THE ROLE OF FORENSIC ACCOUNTING SERVICES IN FRAUD MITIGATION AMONG KENYAN PUBLIC INSTITUTIONS

A CASE OF PARASTATALS IN KENYA

BY

JOHN OPIYO

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THEREQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OFSCIENCE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OFNAIROBI

NOVEMBER, 2017

DECLARATION

This research project is my original work and has not been presented for award in any other University.

Signature ………………………… Date……………………

JOHN OPIYO

D63/76994/2014

This research project has been submitted for examination with my approval as the University Supervisor.

Signed: ______________________Date: ___________________________

DR. KENNEDY OKIRO

Lecturer, Department of Finance and Accounting

School of Business, University of Nairobi

ACKNOWLEDGEMENT

I remain indebted in gratitude to my supervisor Dr. Kennedy Okiro whose support, advice; supervision, dedication and availability have contributed to successful completion of my work. I also wish to express my sincere gratitude to my family, and special group of friends wagenge, Eric Magale, Washington Kamau, Julius Abok and David Odock who have been my source of encouragement and support throughout my studies. Thanks to the Almighty God for his guidance and providence which enabled me to undertake this project.

DEDICATION

I dedicate this work to my parents Rev Gabriel and Mrs Grace Abanga for your continued prayers and support throughout my studies

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABREVIATIONS AND ACRONYMS

AICPA	American Institute of Certified Public Accountants
ANOVA	Analysis of Variance
COSO	Committee of Sponsoring Organizations
PWC	Price Waterhouse Coopers
SOC	State Owned Chain Corporation
SPSS	Statistical Package for Social Sciences
USA	United States of America

ABSTRACT

The objective of the study was to determine the role of forensic accounting in mitigating fraud among Parastatals in Kenya. The data used in this study was collected from respondents using a semi-structured questionnaire. The collected data was coded and keyed into Statistical Package for Social Sciences and then analysed using tabulations, percentages, measures of central tendency and measures of dispersion such as means and standard deviations. Presentation of the study findings was done using frequency tables and figures. Regression and correlation analysis was used to test the strength of the relationship between forensic accounting and fraud mitigation among Parastatals in Kenya. The study concluded that all the parastatals in Kenya have a proactive fraud audit function, robust internal controls and litigation processes which help in fraud mitigation to a very great extent. The study also concludes that parastatals in Kenya have compliance policies, management override of controls and Segregation of duties help in fraud mitigation to a great extent. Dispute resolution impacts fraud mitigation only to a moderate extent. The study further concluded that there is a strong relationship (R= 0.867) between forensic accounting and fraud mitigation among parastatals in Kenya with forensic accounting accounts for 70.4% of the total variance in fraud mitigation among parastatals. Further, components of forensic accounting (proactive fraud audit, compliance with policies, robust internal controls, management override of controls, segregation of duties, dispute resolution and litigation support) have a positive and significant impact on fraud prevention and detection. The study recommends that these functions be implemented to the letter as this help public institutions in Kenya to detect and prevent fraud. The most faced limitation was that senior and middle level managers among the parastatals had very busy working schedules. This explains why most of the respondents were low level managers. However, the researcher made every effort to have the questionnaires filled by most of the respondents. That's how a response rate of 84.91% was achieved. This study only focused on the role of forensic accounting in fraud mitigation among public institutions in Kenya. There is need for a similar study to be conducted among private institutions in Kenya so as to compare how both public and private institutions deal with the challenge of fraud.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Due to the ever increasing globalization, there have been a translational growth of transactions and diversification of economic activities. These developments and changes have led to enormous opportunities for economic and financial crimes, which have gained a global concern. Such events have necessitated the need for forensic interventions hence the reason why forensic auditing and accounting are gaining fast-paced precedence. The harsh global environment has also made it necessary for the forensic auditors and accountants to establish controls and procedures to aid the detection , prevention and prompt response to such crimes with fraud as a crime being at the forefront. Various measures have been put in place to prevent and detect crime in many organizations, but employees and external fraudsters have not been deterred by this from taking part in fraud in organizations (Sudti, 2008).

According to Silverstone & Sheetz (2007), fraud is an act that occurs within a social setup which has a big impact on the economy, individuals and corporations. According to these authors, fraud is an opportunistic act that occurs when greed meets possibilities of deceptions. Fraud do not necessarily come with the intention of monetary gain; however it entails a scope of deceptive, corrupt, unethical or dishonest behaviours. According to global economic crime survey of PWC (2014), 54% of respondents reported that, their companies experienced frauds in excess of $100,000 with 8% reporting fraud in excess of 5%. Sixty six percent of respondent indicated that the financial impact of economic crime on their organization remained the same or increased in their last 24 months. This indicates that fraud can impact on organization's revenue just like any other market forces and businesses. The ability to prevent, detect and swiftly respond to fraud can be powerful cost saving tools. By implementing more robust anti-fraud controls, organization can prevent losses and increase productivity.

Previous theoretical evidence leads to a prediction that the adoption of forensic accounting mitigates corporate crime occurrence in many firms. The application of forensic accounting increases the chances of detecting and disclosing fraud activities, and if potential fraudsters are aware of this they tend to fear committing fraud. Gollwitzer (1990) argues that fraud specialist automatically suspects the existence of fraud which prompts him/her to investigate the existence of frauds within a firm. He further states that individuals feared to commit fraud when aware that forensic auditing could be applied to expose their fraudulent activities.

1.1.1 Forensic Accounting Services

According to Chilvers (2000) "forensic accounting" is the application of investigative techniques, together with business skills and accounting skills, to come up with opinions and information to be used by expert witnesses or as evidence in court. The definition of forensic auditing according to Dhar and Sarkar (2010) is the use of accounting techniques and concepts to solve legal problems. Forensic accounting entails reporting through which fraud accountability is determined and the audit report treated in administrative proceedings or court of law as evidence. Many accountants have been motivated to venture into forensic accounting due to its complexity (Kranacher et al., 2008). The most efficient and effective technique to use for the prevention of fraudulent activities is forensic auditing as it deals with evident and raw accounting data and is mainly concerned with forensic auditing, accounting fraud, due diligence ,compliance , risk assessment, financial statement fraud and detection of financial misrepresentation (Wright & Skousen, 2008).

The forensic accounting services involves the utilization of investigative skills and specialized knowledge exhibited by the forensic accountants in the collection, analysis and evaluation of evidential matters and interpretation and communication of the finding in the boardroom, courtroom or any other legal administration forum. The service includes litigation support, disputes resolution, bankruptcy proceedings, and special investigations and fraud. The different specialized skills possessed by the practitioner such as auditing, specialized accounting, tax, economic and other relevant skills are utilized in the delivery of the forensic accounting services. The nature of the assignment dictates the type of service to be rendered by the forensic accounting expert. There are various pre-determined dispute resolution services already put in place which enables the parties in conflict to reach a consensus. The parties facing bankruptcy charges also have various bankruptcy support services which enable creditors, debtors and other interested court and parties with potential or pending bankruptcy proceeding. Special investigations and fraud involves investigation of suspected or known frauds or event through use of forensic techniques that are pre-determined (Enofe, Okpako, & Atube, 2013).

