OPERATIONAL GOVERNANCE AND OCCUPATIONAL FRAUD RISK IN COMMERCIAL BANKS IN KENYA: A POSITIVISM APPROACH

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ABSTRACT

Association of Certified Fraud Examiners caution that globally, a typical organization loses at least 5% its annual revenue through occupational fraud. Further statistics indicate that occupational fraud risk is highest in commercial banks than any other industry globally. Occupational fraud risk is therefore a global problem. The problem is that Kenya has the highest incidences of fraud is East Africa. The study set to determine the effect of operational governance on occupational fraud risk in commercial banks in Kenya. Using a positivism research paradigm and a descriptive research design, a representative stratified sample of 30 commercial banks out of the 43 commercial banks licensed by Central Bank of Kenya by June 30, 2012 was used in this study. Principal Component Analysis, Varimax, Orthogonal was used for Factor analysis. Kaiser-Meyer-Olkin test of sampling adequacy was used together with Bartlett's test of Sphericity to assess factorability of the predictor variable. Cronbach's alpha coefficient was used to assess the data collection tool for stability and consistency. Factor analysis was used to asses construct validity. In order to test the null hypothesis, that is, there is no relationship between operational governance and occupational fraud risk in commercial banks in Kenya, model fitness, ANOVA and Regression coefficients were generated and interpreted**.** The study found that there is a positive but weak correlation between operational governance and occupational fraud risk. Further, the study found that the relationship is not statistically significant. These results provide insights into the occupational fraud risk controls relevance and

could guide the regulatory authorities approach to the design of antifraud controls in Kenya and developing countries.

Key Words: *Bivariate Linear Regression, Factor analysis, Occupational Fraud Risk, Operational Governance systems, Principle Component Analysis.*

INTRODUCTION

Background of the Study

Fraud risk is a global problem. Fraud frequency is highest in banks than any other industry globally (Kroll, 2011; Association of Certified Fraud Examiners (ACFE), 2012; ACFE, 2008; PricewaterhouseCoopers (PWC), 2007). Global fraud study report to the Nations, a publication of the Association of Certified Fraud Examiners (ACFE, 2012) on occupational fraud and abuse indicate that a typical organization losses 5% of its annual revenue to Fraud. Applied to the year 2011 estimated Gross World Product, this figure translates to a potential fraud loss of more than $3.5 Trillion. When the estimated year 2010 statistics are applied to the United States of America, this translates to (USD) 1.635 Billion (ACFE, 2010). If the same statistic is applied to the consolidated commercial banks revenue for the year 2010 (Central Bank of Kenya (CBK), 2011) the loss translates to approximately KShs. 15 Billion loss to fraud. Globally, fraud median loss by occupational stands at $160,000 (ACFE, 2010), a significant 25% of the cases involve losses of at least $1 million each and frauds lasts a median of eighteen (18) months before being detected (ACFE, 2010). Based on the victims of the fraud, the banking industry ranks as number 1 out of the 22 industry categories, accounting for 16.6% of the fraud cases reported globally. This percentage is way ahead of manufacturing industry, 10.7%, Government and Public Administration, 9.8% and retail industry 6.6% (ACFE, 2010).These statistics by ACFE, an association with the primary mission of educating anti fraud professionals and the general public on the seriousness and threat occupational fraud poses, not only shows the true global nature of fraud but also that Fraud is a global problem and that the Banking industry is the most susceptible, with the highest frequency than any other industry globally.

Occupational Fraud in Kenya

Fraud is unique to East Africa in that it ranks number 2 out of 25 risks when ranked in order of severity (PWC 2011) while the global ranking of fraud in commercial banks is number 15 out of 25 risks in order of perceived severity. Kenyan banking sector is the most affected by the vice compared to Uganda, Tanzania, Rwanda and Zambia (PWC, 2011, World Economic Forum, 2010). Government of Kenya statistics report an alarming 45% annual average increase in number of economic crimes (RoK, 2012). Kenya has the highest incidences of fraud in the world, based on a global ranking of 78 Countries surveyed (PwC, 2011. Fraud statistics are nearly double the global average of 34 per cent and significantly higher than the fraud incidence average in Africa of 57 per cent. The vice threatens a unique sector which occupies a unique position within the Kenyan economy because of the special role in financial intermediation (CBK, 2011). The banking sector maintain over 16 million deposits accounts with gross Kshs 1.5 trillion and over 2 million loan accounts worth over Khs 950 billion (CBK, 2011).

