



**EFFECTIVENESS OF FRAUD INVESTIGATOR’S AT THE BANKING FRAUD INVESTIGATION UNIT, CENTRAL BANK OF KENYA.**

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## ABSTRACT

Many institutions are faced with fraud challenges. The impact of fraud has led to downfall of several organizations, legal tussles and loss of confidence in organizations. The executive involvements in fraudulent activities has greatly impacted on the reputation of many organizations globally. The study findings may in a small way act as a whistleblower to the increasing cases of banking frauds in financial institutions like banking sector and other government departments. The study may also generate policy input for Central Bank of Kenya, other associated financial institutions like banking sector, Kenya Bankers Association and micro finance institutions as well as country's economy at large. The purpose of this research was to explore effectiveness of fraud investigators at the investigation unit of banking fraud at the Central Bank of Kenya. The objectives of the study were: To establish legal constraints that inhibit fraud investigations in the banking sector, to assess how customer confidentiality hinders successful fraud investigations in the banking sector, to identify the technological limitations that hinders successful fraud investigations in the banking sector and to identify mitigation strategies and actions that may be applied by investigators to deter banking fraud. The study used descriptive research design and the data collection instrument was mainly from primary sources through interviews and questionnaire which was administered by the researcher. The questionnaire used open – ended and close ended questions. The study used a stratified random sampling technique. A sample size of 30 investigators was used to inform the study. The data processing and analysis applied both qualitative and quantitative techniques which involved descriptive statistical method. The population of the study was the banking fraud investigators who work in banking fraud unit dealing with fraudulent activities in the banking industry in the country. The key findings of the study include: - legal constraints and the sentences being awarded by courts to fraud convicts are insufficient, the study establishes that there is law present in Kenyan constitution to protect witnesses in fraud cases, lack of IT experts, delay in getting expert reports in the banks and time constraints in conducting forensic investigations and also customer confidentiality hinders successful investigations of banking frauds. The study recommends training of bank employees, customer awareness campaigns, creation of a centralized fraud database and improvements in the judicial and legal handling of bank frauds. Areas for additional research is on awareness of customers on banking fraud and different internal controls put in place by banking sector for purpose of deterring fraudulent activities.

**Key Word:** Fraud Investigator and Banking Fraud Investigation

## INTRODUCTION

### Background of the Study

Fraud is defined as a misrepresentation of a material fact consisting of a false representation, concealment or non-disclosure. Essential elements of fraud such as knowledge of the falsity, intent to deceive, justifiable and actual reliance on the misrepresentation and resulting damage must be present before an actual finding of fraud occurs (Association of Fraud Examiners, 2010). There are various types of fraud such as, computer fraud, credit card fraud, insurance fraud, public sector fraud, contracts and procurement fraud, health care fraud, bankruptcy fraud and banking fraud. The purpose of this project is to explore effectiveness of fraud investigators at the banking fraud investigation unit of Central bank of Kenya. Fraud in the banking sector is a global problem that may not subside in the near future. The relevant crimes have become sophisticated even as the criminals accumulate huge sums of money through such offences as drug trafficking, investments fraud, corruption, embezzlement and tax fraud. Available statistics indicate that the banking industry has the highest fraud incidences and loses at least five percent of its annual revenue to fraud (Association of Fraud Examiners, 2010). Banking sector frauds have been in existence for centuries with the earliest known frauds pertaining to insider trading, stock manipulation, accounting inflation and others (ACFE, 2010).

A 2011 United Nations Office on Drug and Crime (UNODC) report estimates that proceeds from transnational organized crimes were equivalent to 1.5% of the global G.D.P in U.S in 2009. Furthermore, the Association of Certified Fraud Examiners (ACFE, 2008) survey results reported that U.S banks lost an estimated 7% of their annual revenues to fraud in the 1990s (ACFE, 2008). This percentage is higher compared to the estimated 5% for 2006 and 6% for 2004 (ACFE, 2006). Historically, Britain's National Westminster Bank and the Bank of Credit Commerce International (BCCI) lost 10 billion dollars to fraud globally and Japan's Fuji Bank lost 3 billion dollars to forgery both in 1990 (ACFE, 2008). In fact, the fraud bubble burst in Japan's financial sector in the early 1990s lost huge sum of money due to unrealistic valuation of land, share price manipulation, poaching of staff, financial engineering, huge uncollected bad loans and issuance of fake certificates (Anca, 2013).

In Nigeria, the Central Bank of Nigeria (CBN) reported that in the first half of 2012, cases of attempted fraud and forgery in banks exceeded what was recorded in the whole of 2011 (CBN, 2012). The KPMG (2011) report on the African Fraud Survey indicates that fraud is a major concern among African banks. Six percent of the African Fraud Survey respondents said they had lost 170,000 dollars or more to fraud in the year 2007 (KPMG, 2011). Furthermore, the economic survey of 2010 by PwC registered an increase of fraud incidents and cases in the year 2010 than in any other preceding years. This growth in the banking frauds was grounded on the rapid growth and expansion in banks which necessitated the implementation of complex multiple technological systems that promoted high levels of fraud (PwC, 2011). A major problem in the Kenyan banking sector is that in the 1970s the country experienced an increase in financial institutions as the government encouraged the establishment of local banks. Nevertheless, negligent banking laws, insufficient supervisory

ability by the Central Bank of Kenya (CBK) and non-compliance with the banking laws by some banks associated to or possessed by politicians resulted in deficits of the banking system leading to many banks to go under receivership in the 1980s and 1990s. These inadequacies also have created prospects for banking fraud to spread widely (Bank Supervision Report, 2013).

Banking frauds have been attributed to other various reasons which includes banks unwillingness to tackle the problem of fraud, delayed execution of arrest warrants, surveillance of banking halls not strong and automated teller machines Lobbies not properly manned and also weakness in the forensic auditing system (Bank Supervision report, 2013).

According to Furlan et al (2011) there is a large void in data collection in the area of white-collar crime to the extent that it causes increased challenges for fraud fighters. Besides, fraudsters have become increasingly sophisticated and as a result banks need investigators who can accurately assess their vulnerability and adopt a planned approach to tackle the risk of fraud. As such, the purpose of this study is to explore the effectiveness of fraud investigators at the banking fraud investigation unit of the Central Bank of Kenya.

### **Statement of the Problem.**

The banking industry remains one of the most critical sectors in the economy. Its performance impacts significantly on the direction and level of a country's transformation and growth economically, especially on critical issues such as increased unemployment level and high inflation rate, directly affecting the living standards of the citizens. However, despite being highly regulated, frauds continue to thrive in the country's banking sector (ACFE, 2010). On several instances, the confidentiality and integrity of the Kenyan banks has been called to question, due to the persistent frauds (ACFE, 2010). The banking fraud investigations unit data (BFIU), indicates that banking sectors reported loss of Ksh1.49 billion from customers' savings between April 2012 and April 2013. Fraud detectives from Banking fraud were able to recover Ksh530 million and also recovered Ksh1.5 billion from Kenyan bank sectors in the previous one year, in the arrangements devised by bank staffs (BFID, 2014). Frauds in the banking industry have gotten to a level at which many stakeholders are losing their trust and confidence in the industry. Central Bank of Kenya (CBK, 2013) fraud data indicates incidences of banking fraud have increased by between 3-5% of entire financial transactions, from as low as 0.5%, in the previous five years (CBK,2009). Other statistics from Central Bank of Kenya's supervision2013, indicates commercial banks makes an average loss of Kenya shillings 100 million to fraudulent activities monthly. Banking fraud experts say the figure may vary, based on the level of exposure of the financial institutions (Gaitho, 2013).

The specific study issues focus on several aspects which include the legal framework constraints that inhibit fraud investigation in the banking sector whereby it elucidates how to create conducive environment in reference to judicial and legal handling of fraud. Another aspect is customer confidentiality which is a sticky issue during banking fraud investigations whereby the banking fraud investigator requires considering all issues objectively when investigating banking fraud. In regard to the aspect of technological limitations the study explores how the banking fraud investigators should go beyond traditional databases and spreadsheets into new banking Fraud investigation technologies.

The importance of the study is that it may in a small way act as a whistleblower to the increasing cases of banking frauds and generate policy input for relevant institutions like Central Bank of Kenya, other associated financial institutions like banking sector and economy of the country at large. Scholars may use the study as a source of knowledge and insight. It may also be used for future research on the effectiveness of fraud investigators in solving fraud cases.

### General Objective

To explore effectiveness of fraud investigators at the banking fraud investigation unit of the Central Bank of Kenya.