1.1.2 Fraud Mitigation

The Legal Dictionary (2017) gives a definition of fraud as an intentional deception to safeguard unlawful or unfair gain, or to take a legal right from a person. Fraud in one way can be classified as a civil wrong (the fraud perpetrator can be sued by the victiom to obtain monetary compensation or escape the fraud), fraud can also be a criminal wrong (a person who committed a fraud may be sued and put in prison by governmental authorities) or still a fraud can be an element of criminal or civil wrong even where it may not cause property or money loss or even legal right. Mintzer (2016) also gives a definition of fraud as all malicious means which can be devised by a human being, and which an individual uses to benefit over the other denial of the truth or untrue suggestions. It entails all sorts of tricks, surprises, cunning or even dissembling, and any other unfair means which another person is misguided. The two fraud definitions seem to agree that it involves cheating in order to have monetary gain over another person whether a natural or legal person.

One of the major factors to consider when preventing fraud is the opportunity. If opportunities for committing fraud are eliminated then fraud can greatly reduce in the firms. For companies, Prevention of fraud is greatly cheaper than trying to detect it later on as there are very small chances of recovering losses when a fraud has already happened. Opportunity can be termed as when internal controls come into play. There are very less opportunities for employees of a company to commit fraud where a company has come up and implemented more internal controls. Where internal controls are effective and efficient there are very many benefits that accrue to the company. Some of the major internal controls to note in a firm are; proper supervision, segregation of duties, strong information technology controls like; password and hand scanners etc. In conclusion, rationalization can involve someone trying to justify the reasons for committing fraud in various or certain circumstances. This could be strong like in a case where money is seriously needed to cater for medical bills in case of an emergency or even where someone may die in a ransom case and money is desperately needed (Kennedy, 2012).

Detection and therefore mitigation of fraud is only possible through the adoption of investigative instruments by the forensic auditor (Baird & Zelin, 2009). Examples of types of frauds committed by public sector individuals and institutional management include but not limited to; consumer fraud, securities-related crimes, insider-trading, tax fraud, bribery, insurance fraud, political fraud, corruption, bankruptcy etc. (Enofe et al., 2015).

1.1.3 Forensic Accounting Services and Fraud Mitigation

Effective forensic accounting services are crucial in detecting and preventing fraud. The converse where nonexistence and ineffectiveness of forensic accounting services do not facilitate fraud detection and prevention is also true. The goals of firms are to enhance growth, profitability and sustainability, that is, to actually achieves their mission, and minimizes the risk of loss or failure in the process of conducting business. To fulfill their mission, institutions risks must be managed through effective forensic accounting services (MicroSave, 2007).

Fiia (2013), while examining the contribution of forensic accounting in the detection and prevention of corporate crimes, the occurrence of fraud was noted to significantly decline upon the application of forensic accounting in the public sector. A similar study by Okunbor and Obaretin (2010) on the application of forensic accounting by the selected Nigerian companies did not sufficiently aid crimes. Another study by Islam, Hossan and Rahaman (2011), concluded that forensic accounting as a crime detection tool at a corporate level was relevant as it appeared to be one of the strategic tools for dealing with such crimes. Boritz, Kotchetova and Robinson (2008) in another study, probed forensic accountants and auditors to establish the advantages of involving fraud specialist in the processes of development of audit plans that would effectively help in fraud detection. They found out that this would lead to better results than merely consulting with them.

Koh, Arokiasamy, and Suat (2009), in their study, examined the level of public perception towards detection of fraud using forensic auditing and concluded that forensic accounting basically seeks to aid the detection and reduction of accounting crimes. They further noted that majority of the audit firms adopted forensic audit to investigate the financial statements of the company so as to establish the engagement in fraudulent activities by some specific individuals. They further stated that the organization's managerial performance such as investigative litigation and accounting was aided to a large extent by forensic accounting.

With the drastic increase in public demand for honesty, fairness, and transparency, there has recently been an increased need for forensic accountants (Ramaswamy, 2011). The author emphasized the difference between forensic accountants skill set with that of auditors or financial accountants. It was also pointed out that universities need to develop a curriculum that will generate qualified forensic accountants to solve the potential problems that might occur in future. From these studies, it can be deduced that there is a dire need to embrace forensic accounting to aid in detecting and therefore mitigating frauds that are increasing by the day in public institutions.

1.1.4 Parastatals in Kenya

Parastatal refers to a corporate body established by or under Act of parliament. Parastatals began as state owned corporations (SOCs) established in the colonial period to drive growth and development in Kenya. The Kenyan constitution mandates parastatals to cater for both commercial and social goals. They are tasked with correcting market failure, implementing socio-political objectives, ensure quality education, proper health facilities, income redistribution as well as development of marginal areas. Parastatals were remodeled in 1963 at Independence by Sessional Paper no.10 of 1965 into drivers of a stable economy. Major key parastatals in existence were established in 1960s and 1970s. By 1995 there were 240 parastatals the number currently stands at 187 (Parastatals e-news Kenya, 2016). The parastatals are formed to undertake all business activities in key industries by the government with purpose of fulfilling its economic policies. The major purpose of parastatals is in the provision of public utilities.

A survey conducted by KPMG on fraud revealed that increasing number of institutions are experiencing an increased number of fraud incidents as compared to some years back (Forensic, 2003). It can be deduced that many of such institutions are in the public sector. It is cumbersome and difficult to detect, uncover and investigate such crimes and senior officials avoid such situations as they would involve exposing organization’s weak points and even damaging organizational reputation (Omondi, 2013). This, therefore, means that stringent measures should be taken to combat such crimes and launching anti-fraud initiatives could be a way forward and this is where forensic accounting as a tool becomes important (Forensic, 2003).

1.2 Research Problem

Fraud activities are costly, and it is estimated that $3.5 trillion worldwide were lost due to fraudulent financial statements, asset misappropriation, and corruption in 2011 as cited by (Enofe, Okpako, & Atube, 2013). It is deep rooted and inescapable in Kenya and any efforts to curb it may cause a great loss on the Kenya's economy and have negative impacts on its growth (Warutere, 2006). This glaring problem requires that there be active involvement of forensic accountants in all stages of risk assessment and developments of audit plans, and not just involve them as merely consultants (Boritz, Kotchetova, & Robinson, 2008). This will lead to success in early detection and therefore mitigation of these crimes thereby reducing any greater losses in the Kenyan economy. Without constant involvement of the public and improvement in forensic accounting, fraud cases will be hard to detect and thus lead to greater success in financial fraud, which also translates into the failure to meet the expectations of the public, shareholders or even other stakeholders (Enofe, Okpako, & Atube, 2013).

Fraud is increasing in Kenya and it is believed to be one of the gravest problems in the current economic environment (Popoola, Ahmad, & Samsudin, 2014). As cited by (Mahinda, 2012), Kenya is leading the world in occupational fraud, a major corporate crime, with an incidence of 66%, which is about twice the global average of 34%. It is dominantly occurring in many governmental and non-governmental organisations especially those related with financial services (Mahinda, 2012). These crimes are very difficult to detect, investigate, or even mitigate, and many managers in these institutions shy away from such endeavours due to the consequences the institutions would suffer after such exposures (Omondi, 2013).

The effectiveness of forensic accounting services have been examined by various studies. A study by Okunbor et al., (2010) assented that fraud occurrence was not effectively deterred by forensic accounting services, another study on forensic accounting by Owojori et al., (2008) examined the challenges in the corporate world concluded that fraud detection in the current corporate firms had been significantly reduced through use of forensic accounting.

