed 22(22.4%). However, it worth noting that 9.2% and 4.1% of respondents disagreed and strongly disagreed to this statement implying that some commercial bank branches in Kisumu did not have secure, working accounting and financial management information systems hence could easily fall prey to fraud. Secondly, most respondents agreed (48.0%) and strongly agreed (12.2%) that management provided instant feedback to the junior officers about any failures in the bank's financial and information system. This therefore ensured that there was immediate response to deter any attempts to take advantage of banks system failures to commit fraud crime.

However, a sizeable number of respondents disagreed (20.1%) and strongly disagreed (6.1%) to this statement implying that where management did not provide instant feedback to the junior officers about any failures in the bank's financial and information system, opportunistic fraud activities could happen.

Thirdly, 56.1% of respondents agreed that the management has a system of rotating employees' duties and requiring employees to take vacations especially those responsible for cash and other valuable bank assets. However 18.4% disagreed while 7.1% strongly disagreed to this statement implying that where the management has no system of rotating employees especially those responsible for cash and other valuable bank assets could necessitate fraud activities orchestrated by these employees hence the need to rotate them. Further, most respondents agreed (55.1%) agreed that existing communication channels were open to employees to report any suspected fraud case. This was because closed communication channels were open to mere speculations and suspicions from employees and management when fraud incidences arise. Open communication systems thus allow for information share and undertaking any mitigation measures; and that is why majority of respondents agreed (55.1%) that there were risk assessment practices to detect occurrence of any fraud. Such risk assessment practices to detect occurrence of any fraud can only succeed in an open rather than closed communication system.

Further, 53.1% and 12.2% of respondents agreed and strongly agreed that there was an internal mechanism to assess the number of fraud incidences on a monthly basis so as to capture the trends in the numbers, nature and types of frauds. This was reinforced by 49.1% of respondents who agreed that the management always conducted independent spot checks on bank employees handling cash and those responsible for financial information management system. Finally, 58.2% of respondents agreed that corrective action is timely taken to address internal control weaknesses. Such corrective action is necessary so as to ensure that the commercial banks, internal systems are not susceptible to frequent internal or external attacks.

Therefore in summary, the grand mean of responses on internal controls is 3.493 rounded off to 4 which correspondents to agree on the Likert scale used in the study. This shows that internal controls influence fraud occurrence in commercial banks. This is supported by Ajala, Amuda and Arulogun (2013) who examined the evaluation of internal control system as a preventive measure of fraud in Nigerian banking sector and found out that internal control system significantly prevented and curbed frauds in Nigerian banks. However, Zuraidah, Mohd and Yusarina (2015) investigated fraud schemes in the banking institutions and the preventive measure to avoid severe financial loss in Malaysia banking institutions and found that found out that perpetrators of fraud always have insight of the internal procedures; takes advantage and capitalize on the process to penetrate the system and commit fraud; thus concluded that it is impossible to achieve zero fraud risk in the banking institutions because fraudsters will always find their ways, therefore the fundamental functions of banking institutions' staffs should be better emphasized to make their roles more visible in combating fraud.

Staff Compensation and Fraud occurrence in Commercial Banks Branches in Kisumu County

This section analyzes and presents data relating to the second objective of the study; the influence of staff compensation on fraud occurrence in commercial banks branches in Kisumu County, Kenya. Respondents were asked eight questions and their responses summarized in table 2.