### Specific Objectives:

- i. To establish legal constraints that inhibits fraud investigations in the banking sector.
- ii. To assess how customer confidentiality hinders successful fraud investigations in the banking sector.
- iii. To identify the technological limitations that hinder successful fraud investigations in the banking sector.
- iv. To identify mitigation strategies and actions that may be applied by fraud investigators to deter banking fraud.

## LITERATURE REVIEW AND THEORETICAL FRAMEWORK

### Global Perspective of Banking Fraud

Banking fraud is a major problem that affects all continents and various sectors of the economy worldwide, the earliest known bank scams relating to insider trading, accounting irregularity and manipulation of the stock. The banking industry frauds have become more complicated for many years, especially on the areas of technology based services offered to customers, thus costing the banking sector 67 billion every year, as explained by the Association of Certified Fraud Examiners, 2013. It's a clear sign that no one can afford to ignore as several institutions struggle to recuperate from the global financial crisis and the major economies of the world shake on the edge of collapse. Greatest worrying of all, fraud incidences is escalating. In 2014, the United States of America's state of Cyber Crime Survey showed a year-on-year increase of 141 per cent in the number of banking institutions reporting losses of between 10 million and 9.9 million. In reality that figure is likely to be higher because many cases never get referred to external authorities. The most alarming statistic relates to insider fraud. In 70 per cent of cases, the crime was perpetrated by a bank employee. Those with the highest levels of access to IT systems, such as systems and database administrators, are well placed to commit or facilitate it and erase all evidence of their actions. More than 160 fraudulent cases with charges exceeding 100,000 pounds were reported to the UK courts in the first half of the year 2014.

The KPMG (2011) report on the fraud survey in Africa indicates that fraud is one of the main concern among banks in Africa. The respondents of fraud survey in African banks indicates that

they have lost 170,000 U.S .Dollars or more to fraud in the year 2007 (KPMG, 2011). A survey was done by PWC on 33 banks in Tanzania, Zambia, Rwanda and Uganda in the late 2010 and 2011. In this study, the researchers sought to identify the risk identification and risk readiness levels in most local banks (PwC, 2011).

Onodi, Okafor and Onyali (2015) explained the corporate fraud deterrence in Nigerian banks using forensic investigation methods and how it affected the banks operations. The study adopted a survey research design and data were collected through administration of questionnaires and interviews from primary source, while on the other hand secondary source consists of reports on forgery and fraud in the banking sector. The data was analyzed using statistical tools which include percentages, mean score, frequency tables, regression analysis and Z-test. The outcome indicated that there is an important relationship between the forensic investigative processes and Journal of European Accounting, Auditing and Finance, Research and corporate fraud deterrence. The outcome of the findings showed that, forensic investigators expert services are normally required in the prosecution of fraud, however many of the audit and accounting personnel in Nigeria are ineffective as a result of poor perception and knowledge of forensic investigative skills..

Ebimobowei (2011) explained the impact of fraud investigation services in detection of fraud. The collection of primary data was done with the guidance of a highly-structured questionnaire which is divided into three parts directed to twenty-four banks in Port Harcourt, the capital of Rivers State and the gathered data from the questionnaires were descriptively analyzed. The finding clearly discloses that the methodology of fraud investigation may highly impact on the level of fraudulent activities of bank sectors.

In another research from Zimbabwe, Njanike, Mashayanye and Dube (2009) worked on “The effectiveness of fraud investigation in detecting, investigating, and preventing bank frauds”. The study took interest in the investigative skills and efficiency of fraud detectives in the banks. The data was gathered using questionnaire paper, document review and interviews. The research data was collected from thirteen forensic auditors in banking sectors, four building societies, and four audit firms in Harare, Zimbabwe. Forensic auditors used sample of thirty individuals including thirteen from banking sector, four building societies, and four audit firms in Zimbabwe. The findings shows that auditing units faces many difficulties in management of fraudulent activities as their reports are not given clear recognition. The study concluded that fraud investigators need to be facilitated in their investigation work of solving fraudulent activities efficiently. They also need to have a strong professional body that can protect them globally.

The fraudulent crimes in the banking sector have become sophisticated even as the criminals accumulate huge sums of money through such offences as drug trafficking, investments fraud, corruption, embezzlement and tax fraud. Available information showed that the banking industry has the highest level of fraud incidences and loses at least five percent of its annual revenue to fraud (Association of Fraud Examiners, 2010).

### **Overview of Banking Fraud in Kenya**

The Kenyan Banking industry is regulated by the Central Bank of Kenya. All the commercial banks, microfinance institutions, foreign exchange bureaus, mortgage finance companies and

representative offices of foreign banks must operate in accordance to rules and regulations set by Central Bank of Kenya. Any financial institutions established in the country and found not conforming to regulators set standards risk heavy penalty and warnings. The data of December 2010, showed the registered banks in country comprises of 43 bank sectors, foreign exchange bureaus were 126, two microfinance institutions, two offices of foreign banks and only one mortgage finance company (Bank Supervision Report, 2010). The effect of fraud in foreign industry are felt by all, if not as a customer, then, as a citizen of nation. The effect of fraud has a chain reaction on the community as a whole because this industry constitutes a vital position in a community. Every part of the economy, especially the banking sector is punctuated with fraud.

Kenya has the highest level of fraud incidences in East Africa and that the fraud continues to scare away investors and the overall financial intermediation role of commercial banks. Fraud in Kenya contributes to 31.5% of the restraints of global competitiveness. Fraud menaces continue to become a great challenge to the banking sectors management of economic intermediation and encouraging financial growth in Kenya as advanced in the Vision 2030. The increasing rate of the corruption continues to instil fear in investor and consumer confidence and causes a great threat to possible investors in Kenya (PWC, 2011).

Available data from the Banking Fraud Investigations Unit (BFIU), 2014, indicate that fraudulent transactions have resulted to loss of more than Ksh1.5 billion in Kenyan banking sectors in the previous year, in an arrangement made possible by computer experts bank staffs. However, investigators managed only to recover a mere Sh530 million with many proceedings taking place in judiciary and many others still under probe by investigators. Many of the fraudulent activities reported to fraud investigators have the staffs of banks and outsiders who are mostly a compliance of fraudsters at the banks. Increasing cases of cyber-crime and fraud means that financial industry is supposed to urgently capitalize in prevention and detection machineries as current fraudsters are increasingly sophisticated (BFID, 2014). The investigation agency in view of prevalent fraudulent activities targeting top banking sectors in industry, must be on high alert to safeguard depositor's money. In the year 2012, customers at Standard Chartered were subject to fraudulent activities. They realized unauthorized transactions on their accounts. The Standard Chartered had to quickly inform all their clients (Deloitte, 2013).

### **Legal Constraints on Banking Fraud Investigations**

Banking fraud investigation personnel takes interest of both the evidence of reporting and witnesses accounts of financial transactions which is reflected in the books of accounts and legislative framework that support presentation of crucial evidence for the purposes of creating transparency (Sakar, 2010). Their duties entail receiving and investigating fraud complaints from commercial banks and other financial institutions, to sensitize the public on common types of frauds and to liaise with other law enforcement agencies on financial fraud prevention strategies in the banking sector. The judicial system has not been of much assistance in curbing fraud cases in that the crime of fraud is bailable offences hence criminals continue committing fraudulent activities knowing the leniency. Gottschalks, 2011 states that prosecution of fraud requires due process of law that involves long process before criminals are arrested. In most cases lack of conclusive evidence gives criminals benefits of doubts hence offenders acquitted of the charges.

The collection and preparation of evidence is crucial to understanding the fraud elements or misappropriations and it is expected to support the end result reached by the fraud investigation team. The crime of fraud can often span more than one jurisdiction, particularly where it involves multinational organizations such as large banks that have operations in numerous countries, or where elements of the fraud are directed from or carried out in another part of the world. Where frauds are carried out using digital information systems, it is possible that the activity may technically have taken place in more than one jurisdiction and so different countries' legal authorities could become involved. In practice, legal authorities have demonstrated in recent cases that they are prepared to claim jurisdiction over activities that involved perpetrators operating from other territories, especially where these crimes involved global financial markets (Gottschalks, 2011).