Local researches done on forensic accounting includes the rationale of using forensic accounting on reduction of audit expectation gap (Wanjohi, 2011). He found that the adoption of forensic audit was important mechanism in the reduction of audit expectation gap. Omondi (2013) sought to find out the contribution of forensic accounting services in the and prevention and detection of fraud in the Kenyan commercial banks. He found that adoption of forensic accounting services led to increased fraud preventions. Njuguna (2013) examined the response strategy to fraud by the selected Kenyan commercial banks. The study established that, training, preventive, prosecution, investigation and detection strategy are used by commercial bank in Kenya in managing the fraud menace.

Even though many researches have been done globally and locally on the effect of forensic accounting services in prevention of frauds, none has been done specifically on the contribution of forensic accounting services in mitigation of frauds in Kenyan public sector. With the increase in frauds in the public sector and resultant losses, this study will seek to determine the importance of forensic accounting services in detecting and combating fraud in the public sector and specifically among Parastatals in Kenya. It is from this research gap that this study will seek to answer the following question: Is forensic accounting services useful in mitigation of frauds among parastatals in Kenya?

1.3 Research objectives

This study seeks to determine the role of forensic accounting in mitigating fraud among Parastatals in Kenya.

1.4 Value of the Study

The findings of this study assists in policy formulation for Parastatals in Kenya, as pertains to duties and roles of forensic auditors. It will also provide first-hand evidence on the impact of forensic accounting on the mitigation of fraud, thus contributing to policy formulation and implementation. Another importance of the study is to the senior officials of Parastatals in Kenya can offer recommendations on the internal controls that can be adopted by firms during the incidences of fraud and also expound on the forensic accounting services.

The study's findings forms will be used as future reference by students scholars, and researchers who might want to conduct further research on the same field. The findings will also be beneficial to researchers and researchers in establishing areas that require further insight as it highlights related topics that need further research as it reviews the various empirical literature to establish study gaps. The study significantly contributes to forensic accounting practices in the public sector.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses previous studies related to the topic of the study. It seeks to identify the role of forensic accounting on fraud mitigation. The chapter has five sections. The first focuses on various literatures attributed to the determination of fraud mitigation, while the second and third section covers the determinants of fraud mitigation and the empirical literature respectively. The fourth section covers the conceptual framework while the last section concludes with the summary of literature review focusing on the gap to be filled.

2.2 Theoretical Review

The theoretical review focuses on the theories that explain fraud mitigation. These theories include fraud triangle theory, internal controls theory and white collar crime theory which are discussed below:

2.2.1 Fraud Triangle Theory

Albrecht, Turnbull, Zhang, and Skousen (2010) point out perceived opportunity, perceived pressure and rationalization of the act of fraud as the three main elements of fraud. These elements are commonly termed to as fraud triangle. The three elements are intertwined within each act of fraud regardless of whether it is done on behalf of an entity or against the entity (Albrecht et al., 2009). Albrecht et al.(2009) further describes these elements as interactive in the sense that the more intense the pressure or, the greater the perceived opportunity, the lesser the rationalization required for an individual to engage in fraud. According to Rae & Subramaniam (2008), fraud is a complex subject which constitutes several components. Fraud is perceived as complex since it is hard to establish the actual timing of its occurrence despite the measures that are in place. Fraud might for instance not occur despite lack of adequate internal control measures while it could similarly occur even with good internal control measures in place (Rae & Subramaniam, 2008). The management can easily articulate the actual areas of susceptibility of fraud within the organisation through a better understanding of how pressures, rationalizations and opportunities contribute to fraud in organizations and thus put in place the appropriate measures (Albrecht et al., 2010).

According to Albrecht et al., (2009), the perpetrators of fraud must review their code of conduct and function as expected. Lack of personal integrity and moral reasoning is enough justification of fraudulent behavior (Rae & Subramaniam, 2008). Personal integrity is key in keeping an individual on track and against engagement in the misappropriation of the firm's assets since there is never a justification for involvement in fraud (Hillison et al., 1999). Fraudsters often engage in rationalization when they feel unsatisfied with the rewards accrued from work (Mutua, 2011). The character, ethical values or attitudes of some individuals cannot keep them away from crime thus they intentionally engage in the dishonest act (Cohen et al., 2011). Hillison et al., (1999) states that the use of rationalizations to justify illicit behavior can only be prevented through having a strong moral code of conduct. Cohesen further advises the internal auditors to scrutinize every individual as anyone is capable of committing fraud

2.2.2 Internal Controls Theory

For every organization's functions to be safe and sound, an effective internal control should be put in place. The goals and objectives of the organisation together with their long term objectives will both be achieved only through a strong internal control system which will further enable it to maintain a reliable managerial and financial reporting. An appropriate internal control system helps to ensure adequate compliance by the organisation with the stipulated laws and regulations, policies, internal rules, procedures, and internal regulations which will help in the reduction of risk related to damage of the organization's reputation and unexpected losses (Rezaee, 1995).

The following studies drew similar conclusions on several factors regarding internal control. An integrated framework issued in 1992 by COSO, USA, defines internal control as a process influenced by the management, board of directors, and other relevant personnel tailored to provide the necessary assurance regarding the attainment of the relevant firm objectives in the following respective fields: compliance with the applicable laws and regulations; Reliability of financial reporting and operation's effectiveness and efficiency. According to Rezaee (1995) , internal control is the entire system of controls ranging from the financial controls to others, put in place so as to provide the required assurance of Internal financial control, effective and efficient operations and full compliance with laws and regulations. This theory is applicable in the study since it states the internal control procedures, rules and policies to be adopted by the public sector.

2.2.3 White Collar Crime Theory

The term White collar crime was founded by Edwin Sutherland (1939. According to Sutherland (1949), a white collar crime is a crime committed by a high profile individual in the course of executing his/her duties. This also constitutes the organizational crimes. This theory was proposed by Sutherland in the American Sociological Society in order to examine crime and high society since the previous studies pointed no associations among the two factors. The typical street criminals exhibited less attributes and motives as compared to the white collar criminals. The author adopted this concept to oppose the conventional theories and stereotypes (Sutherland, 1949).

This theory speculates that judges and prosecutors handle street criminals with less remorse as opposed to white-collars. This legal case was advanced is strict observation on the number of the upper class annually committed to prison which only amounted to less than two percent . He mainly wanted to establish the link between social status, money, and the possibilities of being jailed for committing a white collar crime as compared to other forms of crime (Sutherland, 1949).

2.3 Determinants of Fraud Mitigation

The importance of fraud mitigation cannot be overlooked and organizations need to take measures to prevent and detect organization crime at all levels. However, successful fraud mitigation is a challenge and several factors need to be taken in consideration if successful fraud mitigation is to be achieved. Some of the determinants of fraud mitigation are discussed below and they include proactive fraud audit, compliance with policies, robust internal controls, management override of controls and clear segregation of duties.

2.3.1 Proactive Fraud Audit

The role of auditors in crime detection cannot be underestimated despite the "reliance on the auditors for fraud detection being misplaced". An audit basically seeks to establish the accuracy of the accounting records provided and set up a platform for the preparation of the accounting records. This goal can only be achieved through a thorough scrutiny of the routine transactions that were undertaken at that particular financial year. This undertaking might help to unveil fraud, except in situations where adequate evidence have been substantially presented(Norman et al., 2010).

This approach is however attributed with prohibitive costs. Through the use sample technique, the volume of test can easily be reduced without a huge deviation from the validity of opinion. This approach will make fraud detection easier through availing a wider comprehensiveness of examining facts. However, this approach is largely expensive which forces the auditors to adopt different criteria which extensively rely upon the internal checks or internal control systems of the organization (Gadziala, 2005). This approach mainly seeks to analyze and evaluate the system and further conduct tests so as to establish the effectiveness of the controls and their reliability in the preparation of the annual accounts and to establish the threshold substantive testing.