Statement of the Problem

Fraud is a global phenomenon and it is on the rise. Kenya is not isolated from the growing wave of frauds. Financial Services survey report that commercial banks in Kenya are more susceptible to fraud risk than banks in her neighbouring countries in Eastern Africa (PWC, 2011). Despite the significant 84% (36) of commercial banks in Kenya complying with risk management guidelines issued by Central bank of Kenya for over half a decade (2005- 2010), an alarming proportion 95% (41) commercial banks are concerned with fraud risk (CBK, 2011). The concern is principally due to the rising losses from fraud to their employees and customers. Rising rate of the vice can erode investor and consumer confidence and pose a great threat to potential investors in Kenya (PWC, 2011). This vice accounts for over 31% of the deterrent of global competitiveness in Kenya and on the other hand is accused of making Kenya among the bottom 40 counties in terms of competitiveness. A number of empirical studies have been conducted but specifically, there is very scanty literature addressing one fundamental issues," what is the influence of operational governance on occupational fraud risk?. The study aim was therefore to

find out the influence of operational governance on occupational fraud risk in commercial banks in Kenya.

LITERATURE REVIEW

Theoretical Literature Review

Association of Certified Fraud Examiners (ACFE,2012) view that occupational fraud means " the use of one's occupation for personal enrichment through the deliberate misuse of or misapplication of the employing organizations resources or assets".

Fraud Triangle Theory

The theory places emphasis on the causes of fraud in institutions. Cressey's (1971) original work in analyzing managers who embezzled from the organizations that employed them found that fraud include three elements; an unsharable problem, accessibility and control of assets or accounting records, and the ability to rationalize the actions they took. Cressey described a triangular relationship between opportunity, pressure, and rationalization (Wells, 2001; Wilson, 2004). Wilson (2004) describes opportunity as the ability to bypass or override controls meant to prevent manipulation, pressure, the motivation to commit the fraudulent act, and rationalization as referring to the moral and ethical argument used to justify the act. While Cressey's (1971) triangular model provides a basis for understanding management fraud, other factors are present in many situations in which managers engage in fraudulent activities. Ludwig and Longenecker (1993) described a phenomenon they termed the Bathsheba syndrome. Managers and leaders who are increasingly successful often acquire unrestrictive control over the organization and its resources. The Bathsheba syndrome is described as an example of the corrupting influences of power and the willful abuse of authority. Ludwig and Longenecker (1993) suggested that a negative consequence of success is the new ability of managers to rationalize actions they know are unethical. Several studies conducted after large organizational failures have shown higher than anticipated involvement of senior management in covering up or causing the causes of decline (COSO, 1987).The theory is important in that it offers a coherent and logical explanation on the cause of fraud. It further shows that factors that contribute to a success in Fraud and the

conditions that contribute to this success. The fraud triangle theory is limited in that it is concerned with the causes of fraud but does not demonstrate how the fraud can be assessed, detected and resolved. This study will undertake to unearth the deterrents of fraud risk management in commercial banks.

The Fraud Management Lifecycle Theory

According to Wesley (2004), fraud management lifecycle is a network lifecycle where each node in the network, each stage in the lifecycle, is an aggregated entity that is made up of interrelated, interdependent, and independent actions, functions, and operations. These activities can, but do not necessarily, occur in a sequential or linear flow. The fraud management lifecycle is made up of eight stages; deterrence, prevention, detection, mitigation, analysis, policy, investigation and prosecution. This theory suggests that the last stage, prosecution, is the culmination of all the successes and failures in the fraud management lifecycle. There are failures because the fraud was successful and successes because the fraud was detected, a suspect was identified, apprehended, and charges filed. The prosecution stage includes asset recovery, criminal restitution, and conviction with its attendant deterrent value (Wesley, 2004). The interrelationships among each of the stages or nodes in the fraud management network are the building blocks of the fraud management lifecycle theory. The theory is important is that it vividly shows the stages of fraud risk management in a sequential manner. The theory also shows what institutional processes should be put in place for fraud to be effectively managed. The theory places a lot of emphasis on how to curb fraud but does not explain drivers of fraud within the commercial banks. This theory assumes uniform cultural, legal, and technological applications in the management of fraud. This theory does not attempt to explain nor prescribe fraud management in an environment when such systems and processes fail. It is therefore a more reactive rather than a proactive theory.