The banking fraud investigators may be required to use computer-assisted data analysis or computer forensic procedures based on the nature of the allegations, the results of the procedures performed and the goals of the investigation. Every evidential, documentary and informative reports require court orders to obtain and must be documented chronologically in an inventory or log. Various examples of documentary evidence include: Letters and correspondence all in digital form either in e-mails or information in personal computers. Computer files and other financial or digital records (Siriganga, 2014). Information technology or systems access records. For admissibility purpose it's necessary to keeping time frame logs and important items such as security camera, videos obtained or access badge records secured properly. In addition, internal phone records, Customer or vendor information's which may be in the public knowledge, such as contracts and payment information should be securely guarded.

### **Customer Confidentiality and Banking Fraud Investigations**

Confidentiality is a cornerstone of the bank-customer relationship. The issue of customer confidentiality begins to become sticky during investigations of bank fraud due to strict non-disclosure of customers information by the concern banks and the privileges of banking fraud investigators to obtain and collect required information about customers which may include the disclosure of personal information. The ethics and Code of Conduct establishes the standards that govern the way the banks do business with each other, their clients, stakeholders, governments' agencies and the entire general public. The banks are required to comply with the set standard of rules as part of the regulations and conditions of operations. When banks are involved in fraud, it makes them to be extremely secretive so as not to be easily detected. This argument to protect confidentiality requirements may result in frauds that are very difficult to notice based on the standards that most banks that are engaging in fraudulent activities are putting in place their best efforts to ensure that they are detected and deterrence measures put in place so that bank-customer relationship is improved, banking fraud investigators may not be in position to identify fraudulent activities unless there is cooperation from banking sectors. These statements are easy to defend rationally and ethically (Muthasamy, 2010).

It is common to receive strong protests from banking industry against changing customer's standards of confidentiality, even in cases of customer fraud. However, the adverse audit opinion of consequences of fraud extend beyond job loss, jail term and fines. Moreover, the means of

unearthing fraud may include employee leaking crucial information, audits trails and enraged customers. Proponents of complete confidentiality in the banking sector normally assert that, breaching customer information's without their consent in matters of fraud will undermine the commitment of customers to cooperate. Faced with the risk of exposure, customers may devise in yet more deceitful methods to hide the fraud, which the auditors will be unable to find (Muthasamy, 2010). The impact to banks that are suspected of fraud, but later found not to be accountable, may be significant and unwarranted. Moreover, the seriousness of the accusations of financial crimes and confidentiality breaches are very sensitive issues which the banking fraud investigator requires to consider objectively when investigating banking fraud.

### **Technological Limitations on Banking Fraud Investigations**

Banking Fraud investigations deals with complex frauds where criminals use high technological skills to commit crime. In the current technological era youngsters are very well acquainted with information technology knowledge and most of Banking fraud investigation personnel's lack such skills. Lack of digital and forensic understanding makes it difficult for investigators to collect and preserve computer generated evidence. According to an IBM report 2016, banks generate volumes of data on daily basis that greatly impact on the effectiveness of how such information is synthesized and interpreted in terms of fraud and corruption risks. This requires going extra miles beyond traditional databases and books of account, new banking Fraud investigation technologies are required today to facilitate banking fraud investigators to keep pace with ever increasing data volumes as well as regulatory complexities (Siriganga, 2014).

As banking become increasingly dependent on technology and in the absence of a countervailing strategy, the information technology department in the banking sectors are expected to constantly monitor any suspicious activities on the institutions systems. Any threat to the computer systems increases more opportunities for fraudsters to gain access to critical systems. It also makes it harder for banks to have a clear overview of all the activity taking place on their systems. Complexity in bank systems can be seen in the growing number of channels through which banks now deliver their services including websites and online banking platforms, mobile apps and social networks. All these channels represent a new set of opportunities for fraudsters to gain access to the bank's information system.

The major factor in enhancing fraud is the continuous advancement in information technology. According to Sirigaga, 2014, the easier things become, the more it is for fraudsters too, hence the cost of perpetrating fraud using available technology is very minimal. The technological advancement has turned the world to a global village where there is no physical boundaries hence fraud can be perpetrated in a very far places. The gains from fraudulent transactions can be accessed with lots of ease. For example, using electronic money transfer. There are so many user points globally where such frauds can be committed. Most of the technological fraudsters are youths with highly developed minds and greatly influenced by other successful peers. As a result of a continuous process of technological development, fraudulent act is being detected and prevented but other methods are being developed.

Banks' information technology system has become more complex as new information systems are implemented on top of older systems, building up layers of technology that do not necessarily link

together and so make it much more difficult to gain a unified view of operations. As mainframes have given way to network computing, critical systems have also become more distributed today even a relatively small institution will have multiple databases running on different servers that are accessible to a large number of staff. Complex and highly distributed IT systems are difficult to police and present more opportunities for fraudsters to gain entry. Modernizing the legacy systems on which many banks still depend can also increase their ability to detect fraud, a factor that is often overlooked. From online banking platforms to mobile apps and social networks, a growing number of new channels make it harder for banks to have a clear overview of all the activity taking place on their systems.

### **Investigation Mitigation Strategies**

The following are some strategies that should be employed by the banking sector to avert fraud as well as putting strategy on how to prevent frauds:

#### **Auditing**

Internal and external auditing or oversight by the banking fraud investigator of the banks financial records and reports is a key approach to deception reduction (Wells, 2014). Sign regarding reviewing shows that numerous banks in fact need audits even in the presence of rule necessitating it (Wallace, 2013). This is in accordance with agency and information concept, which specify that auditing is a significant component in decreasing agency difficulties and on condition that full information is given to owners (and not only to regulators).

#### **World Bank Fraud Detection and Deterrence Rules**

The main goal in the modernization of the banking industry in Kenya has been the obligation of World Bank rules for growth and lending (McGee, 2012). Hence, World Bank rules are expected to be very relevant for the growth of fraud discovery systems in the Kenyan bank. The World Bank has its particular chains of guidelines for fraud and bribery prevention and exposure in World Bank projects. They include detailed anticorruption plans projected to address corruption in the bidding and loan developments in general bank processes and case studies that highlight where and when fraud may be found (Aguilar et al., 2011). The procedures also include a detailed ethical guidance for bank staff aimed to address problems of ethical requirements by bank employees. The banking fraud investigations require that the bank follows these rules.

### **Theoretical Framework**

#### **Rational Choice Theory**

Rational choice theory, “examines the choice to break rules from the perspective of individual incentives and calculations. It comprises a principle agent concept, according to which every individual player acts in the best views of his/her own (Alemann 2005). According to Leti et.al,

1990, Lindenberg, Simpson, 2001 the basics of this particular concept are divided from economics of neoclassic model. Basing their views on a variety of different concepts, Debra Friedman and Michael Hechter (1988) have laid together what they labelled as “skeletal” concept of rational choice theory. The emphasis on rational choice concept is on the individual committing crime. Perpetrators are perceived as being purposive, or as taking intentionally, meaning actors have final goal towards which their actions are aimed. The issues of importance are the fact that the action is carried out to achieve purposive goals that are inconsistent with an actor’s preference of choice. The main focus of rational choice model is to understand why individual’s offenders decide to commit a particular crime. Individuals chose to engage in commission of crime because it can be gainful, easy, satisfying and fun for others. The central premise of this model is that people are natural beings whose behavior can be controlled by an existence of tough punishment. According to a rational choice perspective fraud is an outcome of an overarching “staleness,” following monopolies, choice, and a lack of transparency management system. Assumption of rational choice theory on fraud is that an actor ultimately takes into consideration the cost benefit relationship, which hinges first and foremost on economic factors. Klitgaard (1998) correspondingly states, Fraud is a crime of calculation, not of passion. This rational choice assumption regarding the causes of fraud is binding everywhere, because whether in the public or the private sector, fraud is likely to occur when an organization or a person has a monopoly on power over resources and this is combined with discretion and a lack of accountability (Klitgaard, 1998). Rational choice theory may, provide insights into decisions to act fraudulently. If rational choice theory can be applied to fraud, it might help to explain why weaknesses in any given institution contributes to fraud, and it might help to point out which areas need to be strengthened in order to combat fraud.

