

**THE IMPACT OF FORENSIC AUDIT SERVICES ON FRAUD
DETECTION AMONG COMMERCIAL BANKS IN KENYA**

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DECLARATION

I declare that this is our original work and has not been presented for any academic award in any other University.

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DEDICATION

This project is dedicated to my parents for their continued support through our education journey.

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LIST OF ABBREVIATIONS

ACFE	Association of Certified Fraud Examiners
AML	Anti-Money Laundering
BFID	Banking Fraud Investigation Unit
BOD	Board of Directors
CBK	Central Bank of Kenya
CEO	Chief Executive officer
FRC	Forensic Reporting Centre
IC	Internal Controls
ICPAK	Institute of Certified Public accountants of Kenya
ICS	Internal Control System
IFA	Institute of Forensic Auditors
ML	Money Laundering
ROA	Return on Assets
ROE	Return on Equity

ABSTRACT

This study set out to investigate the effects of forensic audit services on fraud detection in commercial banks in Kenya. The objective of this study was to examine the effect of the forensic audit services offered by commercial banks in Kenya; Suspicious incidences and recurrent costs related to Anti money laundering services. The population of this study was all licensed commercial banks in Kenya as at December 2016. The commercial banks have been entrusted by the Central Bank of Kenya in identification and reporting of suspicious transactions on a regular basis. This study used secondary data from reports submitted to FRC and CBK, as well as data from commercial banks in Kenya. Data was collected for a period of five years spanning 2012 to 2016. More data will be collected from AML compliance managers' management reports on ML. The data collected was coded and analyzed using both descriptive statistics and inferential statistics using Statistical Package for social Sciences (SPSS Version 23.0). Analyzed data was presented in the form of figures and tables for easy understanding. The study used questionnaires to collect data from registered commercial banks in Kenya. The results showed that fraud detection has an inverse relationship with investigation services and litigation support. This means that there exists a negative correlation between the dependent variable (fraud detection represented by frequency of occurrence of red flags) and the independent variables (investigation services and litigation support). A unit increase in forensic audit investigation services will discover and reduce the occurrence of fraud by 0.795 and a unit increase in litigation services would reduce fraud by 0.650, indicative of fraud detection. The study found out that forensic audit services have their highest application in the control of financial statement fraud, detection of scandals in the bank, ensuring regulatory compliance, internal controls monitoring and evaluation, and enhancing financial reporting quality. The study also showed that the prevalent fraud in commercial banks is payroll fraud with a mean of 3.8571 and the theft of cash, physical assets, and procurement fraud both with a mean of 3.5714.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The banking sector in Kenya has endured some difficulties in the past few years as evidenced by the recent scandals within the industry. A recent case is the Chase Bank scandal which hit many Kenyans unaware when an anonymous letter was sent to its foreign investors indicating that one of its directors had lent himself sh7.9 billion, without collateral and beyond the regulatory limits. Akelola (2015) points out that the widespread fraud in the banking sector is a major problem and it is becoming a concern for many Kenyans because of the ease with which individuals can commit it and the lack of sentencing of the involved persons by the courts.

Sang (2014) points out that commercial banks lost over \$1.5 billion in 2012 through fraud and for the final quarter of 2010, they reported losses of Ksh. 761 million through fraud. The Banking Fraud Investigations Unit (BFID) points out that losses resulting from fraud amounted to Ksh. 850 million among financial institutions between January and March 2014. According to Doody, Samociuk, & Iyer (2010), every financial institution is a candidate for fraud, and a big number of commercial banks lose between 5% and 7% of their revenues to fraud. Information on fraud especially in the Kenyan

banking sector is very limited because most of the banks are hesitant to report any fraudulent cases.

In Kenya, the continued fraud incidents among banks has been the result of undetected fraudulent activities which lead to the increasing mismanagement of funds, which is then detected so late that it's irreparable. Lack of disclosure of insider borrowing and mismanagement of funds for long periods will, over time, lead to falsified account books and later on the inability of the banks to pay their short-term and long-term liabilities. According to the BFID, the increasing rates of fraud in the banking sector are also attributable to the unwillingness of banks to effectively address fraud, inadequate laws, particularly concerning fraud, making courts fail to convict the involved individuals, and the lack of independence of the auditing role (Akelola, 2015). The increased incidence of fraud in commercial banks has posed a threat to traditional auditing as a branch of the accounting profession resulting in the question as to whether compulsory auditing is playing the role of early fraud detection and at the end, further prevention of more losses.

The Central the Bank had placed some regulations to stop this from further occurring, but despite this, another scandal happened under the regulator's nose. The National Bank scandal where about Ksh. 4 Billion were misappropriated and the fraud was only detected after a thorough forensic audit was carried out. According to Gitau & Gitahi (2016), the long history of bank fraud is resulting in a situation where stakeholders are starting to lose their trust in the industry. Fraud leads to a loss of credibility and a crisis of

confidence among the public, and it raises questions on the going concern of the commercial banks in Kenya.

1.1.1. Forensic Audit Services

The word forensic refers to the application of knowledge to legal problems such as crime (Gray, 2008). Forensic auditing as a service, therefore, puts together auditing, accounting, investigative, and legal skills to find out whether accounting transactions concur with the regulatory requirements. All this is done to ascertain whether there has been the occurrence of any fraud. Forensic auditing involves gathering, verifying, processing, analyzing, and reporting on data with the aim of obtaining facts and evidence (Mohdi & Mazni, 2008) in a predetermined context in the area of financial irregularities. The Institute of Forensic Auditors (IFA) defines a forensic audit as an activity that involves the collection, verification, analysis, and reporting of data with the aim of collecting evidence to use in a court of law. The Institute of Certified Public Accountants of Kenya (ICPAK) points out that the field of forensic auditing focuses on gaining an understanding of a fraudster's mind in efforts to establish reasons for committing fraud as well as detecting them. Vukadinoc, Knezevic, & Mizdrakovic (2015) state that the focus of forensic audits is the investigation and detection of fraud and it involves two primary activities: investigating the fraud and providing litigation support services in the court of law.

Forensic audit evidence gathered could be presented in a court of law in the case of litigation and could also be used to correct a situation that could lead to fraud. Forensic audit service is useful as both a reactive and a proactive measure in curbing fraud in an organization. Proactive forensic auditing seeks out mistakes and deviant financial transactions before they graduate into fraud. According to Najnike, Dube, & Mashanyanye (2009), the proactive approach searches for the indicators of fraud or red flags and uses the philosophy that “catch fraud before it catches you”. It may revolve around a statutory audit, diagnostic tools, and regulatory compliance. A statutory audit is done by an independent professional on the financial statements of a company that has been compiled by the management with the aim of expressing an opinion pertaining the position, current situation and financial performance by the accounting principles. Regulatory compliance is testing an entity’s compliance with the various laws and regulations applicable to it and preparing a written report. Diagnostic tools have their application in determining the ability of the various components and procedures put in place to be functional and enable investigation of allegations.

Reactive forensic auditing investigates any suspicion of fraud so as to prove or disapprove the accusations and if the suspicion is confirmed the person involved are identified, the findings are supported by concrete evidence, and a presentation is made in an acceptable form in any disciplinary or criminal proceedings. Reactive forensic auditing involves: working relations with the agencies in charge of investigating and prosecuting, authorization and control of audit investigation, documenting the relevant

information and protecting all records pertaining to the case, evaluating the evidence to assess the sustainability of the case, the relevant legal advice where necessary, reporting the overall findings in a format that meets legal requirements.

According to Onodi, Okafor, & Onyali (2015), the need for forensic investigations arises from the fact that the internal and external audit functions of organizations have been failing in the detection of corporate fraud. For instance, the traditional audit committees do not have the ability to uncover facts and hidden aspects of fraud, the rotation of the statutory auditors occur through collusion and manipulation, and most auditors do not undergo a thorough scrutiny of their qualifications. Therefore, forensic auditing skills are critical in uncovering and establishing the occurrence of financial fraud and crimes (Alao, 2016).

1.1.2 Forensic Audit Services and Fraud Detection

Financial fraud refers to committing illicit activities with the purpose of acquiring riches either as an individual or as a group, and it violates the existing legislation or accounting policies governing the economic activities and administration of the organization (Yio and Cheng, 2004). The actual fraudulent activity is hard to observe. Fraud only shows up through various signs in an organization these signs may also not indicate the occurrence of fraud as it may be a human error. Kenyon & Tilton (2015) categorizes fraud into four: asset misappropriation, fraudulent schemes in financial reporting, obtaining revenues and assets through fraud, and in expenditures and liabilities. Some obvious manifestations of

fraud are a delay in submission of returns, late preparation or failure to prepare bank reconciliation statements, failure to segregate duties, the lifestyle of promoters of an organization or its directors and some key employees, and repeated internal control lapses and inability to adhere to norms of corporate governance. Albert (2005) states that at times fraudsters hide fraud in human made mistakes making it hard for forensic auditors to detect them.