2.3.2 Compliance with Policies

The main role of internal auditing is to substantiate compliance with company and regulatory laws, policies and procedures. It is necessary to ensure that the employees are executing their tasks as per the requirements of the management. There must be adequate assurance that the controls are functioning well and that the signatories of the responsible parties present. Written compliance directives in such sources as bulletins, letters and manuals must also be present (Nila & Viriyanti, 2008).

The effectiveness of the firm's internal control structure elements are measured by the auditor through compliance testing. The compliance to accounting procedures is the main aspect of internal auditing. An appropriate and efficient accounting system that functions as per its stipulations yields consistent and reliable accounting data. The duly awarded forms have to be used effectively and efficiently (Pratolo, 2007). Examples of fields that should be subjected to compliance testing are controller's procedures, standards for data processing, procurement, security policies, data retention requirements of the company and governmental agencies, planning, personnel administration, payroll, expense accounts and budgeting.

2.3.3 Robust Internal Controls

According to Mohd-Sanusi (2015), internal control can be defined as a process, formulated by an entity's management, board of directors or any other personnel to provide adequate justification with regard to the attainment of the objectives in the operation's effectiveness and efficiency , compliance of applicable laws and regulations and reliability of financial reporting. The term internal control can also be defined as a process effected by the organization's work and authority flows, structure , people, management information systems and people tailored to enable the organization to attain its specific objectives (AICPA, 2003). Without proper controls, fraudsters will exploit the numerous weaknesses to commit fraud and therefore, the organization has to address fraud risk in a robust manner so that the internal control structure is effective.

Oguda (2015) pointed out that the constituents of adequate internal controls which include risk assessment, control environment, information and communication, monitoring and control activities need to be applied systematically in order to form an integrated system that adjusts appropriately to the dynamic conditions. Internal controls also have to be reviewed and rectified frequently as infrequent review may increase the fraud risk, as the fraudster can identify and exploit the weaknesses in internal control (Mohd-Sanusi 2015).

According to Fardon (2013), various techniques are required in order to have an effective internal control system that is suitable for the fraud detection and prevention by the management and they include: having experienced staff that work full-time on fraud prevention and detection, proper supervision of accounting activities on a regular basis, ensuring physical security by locking valuable items away so as to deter theft, and put in place authorisation limits to some accounting activities such as petty cash and signing of cheques over certain amounts.

2.3.4 Management Override of Controls

According to Farrel and Franco (1999, professional literature states that proper reporting, the responsibility of internal controls and the adoption of appropriate accounting policies is purely dependent on the management and not the auditors. As a result management can intentionally override controls for personal gain or to provide a misleading image of the organization's financial position. The management have the ability to compromise even seemingly effective internal financial reporting systems thus a thorough scrutiny needs to be frequently undertaken so as to detect such frauds. According to KPMG Fraud Survey (2012), more concern has been raised on increased fraud incidences committed by company directors and senior executives with survey data revealing that the damage to corporate is exponentially greater when senior management is associated with the quantum of loss is higher when the fraudster is in the high rank in the organisation. It is almost virtually impossible for an entity to have controls on management override that will be totally effective but entities should nevertheless have controls that minimise the risk, for instance controls over the processing and authorization of journals and other financial statements' adjustments (Di Napoli, 2010).

According to Di Napoli (2010), confidential fraud / internal auditors or abuse hotlines, promoting and hiring managers with high ethical values and good character greatly contribute to the creation of a positive control environment and reduction of risks attributed to management override. AICPA (2003), lays down the guidelines for auditors to use in assessing the management override risks and they include: making inquiries of management, conducting an engagement team discussion regarding fraud risks; obtaining views about the risks of fraud and how the risks are addressed by the audit committee, considering fraud risk factors such as incentives and pressures for management to override controls, and rationalizations or attitudes that enable easy justification by the management on override of controls.

Therefore, for effective corporate crime mitigation, management override of controls should be put in check. The American Institute of Certified Public Accountants (2005) identified that this can be done by the audit committee of the organization by taking actions such as: strengthening committee understanding of the business, maintaining an appropriate level of scepticism, using the code of conduct to assess financial reporting culture ,ensuring the entity cultivates a vigorous whistleblower program and brainstorming about fraud risks.

2.3.5 Clear Segregation of Duties

The potential instances of fraud in an organization can possibly be reduced through clear segregation of duties since this reduces the control of an individual over all or multiple segments of a process. Examples of duties that could be segregated include simple procedures for instance not allowing the same individual writing the cheques to reconcile the same bank statement, not allowing the person who initiated the purchase order to approve the payment and not allowing the receiving department to maintain physical inventory records (Farrel and Franco, 1999). Assigning separate individuals with the mandate for recording transactions, authorizing transactions, maintaining custody of assets and reconciling transactions reduces the likelihood of an employee to perpetrate fraud or conceal errors while executing his/her duties (PCAOB, 2009).

However, even with segregation of duties, employees sometimes manage to circumvent the segregation through collusion in order to commit fraud. Seetharaman et al., (2014) found collusion to be a key motive for the commitment of white collar crime mostly between managers and employees, and is a pervasive problem as it is very difficult to prevent and detect. Collusion is a secret cooperation or agreement between two or more employees to undertake a dishonest or illegal act and thus the management should be well conversant that collusion between employees could overturn the controls (Di Napoli, 2010). Di Napoli further states that it is hard to establish an internal controls system to protect against collusion and thus the management needs to closely investigate any close personal and family relationships that might want to collude and overturn the controls in place.

KPMG Fraud Survey (2012) revealed that while 23% of internal fraud as due to collusion ,the figure rose to 29% in 2012 and identified collusion as employees groups and suppliers approving and raising transactions together, sharing passwords, change and change-back bank account details, providing excessive discounts to customers, ,purchasing of goods above market value and awarding contracts. According to PCAOB (2009), the size of the company will also affect the segregation of duties policy with smaller companies facing a challenge due to personnel limitations. Therefore smaller companies approach segregation of duties in a different manner including dividing functions that are incompatible through use of external party services and implementation of alternative that seek to attain similar goals such as the segregation of duties (PCAOB, 2009).

2.4 Empirical Review

Various studies related to the role of forensic accounting on fraud mitigation have been conducted in the recent past. However, most of these studies are international studies and therefore cannot be used as a representative in the local context. The small number of studies conducted locally has focused on different contexts.

Ezeagba (2014) carried out a study on the contribution of quality assurance and forensic auditing on financial reporting in selected Nigerian commercial banks. The research design adopted in the study were the descriptive and survey designs. The annual reports sourced from the chosen commercial banks were utilized as the secondary data for the study. Two hundred questionnaires structured using the Likert scale were administered were administered to the respondents who were chosen using simple stratification to collect primary data. The study reveals among others that the major qualitative traits (relevance &faithful representation) of accounting, financial reporting and the enhancement of qualitative traits (understandability) can be enhanced significantly through use of forensic accounting.

Eyesi and Ezuwore (2014) executed a research on the effect of forensic accounting on corporate Governances. This was a theoretical research conducted on secondary data .The conclusion of the research was that, financial auditor is not obliged to detect fraud during their financial audits, the responsibility of internal controls rest with management and hence management has sought the skills of forensic accountant to safe guard the internal control system. The forensic accountants have done this by incorporation of computer software in data processing and in the computer information system to detect frauds and errors. This has help management improve accountability to the all stake holders.