### **Fraud Triangle Theory**

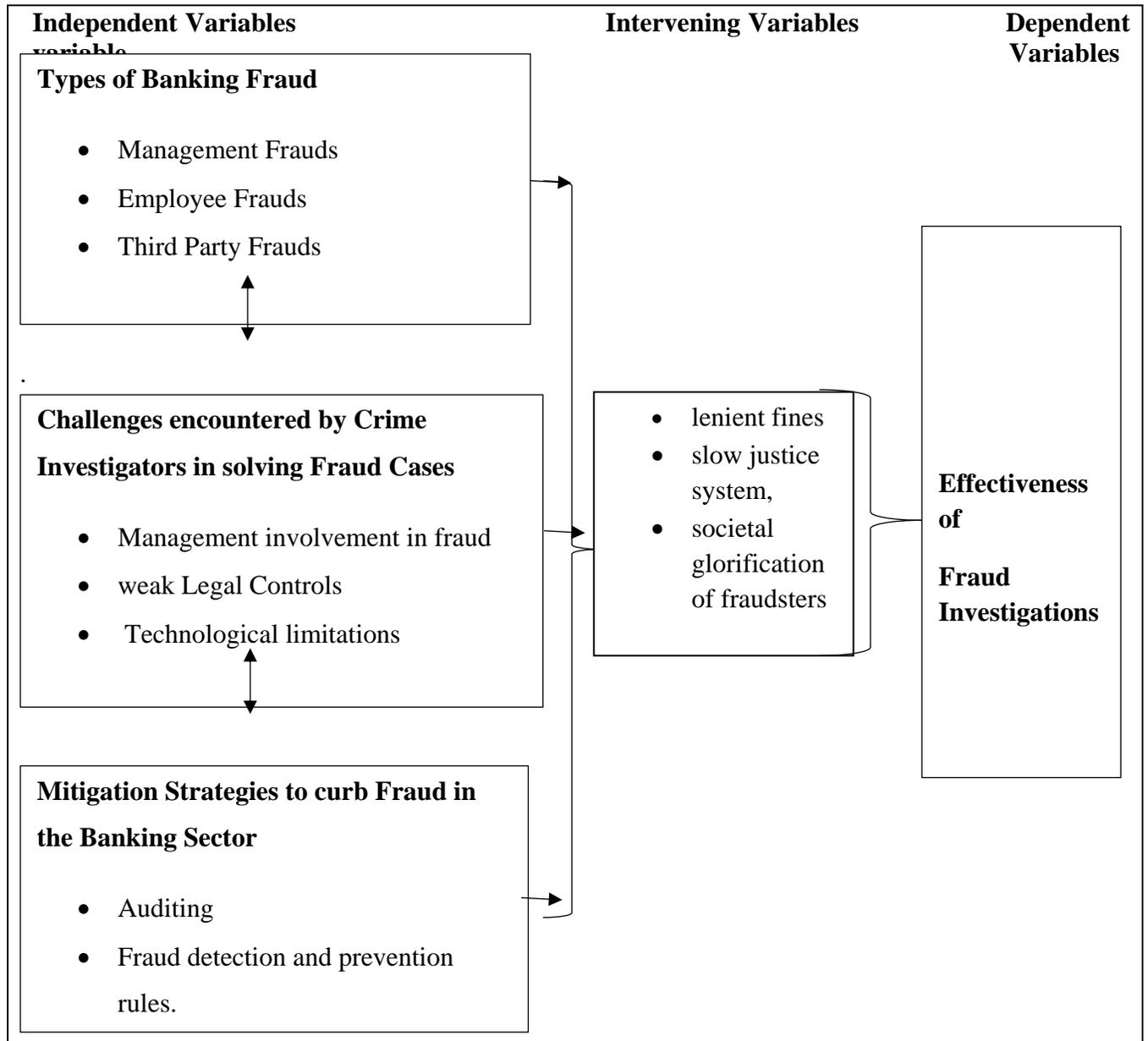
The fraud triangle concept was advanced by criminologist Donald Cressey in the year 1973. He opined that, “Trusted persons become trust violators when they conceive of themselves as having a financial problem which is non-shareable, are aware that this problem can be secretly resolved by violation of the position of financial trust and are able to apply to their own conduct in that situation verbalizations which enable them to adjust their conceptions of themselves as trusted persons with their conceptions of themselves as users of the entrusted funds or property” Donald Cressey explained the main elements that lead to fraudulent activities and other unethical undertakings. The factors that makes individuals to engage in fraud under the fraud triangle model includes: - pressure to commit financial misappropriations. Individuals are either pushed by emotional forces towards fraud or other non- shareable financial difficulties. Another factor is the availability of an opportunity to execute plan without being caught. Once the opportunity avails itself individuals immediately exploit such opportunities to engage in financial fraud. The other factor of fraud triangle is the rationalization. Individuals usual gives personal justification of dishonest action. Individuals who is trusted by management to work in a critical section of the organization does not invest a new rationalization for violation of trust but rather exploit the situation to his own advantage. Position of trust and trust violations is usually acquired by the fraudulent individual from another person who have had prior experience with the similar situation. For an individual to effectively commit frauds all the three factors, that is, pressure, opportunity and rationalization must be present.

Fraud Triangle has been used to expound the nature of fraudulent engagement by perpetrators of crimes for many years. However, in summarizing his study Cressey (1973) ideas indicates that the fraud triangle concepts is inadequate in its practical use for deterrence and finding of trust violation such as fraud or for dealing with arrested criminals. Wells (2005) has also echoed the similar sentiment that the fraud model has had little impact when it comes to fraud prevention, Hence, the fraud concept may not be alleged to be analytical; rather it is a imaginative model (Day, 2010).

### **White Collar Crime Theory of Fraud**

Edwin Sutherland in 1939 was the first to explain the terminology White collar crime. It refers to a criminal act committed by a person of high moral standing in the society and high social status in the course of his professional occupation (Sutherland, 1949). Sutherland was mainly interested in two fields, crime and high society which has no previous empirical correlation. White-collar crime characteristics and motives are completely different from common street criminals. The loss incurred when white-collar crime is successfully committed is huge and has serious implication on affected organization. This theory assumes that judicial system is more lenient on perpetrators of crime as opposed to streets criminals. The focus of Sutherland was to prove a link between money, social status and likelihood of going to prison for a white-collar crime as the percentage of individuals in upper class committed to jail is very low.

## Conceptual Framework



The banking industry has the highest fraud incidences and loses at least five percent of its annual revenue to fraud (Association of fraud examiners, 2010). Bank fraud refers to all forms of frauds committed against banks either by people from inside or outside the bank (wells, 2007). The three independent variables can manipulate the dependent variable in the following ways:

The major schemes of fraud affecting banks are management fraud, employee fraud and third-party fraud (PWC Global Economic crime survey, 2011). There is therefore a dire need for competent banking fraud investigators who are effective and proactive to investigate fraud. However, the investigators are met by challenges which hinder them from being effective in their

work. These challenges include; organization perception of fraud, rationalization, management involvement, Judicial systems and technological limitations. Banks are hesitant to report fraud due to perceived damage to their reputation and exposure of their internal controls to public scrutiny (Norton, 1994, PWC Risk Survey, 2011). The Judiciary systems are poorly equipped and incapable of bringing perpetrators of fraud to trial (Norton, 1994). Systems are slow and the fines are lenient compared to the value of fraudulent activities. These challenges affect the effectiveness of fraud investigators in curbing fraud in the banking sector.

The strategies used to curb fraud in the banking sector have a great influence on the effectiveness of fraud investigators in curbing fraud. Banks should have strong auditing system to curb fraud. Internal and external auditing and oversight by the banking fraud investigators of the banks financial records and information is the main method to fraud reductions. Fraud detection and prevention rules by World Bank for fraud and corruption detection should be adopted by banks. The rules includes: - detailed strategies and strict policies planned to address bribery in the bidding and procedures in overall bank operations and ethical guidance for the staffs. These strategies should be introduced in the bank by the management which should be in the forefront to implement these strategies to curb fraud. According to a KPMG Fraud and Misconduct Survey 2010, a majority of bank managers do not consider fraud as a significant problem for their own organizations. The global financial crisis caused by large frauds, particularly after many highly publicized cases has resulted in lower investment for fear of increased levels of fraud and inevitably inhibit the effectiveness of fraud investigators in curbing fraud.

## RESEARCH METHODOLOGY

### Site Description.

The study was conducted at the banking fraud investigation unit attached to the Central Bank of Kenya. The Central bank of Kenya head office is located along Haile Selassie, Nairobi. It has branches in Kisumu, Mombasa and Eldoret. There are also currency centers in Nakuru town, Nyeri town and Meru. The main function of the bank is to formulate and implement monetary policy directed to achieving and maintaining stability in the general level of prices, to foster the liquidity, solvency and proper functioning of a stable market-based financial system, to formulate and implement foreign exchange policy, to hold and manage its foreign exchange policy, to formulate and implement such policies as best promote the establishment, regulation, and supervision of efficient and effective payment, clearing and settlement system and to act as banker and adviser to, and as fiscal agent to the Government, and to issue currency and coins. The Banking Fraud Investigation Department is headed by Director, assisted by deputy assistant director and other investigators. They mainly focus on fraud cases in the banking sector and other Government Departments. Their main functions include recovery of stolen funds and assets with a view of restituting the same to the rightful owners through the legal system, to receive and investigate fraud complaints from commercial banks and other financial institutions, to liaise with other law enforcement agencies on financial fraud prevention strategies and to sensitize the public on common types of frauds.