The success of fraud detection is in the appropriate identification of red flags by the forensic auditor (DiNapoli, 2016). A red flag refers to an anomaly in business activities and human behavior. However, their presence is not evidence that an illegal act has happened, but they simply indicate that the potential for fraud is high to warrant an investigation. DiNapoli (2016) gives examples of red flags for fraud, the most common being the behavior of employees and management. Also, red flags are observed in various organizational activities such as payroll, procurement, and in accounts receivable management. The Association of Certified Fraud Examiners (ACFE) points out that 64% of fraud perpetrators exhibit behavioral red flags, the most common being unexplained wealth and living beyond means. The expectation is that the frequency of occurrence of these red flags will reduce when forensic audit services are applied in an organization.

Fraud detection is not the role of independent auditors, but it is up to the management to develop strong internal controls that will aid in the detection of fraud. However, with the growth of technology and size of organizations, fraud has also become too complex to be

effectively addressed by management. White collar crime has become rampant in recent times, and the perpetrators do not face any legal action because of a lack of evidence (Ogutu & Ngahu, 2016). Fraud is becoming a concern in the commercial banking sector in Kenya because the statutory audits have failed to uncover or prevent frauds. As a result, the four banks (Chase, Dubai, Imperial, National Bank) and other organizations such as Kenya Airways have resorted to forensic audit services to uncover fraud and mismanagement (Ogutu & Ngahu, 2016). Popoola, Che-Ahmad, & Samsudin (2014) point out that the adoption of forensic auditing skills in every sector of the economy significantly enhances the detection of fraud.

1.1.3 The Banking Sector in Kenya

In Kenya, there are 43 commercial banks, 1 mortgage finance company 12 microfinance banks, eight representative offices of foreign banks, 86 foreign exchange bureaus, 14 money remittance providers, and three credit reference agencies.(Cytonn Q1'2016 Banking Sector Report). The Central Bank of Kenya (CBK) is charged with the supervision of the banking industry. Its role is to review banking laws and policies, issue licenses to financial service providers and banking agencies, and exercise oversight authority over the industry.

The Kenyan Banking sector has been through two main waves of crisis and many of them collapsed. The government in 1982 relaxed rules on the issuance of licenses and set the capital requirement at ksh. 5 million. The move encouraged many entrants into the

banking industry and by the 1980's, there were 24 banks. However, insufficient supervision by the CBK, lax banking regulations, and political interference and connections led to massive bank failures. The number of failed banks as at 1998 was 37 (Akelola, 2012) and the some of the reasons for the collapses were mismanagement in the disbursement of loans, weak legal and regulatory controls, adverse selection of customers resulting in non-performing loans. Therefore, unsound banking practices, fraudulent practices by the managers, employees, and even the Board of Directors (BOD) have been a major problem in the Kenyan Banking sector.

With the growth of commercial banks, the number of shareholders and separate ownership from the management has been on the increase which increases the risk of management committing fraud and malpractices. Therefore, this has necessitated the regular use of forensic auditing services on both the non-financial and the financial report. In 2014 the Kenyan commercial banks lost \$9.4 million to fraud in just six months. The BFID report cited credit card fraud, forgery of documents, and online fraud as the modes through which the banks lost money. This study focuses only on the commercial banks in the Kenyan economy with concern being how forensic auditing as a tool for detection can be used to better the services offered the Kenya commercial banks.

1.2 Research Problem

The role of the CBK in bank supervision is to develop and review laws and guidelines that govern the banking sector and exercise oversight over all players in the banking sector. In the recent past, there has been a rampant increase in the closure of bank due to fraudulent activities like fraudulent financial reporting, forgery, corruption, and embezzlement of funds by the management and other bank officials. The increased fraud is shown by Imperial Bank, Chase Bank, and Imperial Bank put under receivership by the CBK and the involvement of bank managers in National Bank of Kenya scandal. Since the CBK is only tasked with acting as an oversight body for the banking sector, bank managers and employees have found a loophole to conduct fraudulent activities and later cover up their tracks through internal auditors or even going as far as colluding with external auditors.

Banks are expected to carry out their responsibilities with sincerity of purpose devoid of any fraudulent activities (Gitau & Njenga, 2016). However, the sector has been on the spotlight for the many allegations of fraud and some have been put under receivership even to the extent of closure. The public has been concerned why these frauds have not identified and prevented and this points out the failure of the management in setting up strong internal control systems as well as laxity in the regulatory bodies. According to Gitau & Njenga (2013), the BFID is not proactive in the fight against bank fraud and few individuals have been prosecuted over fraud charges.

Statutory audit in banks appears to have failed by showing little concern and reflective attitudes towards fraud-fighting in Kenya thereby giving the inappropriate public assurance to handling corruption and fraud. According to Mahinda (2012), the continued frauds in the Kenyan banking sector erodes investors and consumer's confidence as well as being a threat to any potential investors. External auditors in Kenya have been heavily criticized for the fraud cases, and the public seems to have lost faith in external auditing as a tool to detect fraud in Kenyan companies (Omwong'oa, Mamati, & Ongochi, 2010). There then seems to be a gap that is taken advantage of by the managers, directors, and employees of Kenyan banks. Fraud is perpetrated under the supervision of the management and the internal auditors of banks. According to Peter, Aliyu-Dadi, Ebong-Inyang, & Gabriel (2014), there is a need to come up with different means of tackling fraud in the commercial banking industry.

There are previous local studies carried out by scholars on fraud and the Kenyan commercial Banking sector. Wanemba (2010) carried out a study that sought to establish the challenges of fraud faced by commercial banks in Kenya and to identify the strategies that the banks use to combat fraud. Wanyama (2012) in his study that sought to determine the effectiveness of fraud response strategies adopted by Cooperative Bank of Kenya found out that bank applies both proactive strategies such as data analysis and continuous auditing techniques to deter fraud. Akelola (2012) conducted a study whose aim was to establish the characteristics of fraud and the fraud management approach in the Kenyan banking sector. Waigumo (2012) also carried out a study that sought to investigate the

effect of fraud risk management practices on fraud in Commercial Banks in Kenya and states that fraud risks pose a great threat to the Kenyan Commercial banking sector. None of these studies pay attention to the role of forensic audit services on fraud detection. This is the basis of this study and it seeks to fill the existing knowledge gap by answering the question: Are forensic audit services useful in the detection of fraud in the Kenyan Commercial Bank Sector?

1.3 Research Objective

To ascertain the effect of forensic audit services on Fraud detection in Kenya Commercial Banks

1.4 Value of the Study

The findings of this study are likely to impact positively on the following areas. The CBK as the regulator will have to approve the role of forensic auditing and the use of forensic audit information in the adjudication of suspected criminals in court cases. These cases are usually taken for granted, as they drag in court taking years before anybody is made responsible for the fraudulent acts to the extent that judges are offered bribes to do away with the cases. Foreign and domestic investors will be comfortable to increase the number of investments and even sustain the investments they already have in Kenyan banks. With the assurance that fraudulent activities will be detected earlier, and the ones responsible held accountable. Investors will learn to trust the system, knowing that both the government and regulators are taking care of their investments as if it was their own.

The study will also help improve or contribute to the already existing body of knowledge, assist other researchers in understanding the effect of forensic auditing on fraud detection. The study will also help the management of commercial banks to identify the areas that are most vulnerable to fraud and therefore, the management can gain the knowledge on how to detect fraud and come up with measures that reduce the chances of fraud occurring.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the various theories and studies published relating to the effect of forensic auditing services on fraud detection. The Literature review guides the research and helps set a suitable methodology for the study. In the Kenyan commercial bank sector, it is evident that fraudulent activities in the banks have a negative impact on the banks including collapsing of some banks like Dubai bank. Due to this, there should be a mechanism to enhance the detection of fraudulent activities and reduce their occurrence through the application of forensic audit services.

2.2 Theoretical review

2.2.1 Fraud triangle theory

The fraud triangle theory is founded upon the hypothesis by Cressy (1973) which stated that persons who are trusted could violate the trust once they believe they have a non-sharable problem that can be solved by violating the position of financial trust. Therefore, these persons can apply their position to change their conceptions and those of others on their action. According to Cressy (1973), certain factors must be available for a fraud to occur and they create an enhancing environment for the occurrence of the fraud activity.

The factors stated in this theory are; pressure, opportunity, and rationalization which make up the triangle and hence the name fraud triangle theory.

Pressure is the financial or emotional force pushing one towards committing fraud. Persons have different reasons to commit fraud, and the organization can do little or nothing to control this factor. A person, for example, may be pushed to commit fraud by the lack of enough finances to support his family, influence from peers who are also committing fraud or poor organizational culture which will make one feel the odd one out if he/she does not commit the fraud. The organization can try and scrutinize individual's behavior during recruitment and maintain close relationships between management and employees so as to keep tab of any events in the worker's lives that may pressure them. However, no matter how far the organization tries to control this factor it cannot be entirely controlled, and this has led to criticism of this theory.