A study by Gbegi (2013) examined the contribution of forensic accountants in creating procedures that make risk detection easier. It was noted from the study that the extent of audit test detection procedures put in place by the forensic accountants was unique when likelihood of fraud commitment by the management was higher. Unique procedures are proposed by the forensic accountants different from those of the auditor when the risk of fraud by the management is higher. The effectiveness of an audit plan can therefore be enhanced by the forensic accountants through involving the auditors in the assessment process when there is higher likelihood of management involvement in fraud which will yield a better result rather than mere consulting.

Modugu (2013) pointed out that fraud has become real and prevalent in the contemporary business environment. A significant agreement among stakeholders on the contribution of forensic accounting in fraud control, improving internal controls and financial control was noted from the study. He noted that forensic accountants can provide significant assistants in investigating, preventing and solving such matters. He recommended for the formalization and specialization of the profession by the National Association of Accountants in Nigeria. Locally there has also been research conducted on the subject and results tend to confirm the positive corrections between forensic accountings services and reductions of frauds as indicated by below researchers.

Omar (2013) examined how forensic accounting has improved the effectiveness in the public sector by focusing on selected government agencies such the Malaysian Klang Valley. Structured questionnaires and interviews were distributed and collected from three chosen government agencies in the Klang Valley including, Ministry of Education ,Shah Alam Court Council and Inland Revenue Board of Malaysia. The results showed that most of the government administrators understands the role of forensic accountants and believe that the existence of forensic accounting helps identify and solve the financial fraud and crime in Malaysian economy.

Locally, Oguda (2015) examined the impact of internal control on detection of fraud and prevention Kakamega County particularly the district treasuries. To respond to the data collection instruments, the study adopted the purposive sampling method to select treasury staffs while the heads of staff were selected using the simple random sampling method. The study’s findings established positive associations between the appropriateness of internal control systems and fraud detection and prevention Kakamega County’s district treasuries.

Kyalo (2013) conducted a study to establish the contribution of fraud prevention on effectiveness of financial reporting in the County Government of Nakuru. The study adopted a descriptive approach and the sample size was 106 finance officers, accountants, procurement officers and auditors in the Nakuru county government. Structured questionnaires were used for data collection and descriptive statistics used for data analysis comprising means and standard deviations. The study concluded that fraud prevention influenced effective financial reporting in the county government of Nakuru and this effect is supported by the significant positive relationship observed between fraud policy and effective financial reporting in the county government of Nakuru.

Wanyama (2012) investigated the fraud response strategies' effectiveness employed by co-operative bank of Kenya limited. The case study was mainly aimed at obtaining detailed facts regarding the effectiveness of fraud detection strategies at the Co-operative bank of Kenya. An interview guide was employed to collect primary data which consisted of the open-ended questions which were utilized by the researcher to gather detailed qualitative data. The six proposed managers were interviewed by the researcher and a 100% response rate was obtained. From the study, ineffective strategies were found to be inappropriate measures of fraud detection. The study was narrow in scope as it only concentrated on one bank.

Wanjohi (2011) carried out a study on the rationale for using forensic accounting as a tool for expectations gap with focus on cooperative societies in Central Kenya. The study employed a descriptive research design and used a sample of 134 respondents consisting of 16 audit firms and 118 cooperatives which were selected using a stratified systematic sampling approach. The data collection was done using questionnaires, and analysed using inferential statistics. The findings of the study indicate a notable difference in responses between the cooperative members and auditors thus demonstrationg the existence audit expectations gap in audit engagements in Kenya. In addition, t-tests indicate that forensic accounting, user education and better auditing standards are important mechanisms in reducing the audit expectations gap.

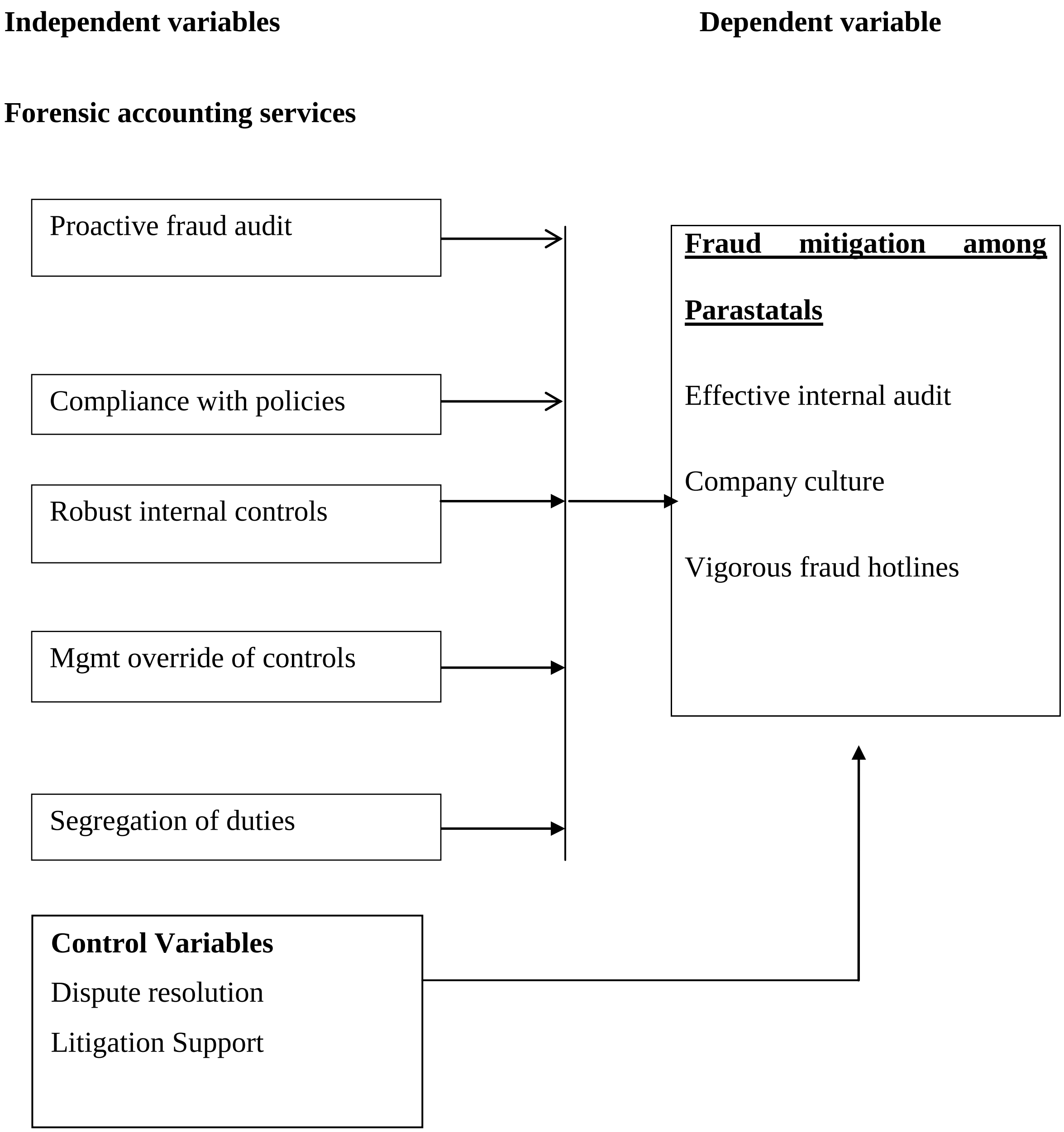
A study by Kimani (2011) outlined a fraud risk assessment plan for the Kenyan Barclays bank. The aim of the study was to explore more on the different aspects of fraud such as;

detection, prevention, resolution guidelines and reporting which can be adopted by the Bank to mitigate fraud. An average of 5-7% of the total banks' gross revenue was noted to be annually lost due to fraud detection. Fraud was noted to occur mainly through assets theft in the form of money, services or physical assets. Most frauds were commonly detected through tips reported by either vendors, employees or whistle blowers. Fraud losses were reduced by 52% by organizations that implemented company-wide fraud awareness training. Barclays Bank Kenya was not an exception to this status of increased fraud. The study concluded that for the Kenyan Barclays Bank to totally reduce frauds, the Bank's fraud risk assessment team should fully comply to the fraud risk assessment strategy put in place so as to follow the right guidelines that help in fraud, prevention, detection, management and resolution.