### Research Design.

A research design is the way in which you plan to carry out the research, similar to that of a blueprint (Mouton, 2012). The study adopted descriptive survey design that comprises of a mixture of both quantitative and qualitative research. A descriptive survey design involves collection of data without manipulation. Quantitative research intentions is to describe and predict concepts that can be generalized to other people and places. It purposively measures the variable(s) of interest, which are well-known, advanced, and standardized with attention to validity and reliability. Quantitative research characteristically reduces the data to means, medians, correlations and other summarizing statistics (Leedey, 2014). A qualitative research design on the other hand, lends itself to a better understanding of peoples' experiences and a specific phenomenon. The qualitative design is more flexible and less formalized than a quantitative design (Leedey, 2014). Using both of these paradigms allowed the research information to be enhanced and the researcher to accumulate as much information as possible on the topic. It allowed for both statistical information as well as personal views from various individuals in the banking sector to be synthesized. The survey method was appropriate for this kind of study as it provides a quantitative and qualitative description of attitudes, experience and opinions of the sample population (Creswell, 2013)

### Unit of Analysis and Observation.

Unit of Analysis is what or who is being analyzed by the study (Gay, 2013). The unit of analysis in this research is the Banking Fraud Crime Investigation, whereas the unit of observation is the banking fraud Investigators who are conversant with fraud cases and are additionally charged with the responsibilities to advise the financial industry on fraud prevention and detection strategies. The target population was able to give reliable and valid information which the study used to address the research question.

### Sample Size and Procedure.

A sample is a representative part of a population, thus by studying the sample one can know about that population without having to study the whole population (Gay, 2013). The purpose of sampling is to secure a representative group which enables the researcher to gain information about a population. The most convenient sampling method is stratified random sampling technique which was used to choose the main respondents for detailed interviews. Gay (2013) recommends that once the target populace is small (less than 1000 members), a least sample of 20% is acceptable for educational research. A sample is a portion of large population, which is thought to be representative of the larger population. Sampling is that part of statistical practice concerned with the selection of individual observations intended to yield some knowledge about a population of concern, especially for the purposes of statistical inference (Mugenda, 2012).

### Sampling Procedure

Rank	Target Population	Proportionate Sample	Percent
Senior management	10	4	13.3
Middle level management	15	7	23.3
Other Employees	40	19	63.4
<b>Total</b>	<b>65</b>	<b>30</b>	<b>100</b>

The study used stratified random sampling to select the respondents working in the banking fraud investigations unit that participated in the study. A sample of 30 respondents was used. The researcher purposively targeted senior management, middle level management and other employees in the banking fraud investigations unit since they have relevant information to the study.

#### **Data Collection Methods and Instruments.**

The instrument of data collection was primary data through interview and structured questionnaire. The questionnaire comprised of three parts. Part (a) covers social demographic data, part (b) covers data that help in answering question relating to the effectiveness of fraud investigators at the Central Bank of Kenya's banking fraud investigation unit and part(c) addresses key informants guide.

#### **Data Analysis.**

Qualitative and quantitative data analysis methods were employed. Quantitative data explains and predicts concepts that can be generalized to other people and places. It objectively measures the variable(s) of interest, which are identified, developed, and standardized with attention to validity and reliability. Qualitative data on the other hand, lends itself to a better understanding of peoples' experiences and a specific phenomenon (Leedey, 2014). Descriptive statistical computation of data from the questionnaire was entered into the computer for analysis. The statistical package for social science (SPSS version) was used to get frequency distribution and percentages. The data was summarized using tables and diagrams.

### **DATA ANALYSIS, PRESENTATION AND INTERPRETATION**

#### **Effectiveness of Banking Fraud Crime Investigators in Solving Fraud Cases**

To establish the effectiveness of Banking Fraud Crime Investigators in solving Fraud Cases, respondents were asked to rate over a five-point Likert scale on the same with attributes of insufficient sentences to convict fraud perpetrators, lack of technological skills in computer crimes, Customer confidentiality, weak legal framework and lack of mitigation strategies .to reduce increasing cases of frauds. They were to use a five-point Likert scale where 5=Strongly Agree and 1= Strongly Disagree. The responses are shown in the table 4.4 below.

After the results, a majority of the respondents 63% agreed that the sentence being awarded by courts to fraud convicts is insufficient. A majority of the respondents 56.7% also agreed that most Fraud investigators don't have technological skills in computer crimes. A majority of the respondents 46.7% also agreed that Customer confidentiality hinders successful investigations of banking frauds. A majority of the respondents 36.7% also agreed that the Kenyan legal framework is weak hence increasing fraud. A majority of the respondents 50% disagreed that there are no mitigation strategies put in place by fraud investigators to reduce increasing cases of frauds. These findings portray that the respondents have knowledge of the effectiveness of fraud investigators in solving fraud cases and therefore solutions to these challenges need to be established.

**Effectiveness of Fraud Investigators in Solving Fraud Cases**

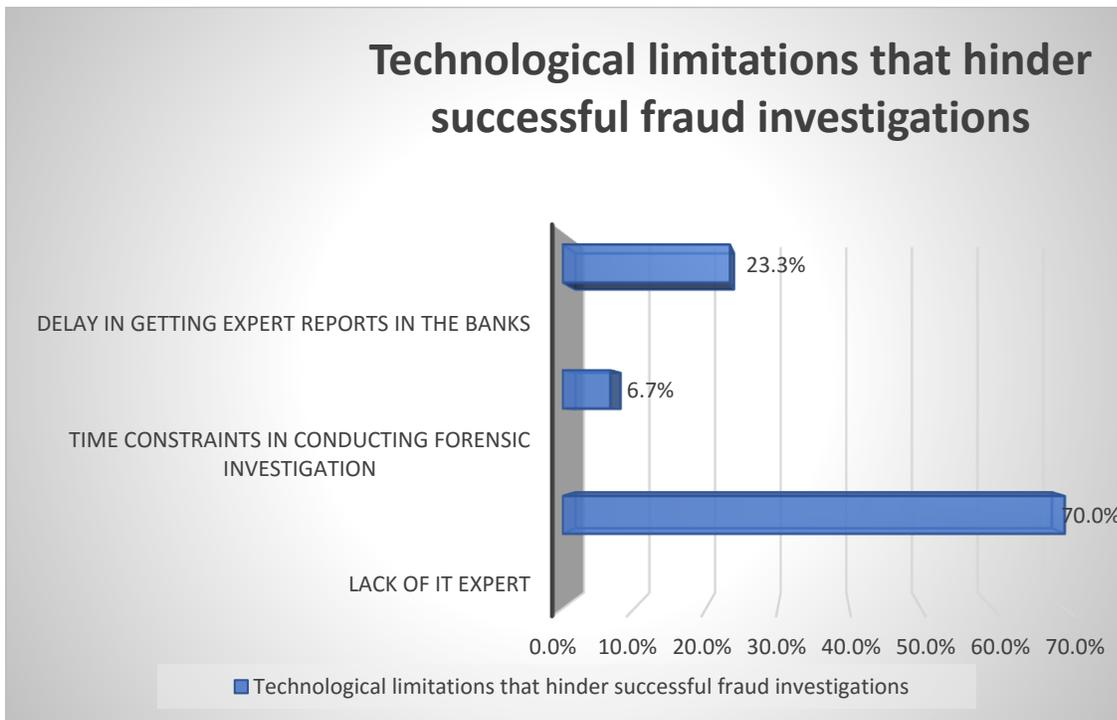
Effectiveness of fraud investigators in solving fraud cases	Strongly disagree		Disagree		Neutral		Agree		Strongly Agree		Total %
	frequen cy	%	frequen cy	%	frequen cy	%	Frequen cy	%	frequen cy	%	
The sentence being awarded by courts to fraud convict is insufficient	1	3.3	3	10.0	2	6.7	19	63.3	5	16.7	100
Most Fraud investigators don't have technological skills in computer crimes	3	10.0	4	13.3	4	13.3	17	56.7	2	6.7	100
Customer confidentiality hinders successful investigations of banking frauds	1	3.3	7	23.3	3	10.0	14	46.7	5	16.7	100
Kenyan legal framework is weak hence increasing fraud	2	6.7	5	16.7	3	10.0	11	36.7	9	30.0	100
There are no mitigation strategies put in place by fraud	1	3.3	15	50.0	5	16.7	7	23.3	2	6.7	100

investigators to reduce increasing cases of frauds.											
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### Technological Limitations that hinder successful Fraud Investigations

The study sought to find out the technological limitations that hinder successful fraud investigations. From the findings, a majority of the respondents 70% identified lack of IT experts as a technological limitation that hinders successful fraud investigations, 23% identified delay in getting expert reports in the bank and 6.7% identified time constraints in conducting forensic fraud investigation. The findings are presented in the figure below.