Empirical Literature Review on Operational Governance Systems

Both theoretical and empirical evidence suggest that effective governance is associated with significantly reduced susceptibility of occupational fraud. An organization's board of directors plays an important role in the oversight and implementation of controls to mitigate the risk of

fraud and misconduct. The board through audit Committee together with management is responsible for setting the "tone at the top" and ensuring institutional support is established at the highest levels for ethical and responsible business practices. Research evidence suggest that organizations reporting occupational fraud are likely to have less independent boards, with fewer audit committees, their audit committees met less often and the audit committees were less independent (Beasley,1996; Carcello, Hermanson & Lapides, 2000). Other scholars, Mustafa and Youssef (2010) and Crutchley *et al.* (2007), found that high levels of growth, overextended outside directors characteristics increased the likelihood of a firm being involved in an accounting scandal, attributed to agency problems and moral hazard. From the discussion the following hypothesis are proposed.

$H0_1$**:** There is no relationship between operational governance and occupational fraud risk in commercial banks in Kenya.

Conceptual Framework

An independent variable (IV) or the exploratory variable is the presumed cause of the changes in the independent variable (DV). It is caused or influenced by the dependent variables. Dependent variable is the variable that the researcher wishes to explain and is also called the criterion or predictor variable (Tabachnik & Fidell,2014).The conceptual framework is based on (operational governance measures) as the exogenous variable and occupational fraud risk (amount of fraud, number of frauds and frequency of frauds) as the endogenous variable.

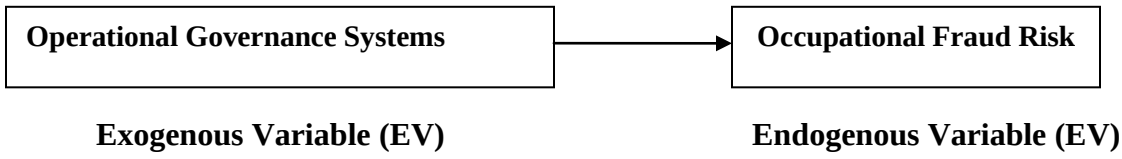

Figure 1: Conceptual Framework for the effect of operational governance systems on occupational fraud risk in commercial banks in Kenya.

Methodology of the Research Paper

This study adopted a positivism paradigm, an approach that advocates the application of the methods of the natural sciences to the study of social reality and beyond (Bryman, 2012).

Hargrove (2004), Saunders, Lewis & Thornhill (2007), points that positivism is premised on four (4) principles. First, only a phenomenon that is observable and measurable can be regarded as knowledge (phenomenalism) and secondly, the purpose of a theory is to generate hypothesis that can be tested and that will thereby allow explanations of laws to be assessed (deductivism). Thirdly, this approach view that knowledge is arrived at through the gathering of facts that provide the basis for laws (inductivism) and finally, that science must be (and presumably can) be conducted in a way that is value free (objectivism). The roots of positivism lie in empiricism, that is, all factual knowledge is based on positive information gained from observable experiences, and only analytic statements are allowed to be known as true through reason alone (Cooper & Schindler, 2011; Mertens, 2010; Koshy, 2010).This paradigm is characterized by a belief in theory before research (Cooper & Schindler, 2011; Koshy, 2010), statistical justification of conclusions from empirically testable hypothesis which is the core tenets of social science (McMillan & Schumacher, 2010; Koshy, 2010). The target population was all the 43 commercial banks operating in Kenya 30th June 2013. These banks are classified by the Central Bank of Kenya using Market Share Index (MSI) as; 6 large banks operating in 546 branches, 15 medium banks operating in 310 branches and 22 small banks with 199 branches. The study used multi - stage sampling process in the selection of a stratified sample of 30 commercial banks and 258 respondents in total; 68 "management", 54 "section heads" and 136 "clerks". This sampling method is strongly supported in some social research studies (Oladipo & Adenkule, 2009; Cooper & Schindler, 2011; Mertens, 2010; Koshy, 2010).). The sample size determination is presented in TABLE 1.