Table 2: Descriptive Staff Compensation

Statement	Frequency and Percentage (%)						
Statement	**5**	**4**	**3**	**2**	**1**	**Mean**	**Std.Dev**
1. Bank staff members are well paid to encourage them not to get involved in bank fraud.	11(11.2)	22(22.4)	24(24.5)	26(26.6)	15(15.3)	2.88	.746
2. The bank staff is contended with annual bonuses and stock based compensation	6(6.1)	12(12.2)	50(51.1)	25(25.5)	5(5.1)	2.89	0.907
3. Whistle blowers from the staff are given monetary and non-monetary rewards to help in preventing an attempted fraud	6(6.1)	7(7.1)	39(39.8)	38(38.8)	8(8.2)	2.64	0.955
4. The bank staff is motivated with equity based compensation	7(7.1)	31(31.7)	5(5.1)	44(44.9)	11(11.2)	2.79	.812
5. Bank employees experiencing financial difficulties can be tempted to engage in banking fraud when an opportunity avails itself	17(17.3)	39(39.8)	12(12.2)	28(28.7)	2(2.0)	3.42	.739
6. Bank employees who are big spenders beyond their compensation scales are likely to engage in banking fraud given an opportunity	16(16.3)	40(40.9)	12(12.2)	25(25.5)	5(5.1)	3.38	.880
7. Dissatisfied management staff are pressurized to collude with internal or external staffs to engage in financial scams	10(10.2)	43(43.9)	13(13.3)	22(22.4)	10(10.2)	3.21	.904
8. Most frauds in commercial banks are usually perpetrated by discontented internal staff	13(13.3)	38(38.8)	15(15.3)	26(26.5)	6(6.1)	3.27	.971
Valid N (listwise) 98							
Grand mean = 3.060							

First respondents had varied opinion on whether they are well paid to encourage them not to get involved in bank fraud. That is; 26.6% disagreed, 24.5% were uncertain, 22.4% agreed, 15.3% strongly disagreed while 11.2% strongly agreed. These mixed results indicated that bank employees were not really clear whether high salaries can really deter them from participating in fraud simply because there are studies that do imply employee fraud whether well paid or not. This is reinforced by the second question whereby most respondents (51.1%) were uncertain that the bank staff is contended with annual bonuses and stock based compensation; while a further 39.8% and 38.8% were uncertain and disagreed respectively that whistle blowers from the staff were given monetary and non-monetary rewards to help in preventing an attempted fraud.

Further to reinforce the assertion that staff compensation may not really deter bank fraud, 44.9% disagreed while only 31.7% agreed that the bank staff is motivated with equity based compensation. This implies that bank staff motivation is an elusive issue given that the fraud triangle theory suggests that available opportunity to engage in fraud may not really stop some employees in engaging in bank fraud. This was reinforced by 39.8% and 17.3% of respondents who agreed and strongly agreed respectively that bank employees experiencing financial difficulties can be tempted to engage in banking fraud when an opportunity avails itself (Cressey, 1973).

More so, 40.9% and 16.3% of respondents agreed and strongly agreed that bank employees who were big spenders beyond their compensation scales are likely to engage in banking fraud given an opportunity. This is because as per the fraud triangle theory (Cressey, 1973) opportunity and financial pressures will make such employees engage in bank fraud so as to meet their financial needs. In support of this, 43.9% and 10.2% agreed and disagreed respectively that dissatisfied management staff were pressurized to collude with internal or external staffs to engage in financial scams. To sum up, 38.8% and 13.3% agreed and strongly agreed respectively that most frauds in commercial banks are usually perpetrated by discontented internal staff. This is supported by Wells, 2005) assertion that employer-employee relations which refer to behaviours promoted by a perceived breakdown of the relationship between the employer and the employee and feelings of betrayal or lack of trust resulting from this relationship breakdown can necessitate bank fraud.

Inferential Analysis

Testing of Regression Model Assumptions

Linearity was tested in order to check the actual strength of all relationships. This was necessary so as to identify any departures from linearity which were bound to affect correlation. Linear models predict values which fall in straight line by having a constant unit of change (slope) of the dependent variable for a constant unit change of the independent variable. Linearity of the variables was tested using Pearson's product moment correlation coefficient. Since several items in the questionnaire measured the construct, the summation scores of the items in the questionnaire for the construct were computed and used in correlation analysis (Jahangir & Lawrence, 2008). Correlation analysis in table 2 showed that all predictor variables in the study were significant at *p<0.01* level, hence the study met this assumption.

Table 3: Correlation analysis

		Internal Controls	Staff Compensation	Fraud
Internal Controls	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	98		
Staff Compensation	Pearson Correlation	.599**	1	
	Sig. (2-tailed)	.000		
	N	98	98	
Fraud	Pearson Correlation	-.706**	.603**	1
	Sig. (2-tailed)	.000	.000	
	N	98	98	98

Multicollinearity was tested by analyzing correlations between all pairs of independent variables (Internal Controls-IC and Staff Compensation-SC. Hair *et al.*(2006) asserts that if correlation coefficient, (r) is close to 1 or -1, then there is multicollinearity but if (r) is not above 0.8, then there is no multicollinearity. In this study, the highest correlation coefficient was 0.732, hence below the threshold of 0.8, therefore, multicollinearity assumption was checked and not violated.