Opportunity is the chance and ability of an individual to commit fraud. People commit fraud where they find the opportunity to commit fraud and get away with it undetected. Opportunities arise where the organization has a weak internal control which cannot detect fraud like lack of sound policies against fraud, lack of procedures to detect fraud, lack of punishment to the caught fraudsters and inadequate management oversight over the employees. This is the only factor that the organization can fully control. Therefore, organization managers should be keen to eliminate any opportunities where the employees may commit fraud. Control of this factor may be through the segregation of

duties to avoid full control by one individual, internal auditing, and strong internal controls to minimize the loopholes of fraud. According to Cressy (1973), the threat of possible detection is the most influential factor in fraud prevention in that it eliminates the fraudster perceived opportunity.

The third factor is the rationalization, and it is a fundamental component of many frauds and shows how the fraudster reconciles his/her behavior with the common notion of decency and trust in his conscience or the one acceptable in the society. Morally upright individuals will have difficulty in this part as it will not be easy to convince themselves that their actions are right, and here morals may play a major role in preventing fraud. Morally corrupted individuals will have no problem with rationalization as they will easily convince themselves with reasons like one is simply rewarding self for the favor did for the company or an individual is making up for the bonus that I was not paid or underpaid.

This theory has received both support and criticism from scholars. Scholars like Bell and Carcelle (2000) and Hogan, Rezaee, Riley, & Velury (2008) term the fraud triangle theory as an important theory in detecting, controlling and preventing fraud. LaSalle (2007) also showed that its use could lead to increased risk assessment and hence detection. Although the theory has received the support of the regulators and some scholars, it has been highly criticized by other researchers and termed it inadequate to detect and control fraud as two of its three factors, pressure, and rationalization, cannot

be controlled. It has been termed as an inadequate tool for deterring, preventing, investigating and detecting frauds (Albrecht, Howe, & Romney 1984; Wolfe & Hermanson 2004)

2.2.2 Fraud Diamond Theory

The fraud diamond theory extends the fraud triangle, and it uses four rather than three elements: incentive, opportunity, rationalization, and capability. Opportunity refers to a weakness that an individual can exploit making fraud possible while rationalization is where a person has the conviction that committing fraud is worth the risk. Incentive means that an individual has the drive and wants to commit the fraud while capability means that an individual has the necessary abilities, traits, and skills to comfortably pull off a fraud.

Wolfe & Hermanson (2004) address the capability element, and they point out that individuals with capability have unique characteristics. First, they have a position within the organization which provides them with an opportunity to commit fraud, for instance, the chief financial officer. Secondly, the person is smart and is aware of the weaknesses in the internal control and this knowledge and senior position make it easy to carry out a fraudulent act. Thirdly, such an individual is confident that he will not be discovered and even if detected, it is possible for him to shift the blame and walk out of trouble. The final characteristic of the individual with capability is that it is possible for him to coerce others to conceal the fraud, and through threats and bullying tactics, the juniors are

intimidated to conceal any fraudulent activities. A lot of frauds are perpetrated by the right individuals with the right capabilities and the element of capability must be considered of great significance in explaining fraud (Kassem & Higson, 2012).

2.2.3. Fraud scales theory

This theory was developed from fraud triangle theory by Albretch (1984). It emphasizes on personal integrity rather than rationalization, and its main use is in financial fraud where pressure is more observable. This theory introduced ranking to the fraud triangle theory factors, and this was developed as an upgrade of fraud triangle theory in which both the pressure and rationalization could not be controlled by the organization. A fraud is likely to occur where the situational pressure and opportunity for fraud are high, and personal integrity is low and unlikely to happen where personal integrity is high, and opportunity and situational pressure are low. The theory terms situational pressure as the immediate problem of an individual's environment usually personal debts or financial issues. The opportunity for fraud is brought by incomplete or lack of strong internal controls. Personal integrity referred to individual's code of conduct. Unlike in fraud triangle theory, here the organization would monitor and assess the personal integrity of its employees. According to Albretch (1984), organizations can determine an individuals' commitment to ethical decision making and use it to evaluate the individual's personal integrity. For instance, by giving an ethical test to people during recruitment you can assess the level of integrity from the answers they give and thus evaluate the risk of the person committing fraud.

Albrecht, Howe, & Romney (1984) argued that unlike rationalization, personal integrity could be assessed through the individual decision and decision-making process. Those with little personal integrity were at a higher risk of committing fraud as they will be comfortable with fraudulent activities and their morals will lead them to such decisions (Dorminey, Fleming, Kranacher, & Riley, 2010; Rae & Subramanian, 2008). Appelbaum, Cottin, Pare, & Shapiro (2006) also stated that those with a low level of ethical development are likely to commit fraud than those with higher levels of moral development. However, it was also noted that those with elevated levels of moral development were not exempted from committing fraud, but they do engage under different conditions with those of the lower moral levels. The organization should assess these conditions and try to minimize them to exempt the ethical employees from committing frauds.

2.2.4. White collar crime theory

White collar crime theory is attributed to Ross (1907) who developed the concept of white collar offenses. Ross (1907) came up with the term *crimanoloid* to refer to the person who exploits the weaknesses in society but does not fit the description of the ordinary offender. This theory was developed further by Sutherland (1949) as a development of traditional theories which preserved crime for the poor people in the society. White-collar crime is motivated financially and of no violence involving corporate or government professionals. According to Sutherland (1949), white-collar crime refers to the crime committed by a person who holds a respectable and a high status

in a particular occupation. These crimes are intentional as well as being carefully and intentionally organized. White-collar crime offenders do not consider themselves as law breakers and they do not fit the description of the ordinary criminal. Poverty is not a driver in these crimes as most white collar officers are rarely poor. White collar crimes include fraud, bribery, cybercrime, embezzlement or money laundering.

Sutherland (1949) tried to connect the crime of upper white collar class with economic and business activities. The professional status in a society creates an atmosphere of both admiration and intimidation making members of the community admire the professionals and also avoid prosecuting them as they are intimidated by the professional status. This leads to less or no punishment of the white collar criminals. White collar crime is complicated and less obvious than violent crime as the consequences of the crime may be shared by many people or over an extended period by the victims (Sutherland 1949). He also asserted that crime is learned from the cross interaction of individuals who are engaging in fraudulent activities. Some people may define fraudulent activities as favorable and may pass it to those who describe such behavior as unfavorable. As the impact of the white collar crimes has been increasingly felt by larger groups in socioeconomic strata, people are becoming less willing to view these crimes as victimless and harmless. The definition of white collar crimes has been changed and sections in the legal units created to deal with this crimes.

Scholars have criticized the white collar crime theory. For example, Sutherland is said to have overemphasized on individualistic social psychological factors and ignored social structural factors like business cycles, profit rates, and capitalism as viewed by Friedrichs (2002). He is also criticized for not making distinctions among white collar crimes and ignoring the role of corporations in legislative and regulatory processes. The assumption of the theory that professionals would face lenient sentences of law has also changed in the recent past.

2.2.5. Hollinger-Clark theory

Hollinger & Clark (1983) surveyed 10,000 workers and he found out that the main reason for fraud in organizations was caused by internal factors of the organization mainly job dissatisfaction. Employee deviance was mainly done in two-way, that is, acts against property like misuse of organization's property and production violations like producing inferior products. Hollinger & Clark (1983) stated that there existed a strong relationship between theft and concern over the financial situation of the employee. The theory says that there is a direct correlation between age and theft in that, younger employees had fewer commitments and thus less theft involvement. The authors also found out that the higher the position of an employee the higher the risk of the employee being involved in fraudulent activities. In this theory opportunity was only a secondary factor to fraud. Hollinger & Clark (1983) noted that disgruntled employees were; more likely to break the rules regardless of age or position to try and compensate for the perceived inequities.

The study focused aspects of internal controls. The conclusions were that; management should work on how employees see the controls in the organizations as the likelihood of fraud will decrease once the employee thinks he will be caught, management should be sensitive to employees and pay particular attention to younger employees to prevent them from being corrupted. Hollinger & Clark (1983) proposed that social controls could be used to detect and prevent fraud. He also stated that fraudulent and dissatisfied employees also show signs of sloppy work and sick leave abuses. Hollinger & Clark (1983) also pointed out that organizations should deal with the rationalization of fraudster morally, legally and make the consequences known to all for perception. He concluded that organizations should use external pressures on employees both active and negative as the best deterrent to deviant behavior by the loss of respect among the peers.