Table 1 Sample size determination per Bank category from Bank Head Office Staff

Bank category	Total	Management	Section heads	Clerks
Large Banks (4)	44	12	8	24
Medium Banks(10)	150	40	30	80
Small Banks (16)	64	16	16	32
Total	**258**	**68**	**54**	**136**

Self-administered questionnaire was used to collect primary data and a secondary data collection sheet was on the other hand used to obtain secondary data from Central bank of Kenya reports,

banking anti-fraud unit reports for the years 2008-2012. Approximately 80% of the commercial banks in Kenya have centralized risk management model (CBK, 2012) and each is head quartered in Nairobi (the capital city). This study focused on the head offices of each bank because branches will generally reflect technologies by the head office. Operational governance systems as a variable were measured using eleven items. The eleven items used to construct the questionnaire were Likert-type scale that ranged from 1 to 5 with the following equivalences, ``1": ``strongly disagree"; ``2": ``disagree"; ``3'': ``neutral"; ``4'': ``agree"; and ``5": ``strongly agree". Likert scale is useful in measuring attitudes and perception (Chimi & Russel, 2009; Chavandrakandan, Venkatapirabu, Sekar, Anandakumar, 2011). Questionnaires' reliability was assessed in a two stage process, before and after factorability analysis. Governance measures retained after factor analysis were re-assessed for their reliability to ensure that construct's validity and reliability were within acceptable thresholds. The results of reliability test are presented in TABLE 2. The results in this Table show that reliability of this construct improved from Cronbach alpha of 0.747 to 0.813.Bryman (2009), Cooper and Schindler (2011); Gay, Mills & Airasian (2009), Charandrakandan, Venkatapirabu, Sekar & Anandakumar (2011) suggest that Cronbach's coefficients of 0.8 should be employed as a rule of thumb to denote an acceptable level of internal reliability. These findings indicate that governance construct measures that were retained had high internal consistency. This level of construct measure reliability of 0.813 is well above threshold set by Bryman (2012) and Cooper & Schindler (2011); Zikmund , Babin, Carr & Griffin (2010) and Koshy (2010).

Table 2 Reliability of Drivers of Operational Governance

	Number of Items	Cronbach's alpha	Number of Items	Cronbach's alpha
Scale Item	**Before Factor Analysis**		**After Factor Analysis**	
Governance environment	11	0.747	8	0.813

The data collection instrument which was a semi structured questionnaire was subjected to thorough examination by two independent resource persons, from the Certified Fraud Examiners, Kenya Chapter to enhance content validity and final questionnaire was refined before subjecting it to the final data collection exercise. Construct validity tests using Confirmatory Factor

Analysis (CFA) was conducted. This measure was considered adequate for the study (Cooper & Schindler, 2011). Kaiser-Meyer-Olkin (KMO) test of sampling adequacy was used to assess the item constructs suitability for factor analysis. The results of sampling adequacy test are presented in TABLE 3.The results show that KMO test had a score of 0.768, which was well above 0.50 levels, indicating an acceptable degrees of sampling adequacy for the variable (Malhotra, 2004; Tabachnick & Fidell, 2014; Brett, Ted & Andrys, 2010; Costello and Osborne,2005). The results also showed that the Bartlett's test of Sphericity had a Chi-Square value of 1975.349 with a significant value of 0.000<0.001, again supporting use of Confirmatory Factor Analysis as a data reduction technique and a measure of construct validity for management control systems constructs.

Table 3 Test of Sampling Adequacy- Management Control systems

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.768
Bartlett's Test of Sphericity	Approx. Chi-Square	1975.349
	Degrees of freedom	28
	Significance	.000

Discussions and Results

Response Rate

Response rate was approximately 92% with 78%, 95% and 100% among the small banks, medium size banks and large banks respectively. Overall the response rate in this study was higher compared to other similar previous studies. For example, Voon and Puah (2009) reported a response rate of 70% in their study on the determinants of corporate crime in Nigeria. The high response rate was attributed to anonymity among respondents. Auta (2010) used anonymity in his study on development of e-banking in Nigeria. Response distribution of the 236 respondents in terms of age was categorized between the age of 21 – 30 (28%), 31- 40 years (40%), 41-50 years (32%), over 50 years (2%). This is a pointer that the respondents had reasonably sufficient knowledge on the subject of the study within the banking sector in Kenya. Among the sampled banks, 11% were from local public commercial banks, 75% from locally private banks and 14% from foreign commercial banks. The findings imply that the sample used in this study included all categories of commercial banks in Kenya in terms of ownership structure and therefore representative of all banks in Kenya. A significant 206 (87%) of the respondents had banking sector experience between 1 and 10 years and therefore likely to have had reasonable exposure to the subject of this study; occupational frauds in commercial banks.