2.5 Conceptual Framework

The conceptual framework outlined below shows the role of forensic accounting on fraud mitigation. Forensic accounting is conceptualized in five dimensions as shown below:

Figure 2.1: Conceptual Framework



Source: Author (2017)

2.6 Summary of the Literature Review

A review of literature indicates that forensic accounting is a discourse that has attracted some attention from scholars and organizations across the world. Theoretical literature examined three theories namely fraud triangle theory, internal controls theory and fraud white collar fraud theory. From the empirical literature, most of the studies carried out point out the importance and effectiveness of forensic accounting in fraud control, financial reporting, and internal control quality in different countries which include Nigeria, Bangladesh and Malaysia (Modugu, 2013; Islam et al., 2011; Omar 2013). However, forensic accounting services are not widely in use (Islam et al., 2011).

Majority of the previous studies conducted on have dwelled on the prevention of fraud through use of forensic accounting services. Varied opinions however exist on the effect of forensic accounting on the organization. Despite the believe by many researchers that that forensic accounting can be effectively adopted for fraud prevention, a few believe that no such prevention exists and thus their use does not prevent fraudsters from executing crime. This study will contribute to this debate by studying on the role of forensic accounting on fraud mitigation among Parastatals in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains information about the design of the research, population and sample that was selected for the study. Data collection, data analysis and presentation techniques that was used in the study are highlighted in this chapter.

3.2 Research Design

Kumar (2005) defined research design as that method that is procedurally acquired by the researcher and that which enables the researcher to be able to answers questions accurately, validly, objectively, and economically. According to Wanyama and Olweny (2013), a research design aims at improving the ability of the research in conceptualizing an operational plan in order to be able to embark on the various techniques available and tasks that are required in order to complete the study while at the same time ensuring that that the procedures used are sufficient enough to acquire valid, objective and precise responses to the research questions.

This study adopted a descriptive research design. According to Mugenda and Mugenda (2003) a research design is the process of collecting data in order to test hypothesis to answer questions regarding the current status of the subjects in the study. The design was adopted as the researcher has interest in the actual state of affairs existing in the field and the variables are not expected to be tampered or manipulated.

3.3 Population

The definition of population by Mugenda and Mugenda (2003) is the whole group of events, objects or individuals having similar observable characteristics. Refering to Ngechu (2004), population can be described as a set of people, households, services, events and group of things that are under investigation. The population of this study was composed of all the 103 Parastatals operating in Kenya as at 31st December 2016. These Parastatals are classified into Agriculture, Service, Industry, Banking and Finance and Education sector.

3.4 Sampling Design and Sample Size

The top, middle and lower level managers were employed as the sample for the study. The representative sample was obtained using stratified random sampling technique at the management level due to lack of homogeneity among the study population. The individuals used to gather data for the study are then randomly selected from the stratum which gives each element of the population an equal chance of being selected. In a descriptive research, a sample size of 10-50% is considered sufficient(Mugenda & Mugenda, 2003). The researcher worked with a sample size of 50% to select the respondents. Therefore, the sample size was 53 respondents (See Appendix II).

3.5 Data Collection Methods

The study made use of primary data which was collected through semi structured questionnaire. According to Biener and Lyberg (2003), primary data is the data that is collected by a researcher while for the secondary data is the already existing data. Primary data is viewed as being more reliable and up to date. The major instrument for the data collection was semi structured questionnaire that allowed for uniformity in the response questions. Questionnaires are faster methods to obtain data in comparison to other methods. The questions are constructed in order to address particular objectives and offer a variety of possible responses. Unstructured questions offer the respondents freedom of response that helps the researcher to gauge the feelings of the respondent. The questionnaires will be directed to the management staffs that are well conversant with forensic accounting operations. The questionnaires will be administered through a pick and drop later method.

3.6 Data Analysis Techniques

To analyze the data collected from the administered questionnaires, the study used descriptive statistics. The data collected was tabulated, summarized and interpreted using descriptive measures. Tables were used for presentation of the findings and the mean, standard deviation; percentages and frequency were used for interpretation. To communicate the research findings, data obtained from the questionnaires were analyzed with the help of SPSS version 21.

3.6.1 Analytical Model

To quantify the strength of the associations between the variables, the researcher utilized the Karl Pearson’s coefficient of correlation. This enable the detection of the association between forensic accounting and fraud mitigation among Parastatals in Kenya. This generated quantitative reports through measures of central tendency, percentages and tabulations.

The model used in the study was in the form below:

$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + \beta_7X_7 + \mathcal{E}$

Where;

Y = the dependent variable Fraud mitigation as measured by effective internal audit, vigorous fraud hotlines and a company's culture

α - Is a constant; it is the Y value when all the predictor values (X_1, X_2, X_3, X_4, X_5, X_6 and X_7) are zero

β_1, β_2, β_3, β_4, β_5, β_6 and β_7– Are constants regression coefficients representing the condition of the independent variables to the dependent variables.

X_1 – Proactive fraud audit, X_2 – Compliance with policies, X_3 – Robust internal controls, X_4– Management override of controls, X_5 – Segregation of duties, X_6 – Dispute resolution, X_7 – Litigation Support, $\mathcal{E}$ (Extraneous) Error term explaining the variability of other factors not accounted for.

3.6.2 Tests of Significance

Parametric tests i.e. F-test in Analysis of Variance (ANOVA) and t-test were used to measure statistical significance in the difference of mean ratios. The F- test and the t – test were used at 95% confidence level. The F statistic was utilized to establish a statistical significance of regression equation while the t statistic was used to test statistical significance of study coefficients.

CHAPTER FOUR

DATA ANALYIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis of the data collected and the discussion of the findings. The objective of the study was to determine the role of forensic accounting in mitigating fraud among Parastatals in Kenya. The data used in this study was collected from respondents using a semi-structured questionnaire. The collected data was coded and keyed into Statistical Package for Social Sciences and then analysed using tabulations, percentages, measures of central tendency and measures of dispersion such as means and standard deviations. Presentation of the study findings was done using frequency tables and figures. Regression and correlation analysis was used to test the strength of the relationship between forensic accounting and fraud mitigation among Parastatals in Kenya.

4.2 Response Rate

The sample size of the study was 53 Parastatals operating in Kenya. This implies that the researcher administered 53 questionnaires to the top, middle and lower level managers of those Parastatals. Only 45 questionnaires were filled and collected from the respondents. The 45 questionnaires constituted 84.91% response rate. The researcher considered this as an adequate representation of the target population. The response rate is shown in Table 4.2.