2.3. Determinants of fraud detection

2.3.1 Internal Controls

COSO defines internal controls as processes effected by a firm's BOD and management whose purpose is to provide assurance concerning efficiency in operations, reliability of financial reporting, and the firm's compliance with the relevant laws. ICs have five components which are the control environment, risk management, control activities, information and technology, and monitoring (Klamm & Watson, 2009). The control environment is the foundation of the ICS and factors include the philosophy and operating style of management, integrity and ethical values of the organizational members, the assignment of authority, and the commitment of the BOD. Risk assessment

and management deals with identifying and analysis the risks that might hinder the achievement of objectives while control activities seek to detect and prevent the risks an organization faces. Information and communication ensures that useful sharing of relevant facts occurs within the organization while monitoring reviews and evaluates the effectiveness of these controls.

According to Kabue (2012), a strong internal control system (ICS) must be a fundamental concept of bank management because it contributes to healthy operations within the organization. Strong ICs ensures that a bank will meet its goals and objectives, comply with the laws and regulations, and facilitate reliable financial reporting. The growing cases of fraud in the banking sector has attracted interested in internal controls and a lot of people believe that such frauds would have been avoided if banks maintained effective internal controls. According to Rae & Subramanian (2008), ICs are useful in the detection and prevention of fraud through enhancing and monitoring financial reporting and compliance with the laws. According to Nyakarimi & Karwirwa (2015), fraudulent activities in banks could be avoided through a strong internal control system because it allows the institution to identify the problems and situations that may cause loss through fraud. Effective and efficient internal controls and procedures enhance the ability of an organization to detect and prevent fraud (Oguda, Odhiambo, & Byaruhanga, 2015).

2.3.2 Corporate Governance

Corporate governance refers to the set of rules that define the relationships between stakeholders, board of directors, and the management and it influences how the company operates. According to In'airat & Rushd (2015), corporate governance has received significant public and regulatory attention as a solution to the fraudulent activities in the business world. The components of corporate governance that have an influence on the prevalence of fraud are the board of directors and the audit committees.

An independent board of directors is effective in monitoring the behavior of managers and Agrawal & Chadha (2005) point out that such organizations have lower incidences of frauds. Audit committees play the role of overseeing the financial reporting process of a firm, the audit process, and the internal controls. ICPAK (2015) points out that audit committees play the role of enhancing corporate governance in organizations by providing an oversight over the internal controls and compliance to the different laws. The CBK prudential guidelines of 2006 require that the board of every financial institution should establish an audit committee that will review the financial condition of the bank, the internal controls, and discuss the performance of the internal auditors at least one in three months. Ogola, K'Aol, & Linge (2016) in their study that examined the effect of the prudential control systems on fraud occurrence in Commercial banks found out that they are critical and instrumental in minimizing the occurrence of fraud and minimizing the losses incurred.

According to Agrawal & Chadha (2015), the audit committee and the board must be independent to effectively monitor the management and increase the likelihood of detecting fraud. However, if they are not independent, directors on the board and the audit committee will act perpetrators of the fraud by engaging in conflict of interests. Independence is of great importance because it ensures that the board and the committee is not influenced by the CEO of the company. A board which is easily influenced by the CEO will be lax in carrying out its oversight duties and there is a great likelihood that it will not suspect any malpractices. Therefore, corporate governance components which include an independent BOD and audit committee are valuable in providing oversight over an entity's financial reporting practices and minimizing the occurrence of fraud.

2.4. Empirical Literature Review

There have been various studies that have been carried out on the impact of forensic auditing on fraud detection in organizations. The studies below discuss the objectives, methodology, and the findings of such studies.

Njanike, Dube, and Mashayanye (2009) conducted a study that sought to determine whether forensic auditing is useful in the detection, investigation, and prevention of bank fraud in Zimbabwe. The study examined the mandate of the forensic auditor in fraud detection using thirty forensic auditors from thirteen commercial banks, four audit firms and building societies. The study found out that forensic auditing is vital in the protection

of the assets of the banks. Therefore, the provision of forensic audit services is crucial for the detection of bank fraud and enabling investigation and litigation of the fraud cases.

Peter et al. (2014) carried out a study that established the effect of applying forensic auditing in fraud control in Nigerian banks. The authors analyzed the fraud types, trends of frauds suffered by banks, the losses sustained by banks for the past twelve years. Descriptive statistics was applied and the study found out that the prevalent frauds are fraudulent withdrawals and forgery and the authors pointed out that the banks which actively applied forensic auditing reported lower losses and fewer fraud cases. Therefore, the study concluded that the role of forensic auditing cannot be underestimated in the dealing with fraud which is prevalent in the banking industry.

Onodi, Okafor, & Onyali (2015) conducted a study that examined the effects of forensic investigation techniques in corporate fraud deterrence in Nigerian Banks. A survey design was adopted where a questionnaire with open and closed questions was used as the research instrument. The study used a sample of 26 Deposit money Banks in the South East Zone of Nigeria and 220 bank managers, accountants, and supervisors were surveyed. The data collected the fraud cases over the past twenty years and it was analyzed using the simple regression analysis. The authors also developed three hypothesis Z-tests to test them. The study found out that forensic investigation services and skills are critical in uncovering and establishing the occurrence of financial crimes and this drives the need for forensic audit services in banks.

Akenbor and Ironkwe (2014) carried out a study that sought to establish the relationship between forensic auditing and the occurrence of fraud in Public Institutions of Nigeria. The study involved twelve public institutions in the Rivers State of Nigeria, and a structured questionnaire was administered to the internal auditors and chief accountants of these institutions. The dependent variable, fraudulent practices, was regressed against a non-linear expression of proactive forensic auditing and reactive forensic auditing, as well as with a set of control variables. The study found out that forensic auditing is vital in the detection and management of the growing fraudulent practices in the public institutions.

Enofe, Omagbon, and Ehigiator (2015) carried out a study to establish the relationship between forensic audit and corporate fraud in Nigeria and whether forensic audit services can significantly detect fraud in firms. The study involved the collection of primary data from 125 respondents in various management positions in Nigeria. The authors used ordinary least square regression technique in the determination of the effect of the forensic audit on corporate fraud and in the estimation of the study parameters. The study found out that forensic audit services play a significant role in the detection of fraud in businesses and therefore, these services would reduce the incidents of fraudulent practices in organizations.

Koh, Arokiasamy, and Suat (2009) carried out a study in Malaysia to establish the level of acceptance with which the public accepts forensic auditing as a tool for fraud detection. The dependent variable was identified as public's level of acceptance of forensic accounting as the tool of detecting fraud in an organization while the independent variables were the level of understanding the public has of the functions of forensic accounting and how the public perceives the application of forensic accounting as a tool for investigating the financial statements. The study found out that forensic accounting services which include litigation support are crucial for the long-term survival of every business and play a critical role in detecting fraud that happens in organizations. DiGabriele (2009) sought to establish whether there is a similarity between forensic accounting and auditing. The study involved 1500 accounting academics, forensic accounting practitioners, and auditors in the United States. The authors used descriptive and inferential statistics with the main analysis being one-way ANOVA to compare the subjects' level of agreement to the questions asked in the questionnaires. The study found out that forensic accounting plays a critical role in the audit process and the application of forensic audit services will play a role in the detection of fraud among organizations.

Okoye and Gbegi (2013) carried out a study to establish the role that forensic accounting plays in fraud detection and prevention for the public sector organizations in Kogi State, Nigeria. A sample of five ministries and involved the collection of both secondary and primary data. The authors used Analysis of Variance (ANOVA) to test the hypotheses developed. The study found out that forensic accounting services reduce the fraud cases

that occur in the public sector and therefore, these services are necessary for the detection of fraud in the business world.

Islam, Rahman, & Hossan (2011) carried out a study in Bangladesh to establish the role that forensic accounting and forensic audit services play in the detection of fraud and corruption. The study involved fifteen multinational corporations, 35 chartered accountants and management accountants, and 50 local organizations. The findings showed that 65.71% of the chartered and management accountants and 47% of the multinational corporations agreed that forensic accounting and auditing is sufficient to detect fraudulent activities. Therefore, the authors concluded that forensic auditing has a critical role to play in the detecting and combating fraud in Bangladesh.

Ogutu & Ngahu (2016) conducted a study that sought to determine the impact of forensic auditing skills on fraud mitigation by accounting firms within Nakuru County in Kenya. The study used a sample of 25 registered practicing accounting firms within Nakuru County and a senior manager or partner from each firm used as a respondent. The study adopted the census approach in sampling and data analysis was conducted through descriptive analysis. The study found out that 97% of the respondents agreed that forensic auditing skills are crucial in fraud detection and prevention. Also, the authors found out that investigative, legal, and fraud skills are necessary for every auditor to enhance the detection of fraud. The study concluded that forensic auditing skills have an influence on

the fraud mitigation ability by accounting firms and as a result, these skills are crucial for effective fraud detection.