### Technological Limitations that hinder Successful Fraud Investigations

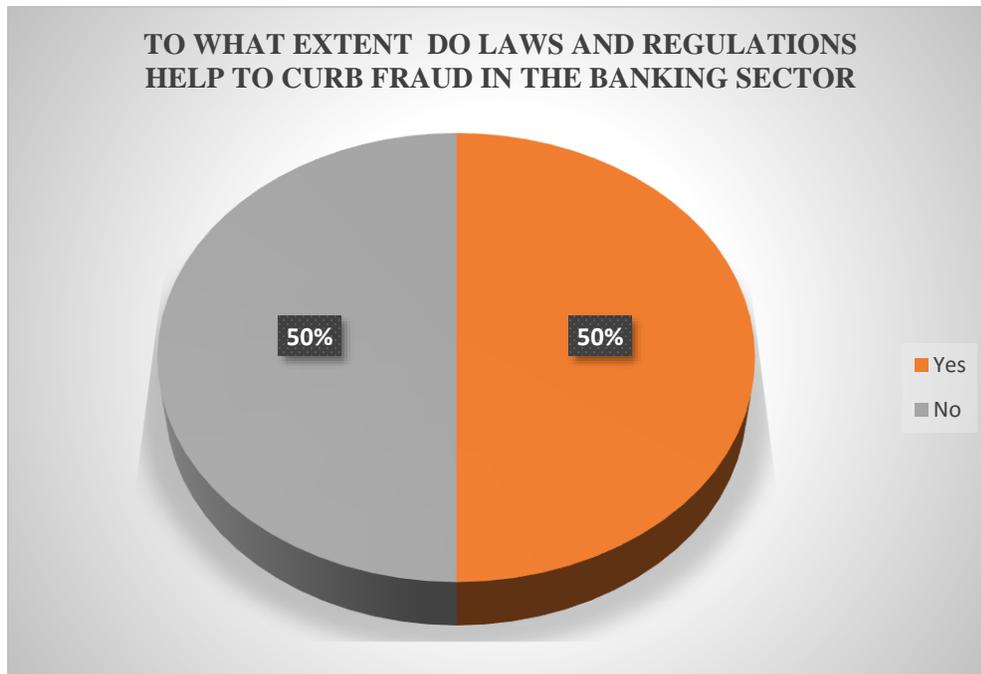


The findings depict that the biggest technological limitation is lack of IT experts who are conversant with current technologies and delay in getting expert reports in the bank. Banking Fraud investigation technologies are required today that enable banking fraud investigators to keep pace with increasing data volumes as well regulatory complexities. The experts required are those with vast knowledge in the field of information technology and the law regarding prosecution of cybercrimes. Time constraint was also identified as a technological limitation by the respondents with some sighting investigating and getting proper evidence in banking fraud cases to be too time consuming.

### Fraud Laws & Regulations that may help to curb Fraud in the Banking Sector

The study sought to find out whether fraud laws & Regulations in Kenya helping to reduce Fraud in the banking sector. From the findings, 50% respondents believed the fraud laws & Regulations in Kenya are helping to reduce Fraud in the banking sector while 50% of the respondents were of the opinion that they are not. The findings are stipulated in the figure below.

### Extent of Rules and Regulations in curbing Fraud in the Banking Sector

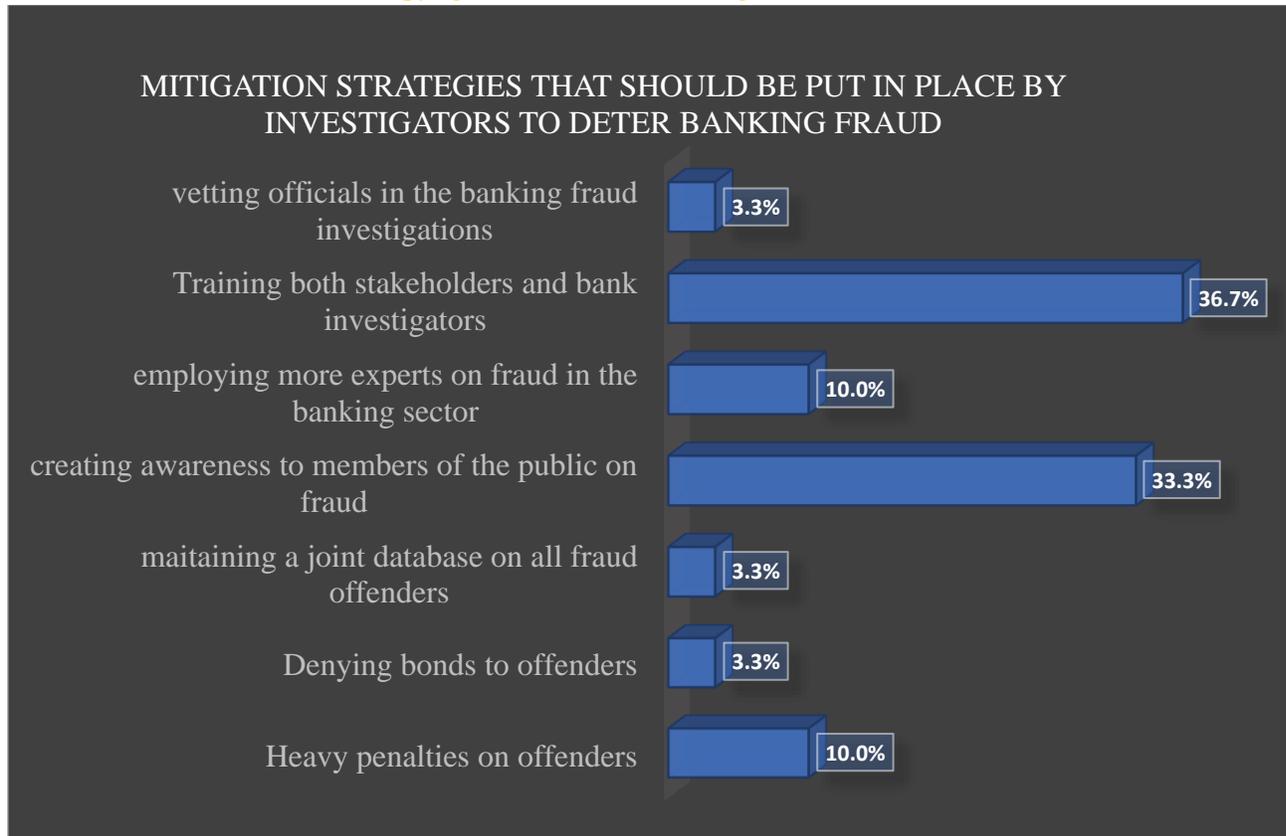


These findings illustrate that the laws and regulations available in the Kenyan constitution cannot be relied upon completely to curb fraud in the banking sector. Further there is a need to create better laws and regulations in the area of fraud to help investigators in their fight against fraud in the banking sector.

### Investigation Mitigation Strategies

The study sought to establish what mitigation strategies should be put in place by investigators to deter banking fraud. From the findings, 10% of the respondents suggested that heavy penalties on offenders. 3.3% of the respondents suggested denying bonds to offenders. 3.3% of the respondents suggested maintaining a joint database on all fraud offenders. 33.3% of the respondents suggested creating awareness to members of the public on fraud. 10% of the respondents suggested employing more experts on fraud in the banking sector. 36.7% of the respondents suggested training both stakeholders and bank investigators and 3.3% of the respondents suggested vetting officials in the banking fraud investigations. The findings are stipulated in the figure below.

### Investigation Mitigation Strategies



The findings illustrate training both stakeholders and bank investigators are a key mitigating factor in the fight against banking fraud. Moreover, creating awareness to members of the public on fraud was also identified as a major mitigation strategy that should be put in place by investigators to deter banking fraud.