Rivers of Operational Governance Systems

Governance practices of occupational fraud were measured using eleven measures. The results of factor analysis are presented in Table 4. These results show that out of the eleven (11) items in the questionnaire, most of them (7) loaded well onto the component while three (3) did not. The three (3) items dropped due to low factor loading were; bank benchmarks fraud risk management policies against best practices in the banking sector, (0.065), the bank's board of directors play an important role in the oversight and implementation of controls to mitigate the fraud (0.021)

and internal audit is an important part of corporate governance structure within the bank to reduce occupational fraud loss (0.006). The items retained are indicated in parenthesis in Table 4. The rest of the analysis used the 8 items in parenthesis as the measure for this variable. The verdict of Factor analysis is that the items in parenthesis were retained as drivers of governance while the rest were dropped due to low factor loadings (Bhattacharyya, 2011; Costello and Osborne, 2005).

Table 4: Results of Factor Analysis-Governance Systems

Component Matrix[a]	**Component 1**
Governance 8; The Bank has a separate fraud and corruption policy and whistle blowing policy.	0.933
Governance 1; Performance goals are realistic.	0.922
Governance3; Fraud prevention goals have been incorporated into the performance measure against which are used to determine related compensation.	0.895
Governance 7; The frequency of audit committee meetings have an effect of reducing occupation fraud loss in the bank.	0.841
Governance 4; The Bank has established, implemented and tested a process for oversight of fraud risks by the board of directors.	0.808
Governance 9; There is a transparent and clear structure of responsibility, which differentiates between what, the board, managers and employees can do.	0.788
Component Matrix[a]	**Component 1**
Governance 2; Fraud prevention goals have been incorporated into the performance measure against which managers are evaluated.	-0.622
Governance 5; High levels of growth and over extended outside directors characteristics increased the likelihood of a firm being involved in occupational fraud.	0.477
Governance 10; The Bank benchmarks fraud risk management policies against best practices in the Banking sector.	0.065
Governance 6; The Banks Board of Directors play an important role in the oversight and implementation of controls to mitigate the fraud.	0.021
Governance11; Internal audit is an important part of corporate governance structure within the Bank to reduce occupational fraud loss.	-0.006

Extraction Method: Principal Component Analysis.

a. 1 Components extracted.

Test of Regression Assumptions

4.3.1 Test of independence

Durbin –Watson *d* statistic test of univariate independence for operational governance systems resulted a coefficient of *d=2.099*, well within the range of 1.5 and 2.5 for independent observations (Tabachnick & Fidell, 2014; Garson, 2012; Porter & Gujarat, 2009). Effiok, Ojong and Usang (2012) used Durbin Watson's *d* Statistic to test autocorrelation of predictor variables in their study which examined the implication of occupational fraud and financial abuse on the performance of Nigerian companies (Porter & Gujarat, 2009).

4.3.2 The Gaussian Test

Before determining the statistical model to use in order to establish the influence of operational governance on occupational fraud risk, normality of the response variable was assessed. The numerical Gaussian test results are presented in TABLE 5. The table shows that normality test statistics computed for occupational fraud risk using both Kolmogorov-Smirnov (K-S) and Shapiro-Wilk tests are insignificant with p-value of .200* and .423 respectively ,both greater than 0.05 in both measures, an indication of held normality assumption based on both numerical methods (Shapiro & Wilk 1965; Park, 2008; Shevlin & Miles, 2010; Porter & Gujarat, 2009).

Table 5 Normality Test for Study Variables

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**Df**	**Sig.**	**Statistic**	**Df**	**Sig.**
Occupational Fraud Risk	0.088	30	.200*	0.965	30	0.423

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Assessment of homoscedasticity of the bivariate model between governance and occupational fraud risk

The bivariate linear regression model used in testing the hypothesis and presented in Table 4.39 was evaluated for absence of serial correlation on the predictor. Homoscedasticity was assessed

using normal p-p plot of standardized residuals. The P-P plot for the model residuals, showing the cumulative probability of the model residuals between governance and occupational fraud risk is presented in Figure 4.18. The probabilities plot along the cumulative probability line from 0 to 1 at an approximate angle of 45 degrees. This shows that the residuals of the models are normally distributed and that the model is appropriate in the regression (Shevlin & Miles, 2010; Porter & Gujarat, 2009).