Akelola (2012) conducted a study whose aim was to establish the characteristics of fraud and the fraud management approach in the Kenyan banking sector. The study used a sample of 40 Kenyan banks and primary data was collected through the use of a questionnaire and interviews. Descriptive statistics as well as Chi-square tests were used in analyzing the data and test the hypothesis. The study found out that the Kenyan banking industry has a high awareness of fraud and they consider it to be a major challenge. Most of these frauds happen through the misappropriation of cash and assets but the fraud detection techniques are inadequate and therefore, detection occurs by accident. Also, the author asserted that the fraud detection measures such as review of internal controls, training of staff, fraud prevention policies, and ethical codes of conducts do not guarantee that any fraud will be detected. Therefore, the study proposes that Kenyan banks must invest in forensic audit services because they have been found to be highly effective in the detection of fraud.

Kimani (2015) conducted a study to establish the effect of forensic accounting services on corporate crime mitigation among the firms listed on the Nairobi Stock Exchange (NSE). The study adopted a descriptive research design, and the population was made up of the 61 firms listed on the NSE. Data was collected using a structured questionnaire made up of two main sections: the effect of forensic accounting on crime mitigation and

how to mitigate corporate crime. The authors formed the conclusion that forensic accounting services reduces the occurrences of fraud and therefore, they are useful in the detection of fraudulent activities among the firms listed on the NSE.

Kamau (2013) conducted a study that sought to establish the determinants of audit expectation gap among limited companies in Kenya. A sample of 110 audit firms was used and a structured questionnaire used to collect the data. One of the study's hypothesis that sought to test whether the level of auditor skills contributes to the audit expectation gap among Limited companies in Kenya. Correlational analysis, multiple linear regression was used to analyze the data. The authors found out that most auditors lack the skills necessary for fraud detection and most of them find it fail to identify red flags as they are performing the audit. Also, most of them lack forensic audit skills and this contributes to the ineffective fraud detection. The study concluded that forensic audit skills play a significant role in the detection of fraud and reducing the audit expectation gap.

Waigumo (2012) carried out a study that sought to examine the influence of fraud risk management practices in commercial banks and their effect on fraud risk exposure. The study used a sample of all the 43 commercial banks in Kenya and collected primary data using a questionnaire and interviews. Descriptive statistics was used to analyze the data and a multiple linear regression model used to establish whether fraud management practices influence fraud risk. The dependent variable was fraud risk while the

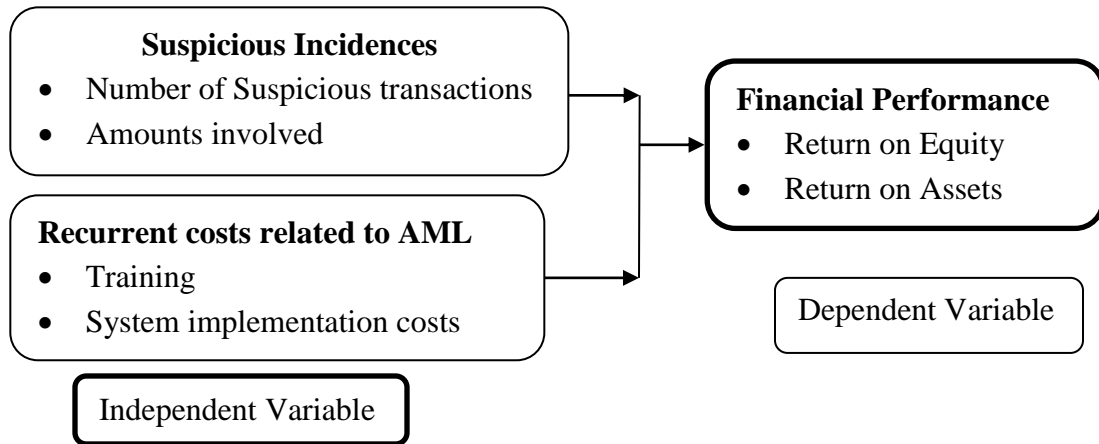
independent variables were fraud detection methods and fraud prevention methods. Fraud type's occurrence was used as the proxy for fraud risk and the author found out that the use of detection and prevention methods led to a negative change in fraud types. The study also found out that the fraud risk detection methods used by commercial banks in Kenya are vulnerable to fraudsters and therefore, better detection methods to safeguard against fraud should be used.

Wanga (2013) carried out a study that sought to examine the responses by Kenyan commercial banks to the increasing fraud related risks in the sector. The sample consisted of 234 respondents who were senior managers, middle level managers, and low level managers in commercial banks whose headquarters are in Nairobi. The study used both primary and secondary data where a self-administered questionnaire was used for collecting primary data. Descriptive statistics such as the mean, mode, and median were used in analyzing the data. The study found out that fraud detection strategies, fraud prevention and a corporate fraud policy are the fraud response strategies used by banks. The fraud detection strategies included forensic investigations, disciplinary procedures, and fraud audit programs. Adoption of a strong ICS was the fraud prevention strategy used by most banks while the group fraud policy sets out the strategic priorities and fraud control requirements of Kenyan banks.

2.4 Conceptual Framework

A conceptual framework is a pictorial relationship between the dependent and independent variables. It presents the relationship between the dependent and independent variables in a study in a pictorial form. The independent variables of this study include suspicious incidences of transactions likely to be acts of “cleaning dirt” money. Another independent variable relates to the recurrent costs associated with the implementation of AML. This could take the form of training and system implementation costs. The dependent variable in the study is financial performance of banks which will be measured by Return on Equity (ROE) and Return on Assets (ROA). The conceptual framework is clearly drawn in the figure 2.1 below:

Figure 2.1: Conceptual Framework



Source: (Researcher, 2017)

2.5 Summary of the Literature Review

The empirical literature has explored a variety of studies on AML and performance of banks. On a global level, Nunes, Singh, Tam and Kwan (2014) studied money laundering through the rational choice theory in China. Hayble-Gomes (2016) examined the various effects that a deficient anti-money laundering program has on a multinational bank. Yepes (2011) examined the level of compliance with the AML/CFT International Standard across different countries with the aim of chatting forward in AML. Demetis (2014) examined anti-money laundering through a systems theoretical approach using a case study in a Greek Financial Institution through self-reference, AML, its systemic constitution and technological consequences. Ogbodo and Mieseigha (2013) studied how money laundering activities had affected the economy of Nigeria. Abdullahi (2013) conducted an assessment with the aim of establishing the level of adherence to the AML regulations among banking institutions in Tanzania. These studies were conducted in different environmental settings which limit the application of their findings to the current study settings.

Locally, Murithi (2013) examined the effect that AML regulation implementation had on financial outcomes recorded by commercial banks in Kenya. This study concentrated on AML implementation and not the risk management which is a continuous process. Michugu (2014) used the case of Chase bank to study the impact that AML regulations had on financial performance of commercial banks in Kenya. This study was conducted in the year 2014 before further regulations came into force in the year 2016 hence

introducing new information. Mwithi and Kamau (2015) sought to identify the strategies adopted by commercial banks in Kenya to combat fraud. This study concentrated on all frauds and not ML hence the scope was large. Sainah (2015) sought to establish the link between AML risk assessment and financial performance of commercial banks. This study concentrated on one aspect of AML risk management and has been overtaken by changes to the AML regulations. The local studies though relevant, their focus is on a past period prior to implementation of reforms on the AML provision in the country hence the current setting may have changed thus limiting the application of their findings.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methods that were applied by the researcher in carrying out the study. It specifically outlines the following sections: research design, population of the study, data collections and data analysis.

3.2 Research Design

This research adopted a descriptive design. This design was deemed appropriate since it deals with issues that help build a profile on a given phenomenon under study. It mainly deals with matters that describe the what, when, where, and how of a phenomenon (Cooper and Schindler, 2006). The study aims at establishing the effects of anti-money laundering risk management on financial performance of commercial banks in Kenya.

3.3 Population of the Study

Population refers to an entire set of elements, individuals or institutions that have similar observable characteristics which are of interest to a researcher. The population of this study was all licensed commercial banks in Kenya as at December 2016 (Appendix II). The commercial banks have been entrusted by the Central Bank of Kenya in identification and reporting of suspicious transactions on a regular basis.

3.4 Data Collection

This study used secondary data from reports submitted to FRC and CBK, as well as data from commercial banks in Kenya. Data was collected for a period of five years spanning 2012 to 2016. More data will be collected from AML compliance managers' management reports on ML.

3.5 Data Analysis

Data analysis is the process of cleaning data collecting from the field and arranging it in a manner that is clear to the study objectives. The data collected was coded and analyzed using both descriptive statistics and inferential statistics using Statistical Package for social Sciences (SPSS Version 23.0). Analyzed data was presented in the form of figures and tables for easy understanding.

3.5.1 Model Specification

In order to estimate the relationship between the dependent and independent variables, the study applied a multiple regression analysis. The study used the following model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

Where Y= Organization Performance (Return on Assets)

X1 = Number of Suspicious transactions

X2 = System Implementation Costs

X3 = Amounts involved

X4 = Interest Rate

X5 = Inflation

3.5.2 Test of Significance

The study tested the significance of the model in explaining the relationship between AML and financial performance of commercial banks in Kenya using Analysis of Variance where F- tests will compare the F-calculated with F-critical. In case the F-calculated is greater than F- Critical, it shall be concluded that the overall model was significant in explaining the relationship. The study is tested at 95% confidence level and 5% significant level.