#### **Effectiveness of Fraud Investigators.**

The study sought to assess the effectiveness of fraud investigators at the banking investigation unit. From the findings; 20% of the respondents cited insufficient laws in the Kenyan constitution to prosecute fraud, 13.3% identified heavy workloads, 16.7% identified lack of team work between the investigators and bank management, 20% identified lack of expertise in information technology, 10% cited prosecution of fraud cases takes long, 16.7% identified Witnesses lack willingness to testify and 3.3% identified lack of resources to conduct investigations. The findings are stipulated in the table below.

**Effectiveness of Fraud Investigators at the Banking Investigation Unit**

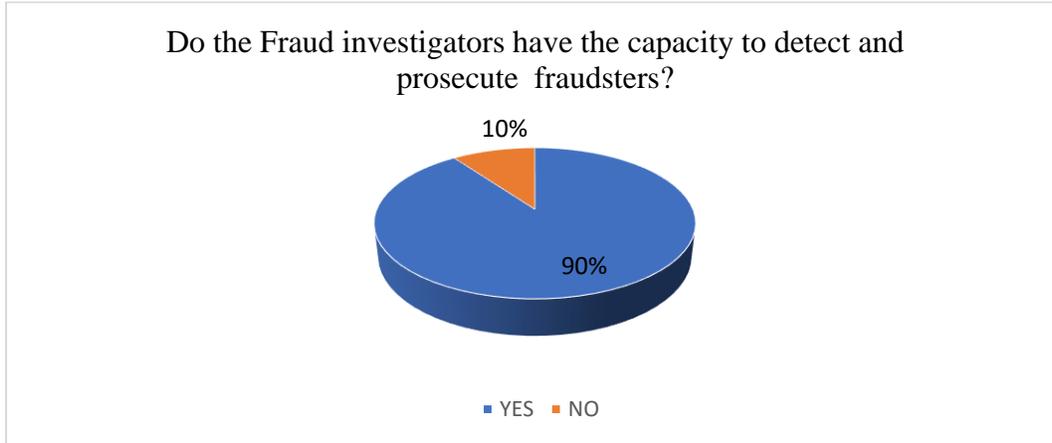
<b>Effectiveness of Fraud investigators at the Banking Investigation Unit</b>	<b>Frequency</b>	<b>percentage %</b>
Insufficient laws in the Kenyan constitution to prosecute fraud	6	20
Heavy work loads	4	13.3
Lack of team work between the investigators and bank management	5	16.7
Lack of expertise in information Technology	6	20
Prosecution of fraud cases takes long	3	10
Witnesses lack willingness to testify	5	16.7
Lack of resources to conduct investigations	1	3.3
<b>Total</b>	<b>30</b>	<b>100</b>

The findings of the study demonstrate that insufficient laws in the Kenyan constitution to prosecute fraud cases and lack of expertise in information technology are the most prevalent challenges encountered by the banking investigation unit. The lack of willingness to testify by the witnesses and lack of team work between the investigators and the bank management were also common challenges identified by the respondents. These challenges need to be alleviated.

**Capacity of Fraud Investigators to Detect and Prosecute Fraudsters.**

The study sought to assess whether the Fraud investigators have the capacity to detect and fight fraud. From the findings, a majority of the respondents 90% said the fraud investigators have capacity to detect and fight fraud while 10% said they don't have. The findings are stipulated in the figure below.

### Do Fraud Investigators have the Capacity to Detect and Prosecute Fraudsters?



This finding illustrates that fraud investigators have capacity to detect and prosecute fraud.

### Remedies for Fraud in the Banking Sector

The study sought to evaluate the remedies for fraud in the banking sector. From the findings, 20% of the respondents identified creating awareness on safeguarding bank credentials, 30% identified tightening internal control systems in the bank, 10% identified having special courts to prosecute Fraud, 33.3% said having frequent training on Fraud and 6.7% reviewing the legal framework on fraud. The findings are stipulated in the table below.

### Remedies for Fraud in the Banking Sector

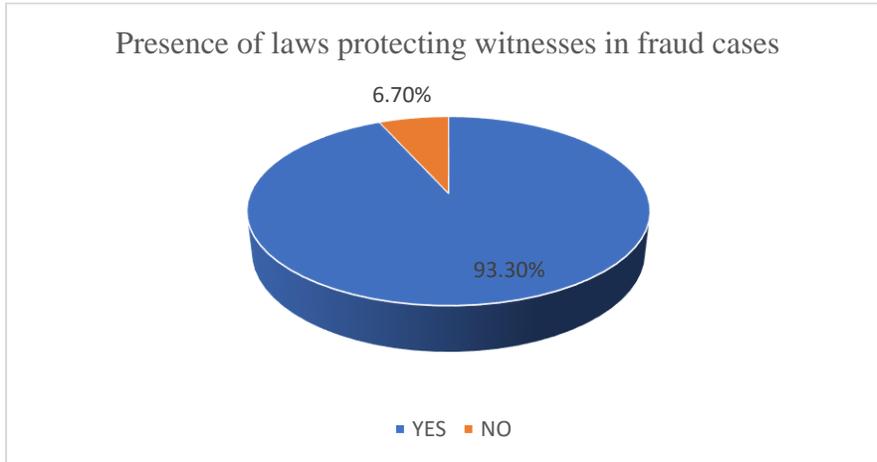
Remedies for Fraud in the Banking Sector	frequency	percentage %
Creating awareness on safeguarding bank credentials	6	20
Tightening internal control systems in the bank	9	30
Having special courts to prosecute Fraud	3	10
Frequent training on Fraud	10	33.3
Reviewing the legal framework on fraud	2	6.7
<b>Total</b>	30	100

This finding establishes frequent training on fraud, tightening internal control systems in the bank and creating awareness on safe guarding bank credentials as the most recommended remedies for fraud in the banking sector.

### Laws Protecting Witnesses in Fraud Cases

The study sought to find out whether there are laws that protect witnesses in fraud cases. From the findings, 93.3% of the respondents said the laws to protect witnesses in fraud cases do exist while 6.7% said those laws don't exist. The findings are represented in the figure below.

#### Laws that Protect Witnesses in Fraud Cases

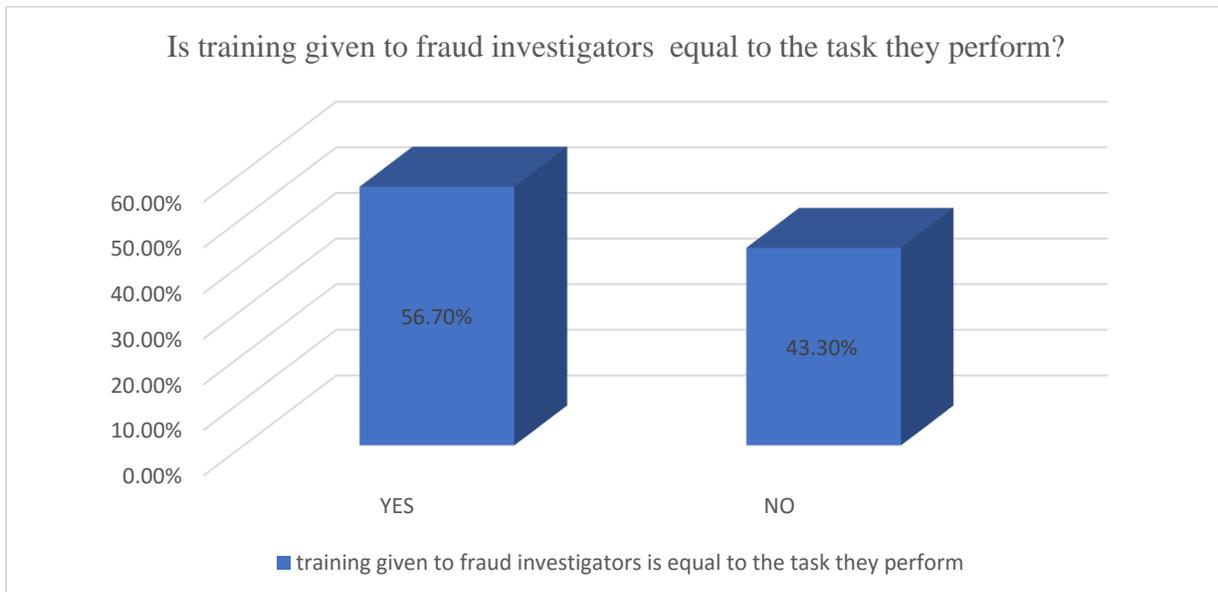


From this finding, it is evident that the laws protecting witnesses in fraud cases are present.