Table 4.2: Response Rate

Response Rate	Frequency	Percentage
Filled and Collected	45	84.91%
Not Collected	8	15.09%
Total	53	100%

Source: Researcher (2017)

4.3 Reliability Test

In order to establish whether the study questionnaire measures what it purports to measure, the researcher undertook a a test of reliability using a Cronbach's Alpha co-efficient of 0.7 as the minimum requirement. The test results are as shown in Table 4.3.

Table 4.3: Reliability Test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.717	.731	38

Source: Research Findings (2017)

The study found out that the questionnaires recorded a Cronbach's Alpha co-efficient of 0.717. This implies the questionnaires had a highly internally consistent and therefore it could be relied on to reliable in establishing the role of forensic accounting services in fraud mitigation among Kenyan public institutions.

4.4 General Information

This section presents the general information of the respondents. The researcher discusses management level, working experience and the department of the respondents. The findings are presented below.

4.4.1 Management Level

The study respondents were requested to indicate the level of management they served at within the parastatals. The results are as shown in Table 4.4.1.

Table 4.4.1: Management Level

Level	Frequency	Percent
Lower Level Management	25	55.6
Middle Level Management	13	28.9
Senior Level Management	7	15.6
Total	**45**	**100.0**

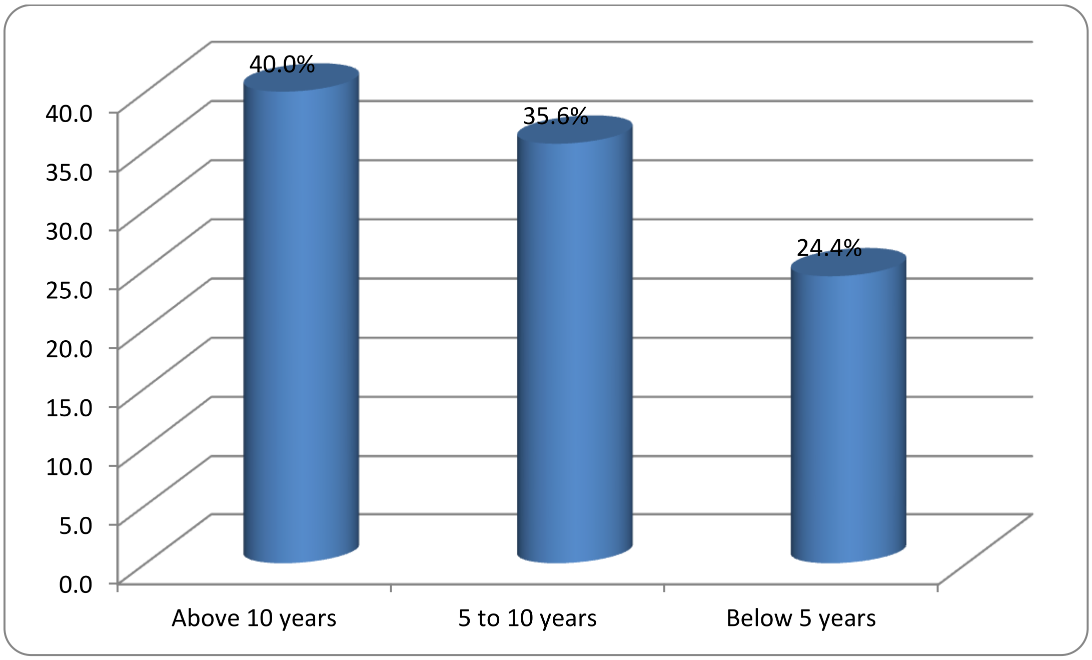
Source: Research Findings (2017)

The findings showed that majority (55.6%) of the respondents held lower levels management followed by 28.9% of the respondents who belonged to the middle level management. Only 15.6% of the respondents were in the senior level of management. Majority of the lower level of management filled the questionnaires because they were less pre-occupied compared to the middle and senior level managers. However, the respondents held management positions that allowed them to understand the the role of forensic accounting services in fraud mitigation among Kenyan public institutions.

4.4.2 Working Experience

The interviewed persons were required to indicate how long they had worked in those respective organizations. The results are as depicted in Figure 4.4.2:

Figure 4.4.2: Working Experience



Source: Research Findings (2017)

The results revealed that most (40%) of the respondents had been working in their respective organizations for over10 years followed by those who had been there for 5-10 years. Only 24.4% of the respondents had been working in the organizations for less than 5 years. These findings indicate that the respondent's had a sufficient and appropriate experience to understand the role of forensic accounting services in fraud mitigation among Kenyan public institutions.

4.4.3 Forensic Accounting Department

Further, the study sought to know whether public institutions in Kenya had forensic accounting departments. All the respondents indicated that the Parastatals they worked in had Forensic Accounting Departments. This shows that the target population was relevant since the objective of the study was to determine the role of forensic accounting services in fraud mitigation among Kenyan public institutions.

4.5 Forensic Accounting Components

In this section, the study sought to the role of forensic accounting components in mitigating fraud among public parastatals in Kenya. The components discussed are proactive fraud audit, compliance with policies, robust internal controls, management override of controls, segregation of duties, dispute resolution and litigation support. The respondents were requested to rate the extent to which the parastatals used the components. The rating was done using on a Likert scale of 1-5 where: “1= Very low extent, 2= Low extent, 3= Moderate extent, 4= Great extent, 5= Very great extent.” The recorded mean scores were interpreted using the following scale shown in Table 4.5:

Table 4.5: Mean Interpretation Scale

Scale	Interpretation
1.00 - 1.49	Very Low Extent
1.50 - 2.49	Low Extent
2.50 - 3.49	Moderate Extent
3.50 - 4.49	Great Extent
4.50 - 5.00	Very Great Extent

Source: Researcher (2017)

4.5.1 Proactive Fraud Audit

The study sought to know whether the organizations had a proactive fraud audit function and the extent to which they believed proactive fraud audit impacts fraud mitigation. The results are shown in Table 4.5.1.

Table 4.5.1: Proactive Fraud Audit

Component	Mean	Std. Deviation
Checking accuracy of accounting records	4.62	0.490
Investigating errors occurring	4.51	0.506
Checking routine transactions	4.51	0.516
Aggregate Mean	**4.55**	**0.504**

Source: Research Findings (2017)

The study established that all the parastatals in Kenya had a proactive fraud audit function. An aggregate mean score of (*M*=4.55, *SD*= 0.504) indicated that the respondents agreed to a very great extent that proactive fraud audit impacts fraud mitigation. All the attributes were rated to have impacted fraud control to a very great extent. The most rated attribute was Checking accuracy of accounting records (*M*=4.62, *SD*= 0.490) followed by Investigating errors occurring (*M*=4.51, *SD*= 0.506) and then Checking routine transactions was the least rated with a mean score of (*M*=4.51, *SD*= 0.516).

4.5.2 Compliance with Policies

The study sought to know whether the organizations had a compliance policy and the extent to which they felt it impacts fraud mitigation. The results are as shown in Table 4.5.2.