3.5.3 Diagnostic Tests

To ensure that the data collected is free from biasness and one variable data is not related to another variable data, the study conducted a Mutlicollinearity tests (Maddala and Lahiri, 2009). The study also conducted an autocorrelation test to determine if there exists some degree of similarity between the time series data collected and the lagged version of the same data over successive time intervals. This is because the study used time series data over the study period.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents a detailed analysis of the data collected through the questionnaires. The questionnaires were sorted and coded to ensure completeness and the data analyzed using statistical package for social science. The data was summarized and presented in form of frequencies, percentages, tables and graphs. The data was collected from internal audit departments, risk management departments, and finance staff of commercial banks.

4.2 Data Presentation

4.2.1 Response Rate

The study targeted 43 commercial banks in Kenya, from which primary data was collected. Data was obtained from 36 banks with seven failing to respond. This represented 83.72% response rate and a response rate of 50% is adequate for reporting (Mugenda & Mugenda, 1999).

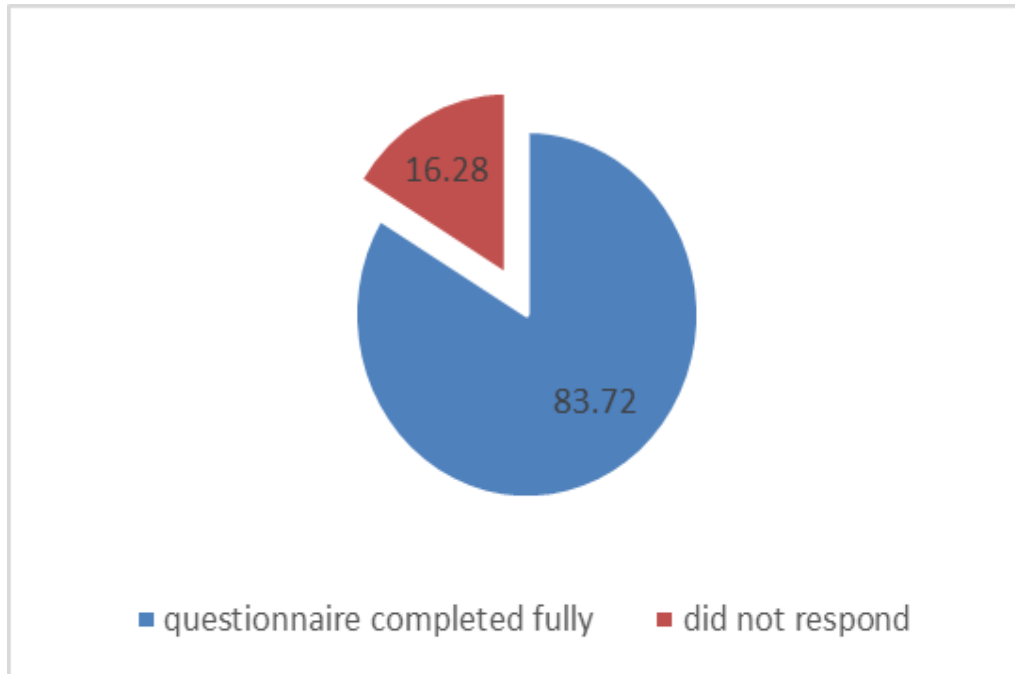


Figure 4.1: Response Rate

4.2.2 Ownership Structure

The study sought to establish the ownership of the commercial bank under study. 66.67% of the respondents said that the bank was jointly private and public, 26.67% said that the institution belonged to a private company, and 6.67% reported that the institution was fully public.

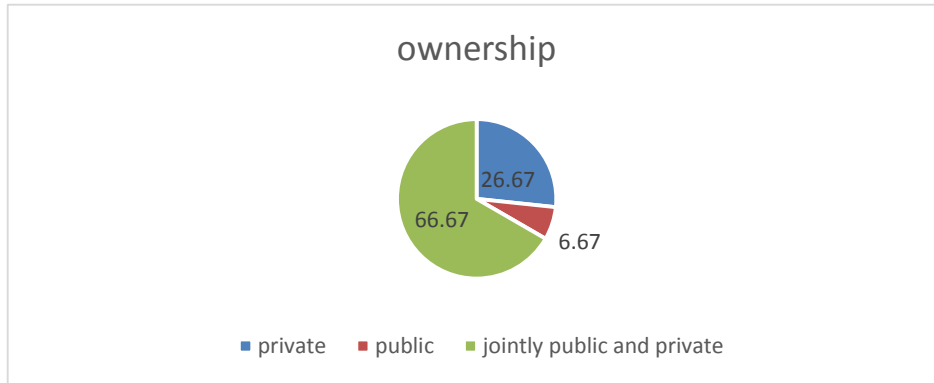


Figure 4.2: Ownership Structure

4.2.3 Years of operation of the bank

The number of years a company has been in operation is a major determinant of its strength in detecting and handling fraud. The respondents reported that all their firms had been in operation for over 20 years indicating that they understand the impact of fraud and importance of fraud detection.

4.2.4 Banks with Forensic Audit Department

The respondents were asked to indicate whether their bank actively supported forensic auditing services. The importance of this is to ensure that the study only considers respondents whose banks have forensic audit departments.

Response	Frequency	Percentage
Yes	36	100%
Total	36	100

Table 4.1: Existence of forensic audit department

4.2.5 Fraud Frequency (Red Flags occurrence)

Table 4.2: Fraud Frequency

No	Indicators	Mean rating
	Unusual credit activity, such as an increased number of unauthorized accounts	4.8671
	Notifications of unauthorized charges or transactions on customers account.	4.5823
	Raising of company costs without any corresponding immediate drivers	4.2886
	An increase in the number of customer complaints	4.5309
	Unexplained wealth by an employee and a high end lifestyle change	3.5277

The respondents were asked to indicate the frequency with which specific fraudulent activities happened in an organization. From table 4.4, unusual credit activity such as increased number of unauthorized accounts was the most occurring fraud while unexplained wealth by an employee and a high end lifestyle change having the lowest frequency with a mean of 3.5527. Other red flags were an increase in the number of customer complaints with a mean of 4.5309, notifications of unauthorized charges or

transactions on customers' accounts with a mean of 4.5823, and raising of costs without immediate cost drivers with a mean of 4.2886.

4.2.6 Legal strategies employed by the bank to address fraud

The respondents were required to briefly state the different legal strategies used by their institution to address and detect fraud. These strategies included ensuring that the involved individuals are brought to book, adherence to policy documents aligned with the laws of Kenya, prosecution of suspects, an ethical code of conduct, and training staff on detection and preventive strategies. Therefore, this indicates that banks actively seek legal services to reduce the occurrence of fraud and ensure that their assets are safe.

4.2.7 Litigation Support

Table 4.4: Litigation Support

Litigation Support	mean rating
Analyzing the financial components of complaints	3.2857
Carrying out financial analysis for damages	4.2770
Disclosure statements preparation including expert report	3.8571
Presentation of evidence and testimony in court	3.5714
Discovery and preparation of interrogatory reports	4.1429

(Source, Research data, 2017)

Table 4.5 shows that majority of the residents considered analysis for financial damages and discovery and preparation of interrogatory reports as the most important attributes of litigation support with mean ratings of 4.2770 and 4.1429 respectively. The other litigation support attributes were analysis of the financial component of the initial complaint, disclosure statements preparation including expert report, and presentation of evidence and testimony with means 3.2857, 3.8571, and 3.5714 respectively.

4.2.8 Investigation Services

Table 4.5: Investigation Services Attributes

fraud investigation	mean
financial reports review	4.1429
performing electronic evidence recovery	3.7143
fraud risk assessment	4.2857
examination of source documents	4.1429
looking for alleged fraud or illegal activity	4.2857
structure regulatory compliance strategies	3.8571
probe suspect financial transactions	4.7777

Respondents were requested to indicate the effectiveness of specific forensic audit investigative techniques in fraud detection. From table 4.6, probing suspect financial transactions, fraud risk assessment, and looking for alleged fraud or illegal activity were considered the most effective with means 4.777, 4.2857, and 4.2857 respectively. Other

attributes of investigation were financial reports review, performing electronic evidence recovery, examination of financial and source documents, and structure regulatory compliance strategies with means 4.1429, 3.7143, 4.1429, and 3.8571 respectively.

4.2.8 Correlation Analysis

Correlation analysis was conducted to reveal the direction of association of the variables. Correlation is measured by (r) which ranges from -1.0 to 1.0. When r is close to zero, it means there is no relation between the variable and when r is negative and close to -1, it means that the movement in one variable would cause a reduction in the other.