Accuracy of data was also not violated because the scales of measurement were all valid since questions had content validity and cronbach's alpha (which is a measure of reliability) values were 0.7 and above hence met the mandatory threshold.

From descriptive statistics that were computed during data analysis there were no values with at

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least 3 standard deviations below or above the mean thus this assumption of outliers was not violated.

Linear Regression Results

Linear regression analysis tested the direct influence of four independent variables (Internal Controls-IC and Staff Compensation-SC on the dependent variable (Fraud occurrence in Commercial Banks in Kisumu).

Influence of Internal Controls on Fraud Occurrence

This tested objective one of the study. The results were presented in table 4.The model summary showed that R squared (R^2) = 0.498 implying that 49.8% of variation in the dependent variable (Fraud occurrence in commercial Banks) was explained by the independent variable (internal controls). This therefore meant that other latent variables not in the model contributed to 50.2% of fraud occurrence in commercial banks branches in Kisumu, Kenya.

Table 4: Direct Influence of Internal Controls on Fraud Occurrence in the Bank: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics: R Square Change	F Change	df1	df2	Sig. F Change
1	.706[a]	.498	.493	.71657	.498	95.198	1	96	.000

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	48.882	1	48.882	95.198	.000[a]
	Residual	49.294	96	.513		
	Total	98.176	97			

Coefficients[a]

Model		Unstandardized Coefficients: B	Std. Error	Standardized Coefficients: Beta	t	Sig.
1	(Constant)	.371	.125		2.957	.004
	Internal Controls	-.766	.079	-.706	-9.757	.000

a. Dependent Variable: Fraud in Bank

Further, regression results using unstandardized beta coefficients showed that there exists a negative and significant effect of internal controls on fraud occurrence in commercial banks branches in Kisumu (*β=-0.766 (0.079); significant at p<.01*). This implied that a single strengthening in commercial banks internal controls led to 0.766 decrease in fraud occurrence in commercial banks branches in Kisumu County, Kenya. The simple linear regression equation for direct influence of internal controls on fraud occurrence in commercial banks branches in Kisumu, Kenya.is; ***(i) Y= 0.371 - 0.766X_1***Where:

Y = Fraud occurrence in commercial banks branches in Kisumu

X_1 = Internal Controls

Influence of Staff Compensation on Fraud Occurrence in the Bank

This tested objective two of the study. The results were presented in table 5. The model summary showed that R squared (R^2) = 0.363 implying that 36.3% of variation in the dependent variable (Fraud occurrence in commercial Banks) is explained by the independent variable (staff compensation). This therefore meant that other confounding variables not in the model contributed 63.7% of fraud occurrence in commercial banks branches in Kisumu, Kenya.

Table 5: Direct influence of Staff Compensation on fraud occurrence in the bank

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.603[a]	.363	.357	.80695	.363	54.767	1	96	.000

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35.663	1	35.663	54.767	.000[a]
	Residual	62.513	96	.651		
	Total	98.176	97			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.175	.082		2.142	.035
	Staff Compensation	.943	.127	.603	7.400	.000

a. Dependent Variable: Fraud in Bank

Further, regression results using unstandardized beta coefficients showed that there exists a positive and significant effect of staff compensation on fraud occurrence in commercial banks branches in Kisumu (*β= 0.943 (0.127); significant at p<.01*). This implied that a single increase in staff compensation led to 0.943 increase in fraud occurrence in commercial banks branches in Kisumu, Kenya. The simple linear regression equation for direct influence of staff compensation on fraud occurrence in commercial banks branches in Kisumu, Kenya.is;

(ii) $Y = 0.175 + 0.943X_2$

Where:

Y = Fraud occurrence in commercial banks branches in Kisumu

X_2 = staff compensation

Multiple Regression Results

Multiple regression analysis was computed because regression model assumptions of normality, linearity and multicollinearity were fulfilled. Multiple regression analysis was computed to assess the combined effect of the two independent variables (internal controls and staff compensation on fraud occurrence in commercial banks branches in Kisumu, Kenya.