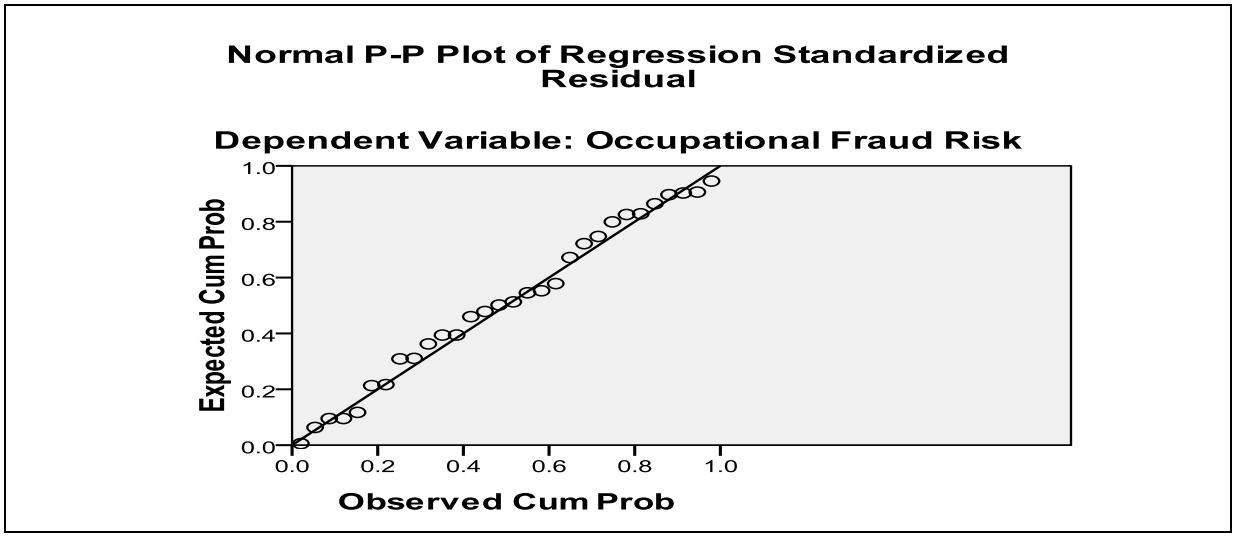

Figure 2: Normal P-P Plot for Standardized Residuals of Operational Governance and occupational fraud risk

Statistical Model

The regression assumptions of normality of regressand, independence of predictor variable, and homoscedasticity, bivariate linear model was deemed as adequate to establish the influence of operational governance and occupational fraud in commercial banks in Kenya. The weighted measures of governance were regressed on the weighted measures of occupational fraud risk. Linear relationship between determinants of fraud and fraud risk is expected based on the results of above tests of assumptions (Shevlin & Miles, 2010). The mathematical relationship between the variables was hypothesized as **"OFR= α + β_1"** where OFR is occupational fraud risk (regressand) and β_1 is operational governance (regressor) (Montgomery, Peck, & Vining, 2001; Garson, 2012; Argyrous, 2011).

Linear Regression Model Fitness

The model fitness is presented in **Table 6**. The linear regression analysis shows that there is a relationship, R= .162 and R^2 = .026 which means that approximately 16.2% of the corresponding variations in occupational fraud risk are explained by a unit change in operational governance measure.

Table 6 Model Fitness of Operational Governance and Occupational Fraud Risk

Model	R	R Square	Std. Error of the Estimate	Durbin-Watson
1	.162[a]	.026	.2600290	2.099

a. Predictors: (Constant), Operational Governance Systems

b. Dependent Variable: Occupational Fraud Risk

ANOVA of Operational Governance and Occupational Fraud Risk

TABLE 7 shows significance of the overall model predictor in the hypothesized relationship among variables. Regression analysis in TABLE 7 shows that the linear relationship between occupational fraud risk and Operational Governance has an F value F=.752 which is not statistically significant with p value p=.393> p=.05 meaning that the overall model is not significant in the predicting occupational fraud risk in commercial banks in Kenya. We therefore fail to reject the null hypothesis and confirm that indeed, there is a not statistically significant effect of operational governance systems on occupational fraud risk in commercial banks in Kenya.