Table 4.5: Correlation Analysis

		Fraud Detection	Investigation Services	Litigation Support
Fraud Detection	Pearson Correlation	1	-.104	-.407
	Sig. (2-tailed)		.046	.014
	N	36	36	36
Investigation Services	Pearson Correlation	-.104	1	.033
	Sig. (2-tailed)	.046		.848
	N	36	36	36
Litigation Support	Pearson Correlation	-.407	.033	1
	Sig. (2-tailed)	.014	.848	
	N	36	36	36

The results in Table 4.7 show that the correlation between fraud detection and investigation services is negative and significant ($R = -.104$, $p \text{ value} = 0.046$). This means that an increase in investigation services is associated with a decrease in the level of fraud detection, that is, the occurrence of fraud. The findings also reveal that the correlation between litigation support and fraud detection is negative and significant ($R = -.407$, p

value=0.014). This implies that an increase in litigation support services is associated with a reduction in the frequency of fraud, that is, fraud detection.

4.2.9 Regression Analysis

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.417a	.174	.124	.4738908

a. Predictors: (Constant), Litigation Support, Investigation Services

The adjusted R square of 0.417 shows the variation in the dependent variable, fraud detection, due to changes in the independent variables. It means that there was a 12.4% variation in fraud detection due to changes in fraud investigation services and litigation support.

Table 4.7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.561	2	.781	3.476	.043a
	Residual	7.411	33	.225		
	Total	8.972	35			

a. Predictors: (Constant), Litigation Support, Investigation Services

b. Dependent Variable: Fraud Detection

From table 4.8, the significance was 0.043 which is below 0.05 meaning that there existed statistically significant differences between group means, that is, forensic audit services are significant in fraud detection in Kenyan commercial banks.

Table 4.8: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.975	1.164		5.133	.000
Investigation Services	-.795	.190	-.091	-.573	.041
Litigation Support	-.650	.176	-.404	-2.553	.015

a. Dependent Variable: Fraud Detection

The established regression from the above table of regression coefficients was:

FD= 5.975-0.795 Investigation services-0.650 litigation support

From the regression analysis, fraud detection has an inverse relationship with forensic audit services. A unit increase in forensic audit investigation would reduce fraud by a factor of 0.795 and a unit increase in litigation services would enhance fraud detection by a factor of 0.650.

4.2.10 Application of Forensic Auditing

The respondents were asked to rate the application of various attributes of forensic auditing in their organization. They used a five point Likert scale where 1-Very good, 2-Good, 3- Average, 4- Poor, 5 -Very poor

Table 4.9: Areas of Application of forensic auditing

Attribute	mean rating
controlling financial statement fraud	1.4285
detection of scandals in the bank	1.8571
Enhancing financial reporting quality	2.5429
guarantee the well-being of the bank	2.2857
detection of economic crimes	2.7857
detection of employee theft	2.2857
establishing effective lines of communication	2.6585
ensuring compliance with banking regulations	2.0000
monitoring and evaluating the internal control systems	1.7142
detection of financial statement fraud	2.1429

From table 4.11, forensic auditing services had the highest application in in controlling financial statement fraud with a mean of 1.4285 followed by the monitoring and evaluation of internal control systems with a mean of 1.7142. Other attributes and their means were the enhancement of financial reporting quality 2.5429, guaranteeing the well-being of the bank 2.2857, detection of economic crimes 2.7857, detection of employee theft 2.2857, establishment of effective communication lines 2.6585, regulatory compliance 2.0000, and financial statement fraud detection 2.1429.

4.2.11 Common Frauds in Commercial banks

Table 4.10: Common Frauds in Commercial Banks

	mean rating
theft of cash, physical assets or confidential information	3.5714
misuse of accounts	3.1429
procurement fraud	3.5714
payroll fraud	3.8571
Loan fraud	2.4286
inappropriate journal vouchers	2.2857
Credit card fraud	3.4286
fraudulent expense claims	2.7143
Theft by directors	2.2857
bribery and corruption	2.2857
corporate identity theft	2.0000
intellectual property fraud	2.4286

The table 4.12 indicated that payroll fraud was the most prevalent fraud with a mean of 3.8571 followed by theft of cash, physical assets or confidential information and procurement fraud both with mean ratings of 3.5714. Other major frauds were misuse of accounts 3.1429, loan fraud 2.4286, inappropriate journal vouchers 2.2857, credit card

fraud 3.4286, fraudulent expense claims 2.7143, theft by directors 2.2857, bribery and corruption 2.2857, corporate identity theft 2.000, and theft of intellectual property 2.4286.

4.3 Summary of Data Analysis

The study revealed that litigation support impacts on fraud detection through analysis of the financial components of the initial complaint, financial analysis for damages, preparation of disclosure statements, presentation of the evidence and testimony in court, and the preparation of interrogatory reports. Also, the study revealed that commercial banks employ legal strategies such as staff training, adherence to policy documents aligned with the laws of Kenya, prosecution of suspects, and an ethical code of conduct to combat fraud. The study also indicated that investigation services impact on fraud detection through the review of financial reports, assessment of fraud risk, probing any financial transactions indicative of fraud, examination of source documents, looking for alleged fraud, and structuring of regulatory compliance strategies.

The results showed that fraud detection has an inverse relationship with investigation services and litigation support. This means that there exists a negative correlation between the dependent variable (fraud detection represented by frequency of occurrence of red flags) and the independent variables (investigation services and litigation support). A unit increase in forensic audit investigation services will discover and reduce the

occurrence of fraud by 0.795 and a unit increase in litigation services would reduce fraud by 0.650, indicative of fraud detection.

The study found out that forensic audit services have their highest application in the control of financial statement fraud, detection of scandals in the bank, ensuring regulatory compliance, internal controls monitoring and evaluation, and enhancing financial reporting quality. The study also showed that the prevalent fraud in commercial banks is payroll fraud with a mean of 3.8571 and the theft of cash, physical assets, and procurement fraud both with a mean of 3.5714

The results of this study which indicated that the application of forensic audit services plays a vital role in fraud detection is consistent with those of previous studies. Enofe et al. (2015) in their examination of forensic audit as a tool for fraud detection found out that, a forensic audit is an efficient and effective tool against corporate fraud. The application of investigation services and litigation support would significantly reduce the incidences of fraudulent practices in an organization.

Peter, Aliyu-Dadi, Ebong-Inyang, & Abba Ogere (2014) in their study that sought to establish the role of forensic auditing in reducing fraud cases in Nigeria Money Deposit Banks found out that forensic audit services are effective in the detection of fraud. Onodi et al. (2015) in their study that examined the effect of forensic investigation methods in corporate fraud deterrence in Nigeria found out that forensic investigation services are much needed to detect the activities of fraudsters in organizations.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATION

5.1 Introduction

The objective of the study was to establish the impact of forensic audit services on fraud detection in Commercial Banks of Kenya. Primary data was collected from the audit and risk departments of banks and a regression analysis carried out. Red flag occurrences were used as the proxy for fraud detection. This chapter discusses the summary of the research findings based on the study objectives, the conclusion, the study limitations, policy recommendations, and suggestions for further studies.

5.2 Summary of Findings

The study found out that commercial banks in Kenya are aware of the attributes of forensic auditing because 100% of the organizations had a forensic auditing department and actively applied forensic audit services. The study revealed that investigation services impact mainly on fraud detection through probing suspect financial transactions, fraud risk assessment, and looking for alleged fraud. The study also showed that litigation support affects fraud detection mainly through financial analysis for damages and the discovery and preparation of interrogation reports

The resultant relationship was $FD = 5.975 - 0.795 \text{ Investigation services} - 0.650 \text{ litigation support}$. The study revealed that there was an inverse relationship between fraud reduction between forensic audit litigation support and forensic audit investigation services hence fraud detection. The study also showed that commercial banks have legal strategies to combat fraud and they include individuals are brought to book, adherence to policy documents aligned with the laws of Kenya, prosecution of suspects, an ethical code of conduct, and training staff on detection and preventive strategies. Forensic audit services had the highest application in controlling financial statement fraud followed by monitoring and evaluating ICS while detection of uncovered bank crimes had the least application. The study also revealed that the most common frauds in the Kenyan commercial banking sector were payroll fraud followed by procurement fraud and theft of cash, physical assets, and confidential information while corporate identity theft was the least occurring fraud.

5.3 Conclusion

The study, therefore, concludes that the role of forensic auditors in fraud detection in commercial banks is crucial. It can be established that commercial banks are likely to identify the occurrence of fraudulent activities by applying investigation services and litigation support. Forensic auditors help lawyers and courts through the use of auditing, investigative, and accounting principles in solving fraud cases. The impact of fraudulent activities is a major setback on the banking sector because it reduces customer and

investor confidence. In Kenya, perpetrators of fraud are rarely prosecuted and but forensic auditors will provide evidence to the courts, and this will see individuals who commit fraud sentenced, and this will assist in improving the reputation of the industry. The study also concludes that commercial banks in Kenya have adopted forensic audit practices of investigation services and litigation support. It also concludes that forensic auditing has its highest application in controlling financial statement fraud and the monitoring and evaluation of ICS.