Table 6: Multiple Regression Results: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.882[a]	.779	.769	.48353	.779	81.728	2	95	.000

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.432	2	19.108	81.728	.000[a]
	Residual	21.743	95	.234		
	Total	98.176	97			

a. Predictors: (Constant), Staff Compensation, and Internal Controls

b. Dependent Variable: Fraud in Bank

From table 6, model 1 showed combined regression results for influence of two independent variables (internal controls and staff compensation) on the dependent variable (fraud occurrence in commercial banks branches in Kisumu, Kenya). The result showed R^2 = 0. 779; which a good model, thus the model explained 77.9% of the variations in fraud occurrence in commercial banks branches in Kisumu. The F statistic was 81.728 significant at *p<0.01.* This implied that the independent variables in the study model were indeed different from each other and therefore influence the dependent variable (fraud occurrence in commercial banks branches in Kisumu, Kenya) in varied ways, thus confirming the relevance of running multiple regressions.

Table 7: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.447	.264		5.486	.000
	Internal Controls	-.316	.072	-.291	-4.397	.000
	Staff Compensation	.373	.124	.238	3.012	.003

a. Dependent Variable: Fraud in Banks

From the values of unstandardized regression coefficients with standard errors in parenthesis in Table 7, all the four independent variables (Internal controls;β = -0.316 (0.072) at *p<0.01*; (this implied that a single strengthening in commercial banks internal controls led to 0.316 decrease in fraud occurrence in commercial banks branches in Kisumu County, Kenya), Staff compensation; β = 0.373 (0.124) at *p<0.05;* (this implied that a single increase in staff compensation leads to 0.373 increase in fraud occurrence in commercial banks branches in Kisumu County, Kenya). Therefore, the multiple regression equation for overall influence of the two significant independent variables on fraud occurrence in commercial banks branches in Kisumu County, Kenya is;

(vi) $Y= 1.447 - 0.316X_1 + 0.373X_2$

Where;

Y= Fraud occurrence in commercial banks branches in Kisumu

X_1= Internal controls

X_2= Staff compensation

Testing Null Hypotheses

1. **H_{01}**: There is no significant relationship between internal controls and fraud occurrence in commercial banks branches in Kisumu, Kenya

   H_A: There exists significant relationship between internal controls and fraud occurrence in commercial banks branches in Kisumu, Kenya

T-test statistics results: (t = -4.397; *p=0.000*< 0.01)

Verdict: The null hypothesis **H_{01}** was rejected.

Results interpretation: H_A: There exists significant relationship internal controls and fraud occurrence in commercial banks branches in Kisumu, Kenya.

2. **H_{02}**: There is no significant relationship between staff compensation and fraud occurrence in commercial banks branches in Kisumu, Kenya

   H_A: There exists significant relationship between staff compensation and fraud occurrence in commercial banks branches in Kisumu, Kenya

T-test statistics results: (t = 3.012; *p=0.003*< 0.05)

Verdict: The null hypothesis **H_{02}** was rejected.

Results interpretation: H_A: There exists significant relationship staff compensation and fraud occurrence in commercial banks branches in Kisumu, Kenya.

CONCLUSIONS

First, the study concluded that a commercial bank that invests heavily in secure internal controls can significantly reduce bank frauds that arise from weak and compromised banks internal control mechanisms. Further, staff compensation is a very elusive issue since several studies have found that it significantly influences bank fraud; that is, bank fraud can only be reduced by viable staff compensation schemes.

RECOMMENDATIONS

First, while it is impossible to achieve zero fraud risk in the banking institutions because fraudsters will always find their ways, management of commercial banks should design independent, secure internal control systems with real time checks so to tame both internal and external bank fraudsters. Further, viable risk-adjusted return metrics, prudential metrics, strategic metrics and conduct metrics should be wisely adopted while crafting prudential staff compensation schemes meant to reduce employee fraud in commercial banks.

Areas for Further Research

First, a comparative study can be done using qualitative research techniques to capture real qualitative data so as to compare it with quantitative data. Secondly, a similar study can be done but with the utilization of forensic audit techniques so as to compare study results.

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