### Effectiveness of Fraud Investigators' Training

The study sought to find out whether training given to fraud investigators is equal to the task they perform. From the findings, 56.7% of the respondents said the training given to fraud investigators is equal to the task they perform while 43.3% said they are not. The findings are represented in the figure below.

#### Effectiveness of Fraud Investigators' Training.



This finding stipulates that the training given to fraud investigators to some extent is sufficient but to another extent there are needs to better train especially in areas of technology.

### **Conclusion of the Findings**

All the questionnaires were returned therefore the response rate was 100%. The sample was well distributed across various age groups; therefore, the response represented the views of employees with different experience on the subject matter. The sample selection procedure used ensured that the gender factor was well represented; hence the responses captured both genders. The findings indicate that the bank prefers to employ married people rather than single people. This could be because the working in the central bank demands a lot of commitments in handling issues and married people are believed to be dedicated and stable and are therefore expected to handle their job with maturity. The sample was well distributed among employees who have work experience of between one and above eleven years and therefore they were able to give the appropriate response required for the study. A majority of the respondents had university education. This shows that the banking fraud unit prefers hiring employees who are more educated.

The study sought to establish the Effectiveness of Fraud Investigators at the Banking Fraud in solving Fraud Cases; from the findings the respondents have vast knowledge of these Challenges. The findings further depict that the biggest technological limitation is lack of IT experts who are conversant with current technologies and delay in getting expert reports in the bank. Time constraint was also identified as a technological limitation by the respondents with some sighting investigating and getting proper evidence in banking fraud cases to be too time consuming. The findings also illustrate that the laws and regulations available in the Kenyan constitution cannot be relied upon completely to curb fraud in the banking sector. Further there is a need to create better laws and regulations in the area of fraud to help investigators in their fight against fraud in the banking sector.

The findings further established that training both stakeholders and bank investigators, tightening internal control systems in the banks and creating awareness on safeguarding bank credentials are key mitigating factors in the fight against banking fraud. Moreover, creating awareness to members of the public on fraud was also identified as a major mitigation strategy that should be put in place by investigators to deter banking fraud. Nevertheless, the respondents were of the opinion that fraud investigators have capacity to detect and prosecute fraud. The study established that the laws protecting witnesses in fraud cases are present.

## **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **Legal Constraints that inhibit Fraud Investigations in the Banking Sector**

The study established the following legal constraints; the sentences being awarded by courts to fraud convicts are insufficient, that the Kenyan legal framework is weak hence increasing fraud, heavy workloads and lack of team work between the investigators.

The legal system causes or encourages fraud in that most fraudulent cases are bail able offences, hence perpetrators in most cases get off the hook even when caught. Fraud prosecution requires due process of the law. This involves a careful but very long investigation process before the culprits are brought to book (Gottschalks, 2011). Sometimes when suspects or known fraudsters are arrested, they are discharged by the court for lack conclusive evidence.

The crime of banking fraud can often span more than one jurisdiction, particularly where it involves multinational organizations such as large banks that have operations in numerous countries, or where elements of the fraud are directed from or carried out in another part of the world. Where frauds are carried out using digital information systems, it is possible that the activity may technically have taken place in more than one jurisdiction and so different countries' legal authorities could become involved.

The study also established that there are laws present in the Kenyan constitution that protect witnesses in fraud cases.

### **Customer Confidentiality in relation to Successful Fraud Investigations in the Banking Sector**

The findings of the study demonstrated that customer confidentiality hinders successful investigations of banking frauds. Confidentiality is a cornerstone of the bank-customer relationship. The issue of customer confidentiality begins to become sticky during investigations of bank fraud due to how information is collected and stored and the rights of banking fraud investigators to access and correct information about customers which may include the disclosure of personal information. The Code of Conduct and Ethics (Code) establishes the standards that govern the way the banks deal with each other, their, customers, shareholders, governments, regulators, suppliers, competitors, the media and the public at large. The banks are required to comply with the Code as part of the terms and conditions of operations. When banks are engaged in fraud, it behooves them to be as secretive and competent as possible. This argument to protect confidentiality standards will result in frauds that are more difficult to detect seems and are based on the principles that banks that are engaged in fraud are making their best efforts to avoid detection and that if banks are forced to become better at fraud, banking fraud investigators will be unable to detect it.

## **The Technological Limitations that hinder Successful Fraud Investigations in the Banking Sector**

The study established the following technological limitations that hinder successful fraud investigations; lack of IT experts, delay in getting expert reports in the bank and time constraints in conducting forensic fraud investigation.

Banking Fraud investigations relates to the ability to collect and use structured and unstructured data to identify potentially improper payments, patterns of behavior and trends. Majority of the respondents interviewed had only basic computer knowledge whereas new banking Fraud investigation technologies are required today that enable banking fraud investigators to keep pace with increasing data volumes as well regulatory complexities. Complexity in bank systems can be seen in the growing number of channels through which banks now deliver their services, including websites and online banking platforms, mobile apps and social networks. All these channels represent a new set of opportunities for fraudsters to gain access to the bank's information system.

### **Investigation Mitigation Strategies**

The study established mitigation strategies that should be put in place by investigators to deter banking fraud. They include heavy penalties on offenders, denying bonds to offenders, maintaining a joint database on all fraud offenders, creating awareness to members of the public on fraud, employing more experts on fraud in the banking sector, training both stakeholders and bank investigators and vetting officials in the banking fraud investigations. Further, the study established more remedies which include creating awareness on safeguarding bank credentials, tightening internal control systems in the bank, having special courts to prosecute, having Frequent training on Fraud and reviewing the legal framework on fraud.

### **Conclusions**

The study concludes that the respondents are familiar with the scope of effectiveness of fraud investigators at the banking fraud investigation unit.

The study further concludes that there are technological limitations that hinder successful fraud investigations. Fraud investigators need to upgrade their knowledge and expertise regarding new technology and cyber related banking fraud. This is because the changes in the technological environment are moving fast and the banking fraud investigators need to be active to respond to these changes.

The study also concludes that the laws and regulations are not completely reliable and therefore require to be reviewed. The study also concludes that mitigation strategies should be put in place by investigators to deter banking fraud.

## **Recommendations**

### **Training of Employees**

Training employees is critical in the effort to prevent, detect and respond to financial exploitation. Clear, efficient training protocols enhance financial institutions' capacity to detect financial exploitation. It is essential that training programs describe what actions to take when employees detect problems. Training should communicate the roles and responsibilities of management, frontline staff, and other employees to reduce ambiguity and promote efficient and timely action when staff suspect or observe financial exploitation.

Fraud investigators are supposed to be more knowledgeable in the area of collecting and preserving electronic evidence as well as preservation of physical evidence. Fraud perpetrators are usually well conversant with digital aspect of technology hence investigators require a range of skills coupled with the experience to apply those skills in real and virtual environments.

### **Customer Awareness Campaigns**

Most customers at financial institutions are not aware of prevalent fraud. As long as they have an account at the bank and withdrawal cash from ATM they are not in any position to detect threat to their savings. Therefore, it's of great importance for the management of the financial institutions to provide frequent training to their customers. Customer awareness reduces potential fraud and encourages customers to report any suspicious transactions to the management as soon as they are detected.

### **Creation of a Centralized Fraud Database**

Fraud database centralized system should be put in place to have all fraud case managed at main database. The fraud investigators and judicial officers' capacity also need to be strengthened for purpose of managing fraud cases effectively. Having centralized database greatly enables fraud investigators to efficiently manage fraud cases.

### **Improvements in the Judicial and Legal handling of Bank Frauds**

Improvement in the judicial and legal handling of bank frauds can effectively and efficiently attained through strengthening fraud laws and regular training of judicial officers. The banking fraud investigation unit main objective is to investigate fraud related case and in addition also create awareness to all stakeholders on matters of fraud. Fraud laws need to be strengthened and the sentences to fraud perpetrator's enhanced to deter would be fraudsters from engaging in criminal acts.

### **Area for Further Studies.**

The study was restricted to effectiveness of fraud investigators at the fraud investigation unit of the Central Bank of Kenya. Further research should be conducted into customer awareness of banking fraud. Frauds in the banks are usually detected by customers who notice some suspicious transactions on their accounts. However, banks may not report such cases to protect the image of the financial institution. They prefer compensating any aggrieved customer hence fraud continues to thrive in banking industry.

Another area where research should be conducted is on different internal controls used by commercial banks to control and prevent fraudulent practices and how such controls affect the forensic accounting practices in such banks.

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