5.4 Policy Recommendations

The study makes the following recommendations about forensic audit services commercial banks in Kenya in Kenya. The recommendations are consistent with the literature review. The study recommends that the institutional infrastructure that supports fraud prosecution should be improved. This will involve restructuring the laws, offering advanced training to the police, lawyers, and judges in the issue of banking fraud. Also, the public institutions charged with dealing with fraud cases should be reformed to enable them carry out their duties effectively. An efficient fraud prosecution system where the fraud perpetrators will be sentenced will go a long way in enhancing fraud detection and deterring future fraudulent events in the banking sector.

Commercial banks should revise their organizational structure to allow for better alignment with the functions of forensic auditing department. A more hands-on approach is needed to fraud detection, and this requires proper structures and policies that separate

and guide the role of the forensic auditing department from others. This will ensure that the department will work without interference from anyone and avoid any conflict within the organization.

Fraud detection and preventive strategies should be the start with the BOD and the management. Management should take a proactive approach towards the identification of fraud by setting a specific tone about fraud. This involves communicating the organization's policies and procedures to all stakeholders. The tone at the top makes the forensic auditors work of identifying fraud easier as well as encouraging whistleblowers when a red flag is noticed. A corporate fraud policy which directs the employees on what they should do when fraud is suspected should be developed. Such a policy gives the course of action on how the organization deals with fraud and communicate that no individual has the authority to engage in fraudulent activities, even to the benefit of the company.

The management and employees should undergo training on fraud identification and prevention strategies. The training teaches them on the factors that indicate fraud and the steps that they should take. Also, they should be trained on the internal controls as well as the organization's procedures. Employees should be aware of the consequences of committing fraud, and this will ensure that they follow the set guidelines and regulations.

Commercial banks should develop strong internal control systems. An ICS will enable the bank to identify any potential problems that may result in financial losses before they

occur. It is the responsibility of the management to establish an ICS which is strong enough to identify any indicators that signal fraud and ensure the continuity of operations. Therefore, effective ICs will enhance the efficiency of operations, reliability of financial reporting, and ensure that the commercial banks will comply with the relevant laws and regulations.

5.5 Limitations of the Study

Some banks were not willing to fill in the questionnaire because fraud is a sensitive issue. Some respondents were prohibited by the organization's policies, and they declined to provide information. Also, the accuracy of the study was limited to the honesty of the respondents. The researcher could not establish the extent of the truth particularly in the section about the most prevalent frauds in the organizations.

The study did not consider other variables that may affect the use of forensic audit services. They include the availability of these services, the cost, and independence of the forensic auditor. The fraud environment is also highly dynamic due to the advancement of technology and increased use of the internet. Therefore, the findings may not truly reveal the most prevalent frauds in the banking sector and the impact of forensic audit services on fraud detection.

5.6 Suggestions for Further Research

The study did not consider the factors that affect the adoption of forensic audit services in the Kenyan Commercial Banking sector. Therefore, another study should focus on the factors influencing the adoption of forensic auditing in Kenyan Commercial Banks.

The study has considered organizations in the financial sector. Another study should focus on another sector such as manufacturing or use the firms listed on the Nairobi Stock Exchange.

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APPENDICES

Appendix 1: Questionnaire

This research work is intended to explore the relevance of forensic audit services detecting frauds in the Kenyan Commercial banking sector. You are kindly requested to provide the most suitable responses on the spaces provided.

(Responses will be treated with utmost confidentiality).

PART A General Bank Information

PART B Forensic Audit Services and Fraud Detection

PART C Application of forensic audit services in the bank

PART D Prevalent frauds in the banking sector

Questionnaire Number.....

Date.....

PART A: GENERAL BUSINESS INFORMATION

Ownership

☐ private bank

☐ public bank

☐ Both private and Government

Years of operation of the Bank

1-10 ☐

11-20 ☐

above 20 ☐

Is there a forensic auditing department?

☐ Yes No ☐

PART B. FRAUD DETECTION

Section one: Fraud occurrence

To what extent do you agree with the observance of the following red flags in your organization?

Key: 1-Very rarely, 2-Rarely 3-Occasionally 4-Frequently 5-Very frequently

No	Indicators	1	2	3	4	5
	Unusual credit activity, such as an increased number of unauthorized accounts					
	Notifications of unauthorized charges or transactions on customers account.					
	Raising of company costs without any corresponding immediate drivers					
	Close long-term relationship between the employees and contractors					
	Unexplained wealth by employee and a high end lifestyle change					

Section Two: Litigation Support

Does this bank actively support forensic accounting/auditing services?

☐ Yes ☐ No

What legal techniques are employed in the bank to combat frauds?

.....

Rate your agreement with the following statements that indicate the usefulness of litigation support on fraud detection. (Please tick appropriately)

Key: 1-Can't tell, 2- Strongly Disagree, 3-Disagree, 4-Agree, 5-Strongly Agree

No.	Description	1	2	3	4	5
	Analyzing the financial components of complaints					
	Carrying out financial analysis for damages					
	Disclosure statements preparation including expert report					
	Presentation of evidence and testimony in court					
	Discovery and preparation of interrogation reports					

Section Three: Investigation Services

Rate your agreement with the following statements as attributes necessary for fraud detection.

Key: 1-Can't tell, 2- Strongly disagree, 3-Disagree, 4-Agree, 5-Strongly

Agree

No.	Description	1	2	3	4	5
	Review of financial reports					
	Performing electronic evidence discovery					
	Fraud risk assessment					
	Examination of source documents					
	Looking for alleged fraud or illegal activity					
	Structure regulatory compliance strategies					
	Probe suspect financial transactions					

PART C: APPLICATION OF FORENSIC AUDIT SERVICES

Rate your agreement with the following as the main areas where forensic audit services are applied in the bank?

Key: 1-Very good, 2- Good, 3- Average, 4- Poor, 5 –Very poor

No.	Description	1	2	3	4	5
	Controlling financial statements fraud					
	Detection of scandals in the bank					
	Enhancing financial reporting quality					
	Guarantee the well-being of the bank					
	Detection of economic crimes					
	Detection of employee theft					
	Establishing effective lines of communication					
	Ensuring compliance with the banking regulations					
	Monitoring and evaluating the internal control systems					
	Detection of financial statement fraud					

SECTION D: THE PREVALENCE OF FRAUDS IN THE BANKING SECTOR

The following statements tests on the most common frauds in the banking sector.

To what extent do you agree with the probability of occurrence of the frauds below?

Key: 1-Very low extent, 2-Low extent, 3-Moderate extent, 4- High extent,

5- Very high extent.

No.	Description	1	2	3	4	5
	Theft of cash, physical assets or confidential information					
	Misuse of accounts					
	Procurement fraud					
	Payroll fraud					
	Loan fraud					
	Inappropriate journal vouchers					
	Credit card fraud					
	Fraudulent expense claims					
	Theft by the directors					
	Bribery and corruption					
	Corporate identity theft					
	Intellectual property fraud					

Filled by.....

Designation.....

Thank you for taking the time to complete the questionnaire

Appendix II: List of Commercial Banks in Kenya

1. Africa Banking Corporation Ltd
2. Bank of Africa Ltd
3. Bank of Baroda Ltd
4. Bank of India
5. Barclays Bank of Kenya
6. CFC Stabic Bank Ltd
7. Chase Bank Ltd
8. Citibank N.A. Kenya
9. City Finance Bank
10. Commercial Bank of Africa Ltd
11. Consolidated Bank of Kenya Ltd
12. Co-operative Bank of Kenya
13. Credit Bank Ltd
14. Development Bank of Kenya Ltd
15. Diamond Trust Bank Ltd.
16. Dubai Bank Ltd.
17. Ecobank Ltd
18. Equitorial Commercial Bank Ltd
19. Equity Bank Ltd
20. Family Bank Ltd
21. Fidelity Commercial Bank Ltd
22. Fina Bank Ltd
23. First Community Bank Ltd
24. Giro Bank Ltd
25. Guardian Bank
26. Gulf African Bank Ltd
27. Habib AG Zurich

28. Habib Bank Ltd
29. I & M Bank Ltd
30. Imperial Bank Ltd
31. Kenya Commercial Bank Ltd
32. K-Rep Ltd
33. Middle East Bank Ltd
34. National Bank of Kenya Ltd
35. NIC Bank Ltd
36. Oriental Commercial Bank
37. Paramount Universal Bank
38. Prime Bank Ltd
39. Southern Credit Banking Corporation Ltd
40. Standard Chartered Bank Ltd
41. Trans-National Bank Ltd
42. UBA Kenya Bank Ltd
43. Victoria Commercial Bank Ltd Source:
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