Table 7 ANOVA Operational Governance and Occupational Fraud Risk

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.051	1	0.051	.752	.393[a]
	Residual	1.893	28	0.068		
	Total	1.944	29			

a. Predictors: (Constant), Operational Governance Systems

b. Dependent Variable: Occupational Fraud Risk

4.4.3 Assessment of Regression model coefficients

In order to assess each of the model statistics, the model coefficients were generated and are presented in TABLE 8.TABLE 8 shows; test on the beta coefficient of the resulting model, the constant α= .875 is significant with p

value p= 0.002< p=0.05. The coefficient β = 0.200, has a p value, p= .393 which is greater than p= 0.05. This means it is insignificant in the regression model.

Table 8: Regression Coefficients of Operational governance and Occupational Fraud Risk

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	**Std. Error**	**Beta**	**T**	**Sig.**
1	(Constant)	0.875	.262		3.342	.002
	Operational Governance	.200	.231	.162	.867	.393

a. Dependent Variable: Occupational Fraud Risk

The findings of this study show that there is a positive relationship between occupational fraud and governance in commercial banks in Kenya. Additionally, results above indicate that the positive relationship exhibited between operational governance and occupational fraud risk is not statistically significant at 95% level of confidence among the commercial banks in Kenya. These findings differ with prior findings by Beasley, Carcello, Hermanson and Lapindes (2000) who found that organization practicing different mechanisms of governance have similarly different levels of fraud. Crutchley, 2007, Jensen and Marshall (2007) also found that certain governance characteristics increased the likelihood of an organisation suffering scandals. These findings indicate very low variability in the influence of governance on occupational fraud in commercial banks in Kenya and that risk exposure from governance practices is more of a constant. However, top officials and regulators of commercial banks in Kenya need to observe improvements in a number of areas. First, it is important that fraud prevention goals are incorporated into the performance measures against which evaluation will be done. This would ensure that fraud deterrence is an organizational wide responsibility of every staff member and not entirely left to the staff in risk management. Organization wide occupational fraud responsibility is associated with higher effectiveness compared with silo based approaches. (ACFE, 2012).Secondly, commercial banks have reported significant growth in past several years. Bank officials should keep in sight the fact that institutions characterized by high growth levels have higher susceptibility to occupational fraud than those that are not.

To strengthen tone at the top as regards occupational fraud, it may be crucial to ensure that whistle blowing policy is safeguarded and implemented together with very clear fraud policy and

corruption policy. These governance tools have been reported to significantly reduce occupational frauds globally (ACFE, 2010).

Conclusion and Recommendations

This study found that there is a positive but not statistically significant relationship between governance and occupational fraud risk in commercial banks in Kenya, hence the study fail to reject the study null hypothesis ($H0_1$); there is no relationship between governance and occupational fraud risk in commercial banks in Kenya. These findings corroborate findings by Beasley, Carcello, Hermason and Lapindes (2000) who stated that organization practicing different mechanisms of governance will have different levels of fraud susceptibility. ACFE (2010) found that governance influence occupational fraud risk. The findings of this study point however that governance does not influence occupational frauds in commercial banks Kenya.Governance arm of the bank is entrusted to ensure that staff have achievable job targets and are adequately compensated to reduce the "pressure" on staff. In instances where this balance is not achieved to the satisfaction of staff, the affected staff can leave one bank at will and possibly get a job with another one. These partly ensure that pressure for occupational frauds is reduced in a bank. This can however spread the habitual occupational fraudster within the commercial banks. In addition, each bank should be tasked to develop and report tangible measure taken for each detected case of occupational fraud, to deter spread of the vice. In the context of fraud management life cycle theory, fraud policies should be documented and antifraud trainings conducted regularly on all new and existing staffs.

Limitations and Future Work

Likert scaled measures of perception of the bank staff on the influence of operational governance systems on occupational fraud in commercial banks. Further, the study is limited to commercial banks in Kenya and excludes other financial market players like forex bureaus, mortgage banks, micro finance institutions, savings and credit cooperatives (SACCO's) and pension funds. A more informative study could be conducted using a multi-sector approach study in order to generalize the fraud situation in the Kenyan context. Further, other measures of governance could be used to assess their influence of occupational fraud risk in commercial banks.

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