Table 4.5.2: Compliance with Policies

Component	Mean	Std. Deviation
Security policies	4.78	0.420
Controller's procedures	4.44	0.546
Standards for data processing	4.42	0.499
Procurement	4.18	0.650
Data retention requirements	4.11	0.487
Personnel administration	4.09	0.668
Aggregate Mean	**4.34**	**0.545**

Source: Research Findings (2017)

The study found out that all the parastatals had compliance policies and that the policies affected fraud mitigation to a great extent (M=4.34, SD= 0.545) as shown by the aggregate mean score. The most rated attribute was security policies where it was said to affect fraud mitigation to a very great extent (M=4.78, SD= 0.420). Controller's procedures and Standards for data processing were also highly rated with mean score of (M=4.44, SD= 0.546) and (M=4.42, SD= 0.409) implying that they affect fraud mitigation to a great extent. Personnel administration was the least rated.

4.5.3 Robust Internal Controls

The study also sought to know whether the parastatals had working robust internal controls and the extent to which they agreed that it impacts fraud mitigation. The results are as shown in Table 4.5.3.

Table 4.5.3: Robust Internal Controls

Component	Mean	Std. Deviation
Code of conduct in the organization	4.67	0.477
Regular conduct of fraud risk assessment	4.60	0.495
Looking at alleged fraud	4.56	0.503
Robust audit committee	4.53	0.505
A functional whistle blower programme	4.33	0.477
Aggregate Mean	**4.54**	**0.491**

Source: Research Findings (2017)

It was found out that the parastatals in Kenya had robust internal controls which they agreed impacts fraud mitigation to a very great extent as shown by a mean score of (M=4.54, SD= 0.491). Code of conduct in the organization and Regular conduct of fraud risk assessment with mean scores of (M=4.67, SD= 0.477) and (M=4.60, SD= 0.495) respectively were the most rated attributes of robust internal controls followed by Looking at alleged fraud and Robust audit committee with mean scores of (M=4.56, SD= 0.503) and (M=4.53, SD= 0.505) respectively. A functional whistle blower programme with a score of (M=4.33, SD= 0.477) was the least rated attribute.

4.5.4 Management Override of Controls

The respondents were asked to indicate whether their parastatals had management override of controls and the extent to which they agreed that it impacts fraud mitigation. The results are as shown in Table 4.5.4.

Table 4.5.4: Management Override of Controls

Component	Mean	Std. Deviation
The firm ensures that the entity cultivates a vigorous whistle-blower program.	4.36	0.484
The firm strengthen committee understanding of the business	4.27	0.618
The management maintains an appropriate level of skepticism	4.22	0.517
The management brainstorm about fraud risks	4.07	0.495
The firm uses the code of conduct to assess financial reporting culture	3.91	0.514
Aggregate Mean	**4.16**	**0.526**

Source: Research Findings (2017)

The responses indicated that all the parastatals had management override of controls which impacted fraud mitigation to a great extent as illustrated by an aggregate mean score of (*M*=4.16, *SD*= 0.526). The respondents agreed that all the attributes impact fraud mitigation to a great extent. The most rate was The firm ensures that the entity cultivates a vigorous whistle-blower program and The firm strengthen committee understanding of the business with scores of (M=4.36, SD= 0.484) and (M=4.27, SD= 0.618) respectively. The least impactful was that “The firm uses the code of conduct to assess financial reporting culture” with a score of (M=3.91, SD= 0.514).

4.5.5 Segregation of Duties

The respondents were further asked to indicate whether their parastatals had segregation of duties and the extent to which they felt that it impacts fraud mitigation. The results are as shown in Table 4.5.5.

Table 4.5.5: Segregation of Duties

Component	Mean	Std. Deviation
The organization assign different people responsibility for recording transactions	4.70	0.405
The management brainstorm about fraud risks	4.78	0.420
The organization does not let the person writing the cheques to reconcile the bank statement	4.44	0.546
The organization assign different people responsibility for maintaining custody of assets	4.27	0.654
The organization does not let the person initiating the purchase order approve the payment	3.84	0.520
The organization assign different people responsibility for authorizing transactions	3.60	0.809
Aggregate Mean	4.29	0.559

Source: Research Findings (2017)

It was established that parastatals in Kenya have segregation of duties and this impacts fraud mitigation to a great extent as shown by an aggregate mean of (M=4.29, SD= 0. 559). The top rated attributes of segregation of duties component were “The organization assign different people responsibility for recording transactions” and “The management brainstorm about fraud risks” with scores of (M=4.70, SD= 0.405) and (M=4.78, SD= 0.420) respectively. This shows that the two attributes affects fraud mitigation to a very great extent. The least rated attributes were “The organization does not let the person initiating the purchase order approve the payment” and “The organization assign different people responsibility for authorizing transactions” with scores of (M=3.84, SD= 0.520) and (M= 3.60, SD= 0.809) respectively implying that they influence fraud mitigation to a great extent.

4.5.6 Dispute Resolution

The study further sought to establish the extent to which they felt dispute resolution impacts fraud mitigation. The results are as shown in Table 4.5.6.

Table 4.5.6: Dispute Resolution

Component	**Mean**	**Std. Deviation**
Negotiations(Includes all efforts by individual disputants to resolve conflict themselves)	3.96	0.737
Risk based processes(3rd party determines the outcome of a dispute based on laws)	3.07	0.539
Interest based neutrals (manages dispute resolution and leave decision making authority to parties themselves)	2.84	0.796
Aggregate Mean	**3.29**	**0.691**

Source: Research Findings (2017)

The study found out that dispute resolution impacts fraud mitigation to a moderate extent as shown by an aggregate mean of (M= 3.29, SD= 0. 691). The most impactful attribute was negotiations (all efforts by individual disputants to resolve conflict themselves) which was rated to have a great impact on fraud mitigation as shown by a mean score of (M= 3.96, SD= 0.737) followed by risk based processes (3rd party determines the outcome of a dispute based on laws) with a mean score of (M= 3.07, SD= 0. 539). This implies that the attribute helped in fraud mitigation to a moderate extent. The least rated attribute was that "Interest based neutrals (manages dispute resolution and leave decision making authority to parties themselves)" and it influenced fraud mitigation to a moderate extent as evidenced by a mean score of (M= 2.84, SD= 0.796).

4.5.7 Litigation Support

Lastly, the study sought to know the extent to which the respondents agreed that litigation processes impact on fraud prevention and detection among parastatals in Kenya. The results are as shown in Table 4.5.7.

Table 4.5.7: Litigation Support

Component	Mean	Std. Deviation
Presentation of expert testimony	4.74	0.367
Accounting and financial analysis for damages	4.76	0.435
Analysis of the financial components of the initial complaint	4.47	0.505
Preparation of disclosure statements including expert report	4.44	0.503
Discovery, interrogatory preparation and requests for production	4.29	0.626
Aggregate Mean	**4.56**	**0.487**

Source: Research Findings (2017)

The study found out that litigation processes impacts fraud prevention and detection among parastatals to a very great extent as evidenced by the aggregate mean of (M=4.56, SD= 0.487). The most effective attributes were “Presentation of expert testimony” and “Accounting and financial analysis for damages” with a mean scores of (M= 4.74, SD= 0.367) and (M4.76, SD= 0.435). The least rated statement was “Discovery, interrogatory preparation and requests for production” with a mean scores of (M= 4.29, SD= 0.626). This shows that the attribute had a great impact on fraud prevention and detection among parastatals.

4.6 Fraud Mitigation

The study further sought to know the extent of respondents' agreement in regard to fraud mitigation among parastatals. The recorded mean scores were interpreted using the following scale: 1.00 - 1.49 = Very Low Extent; 1.50 - 2.49 = Low Extent; 2.50 - 3.49 = Moderate Extent; 3.50 - 4.49 = Great Extent; 4.50 - 5.00 = Very Great Extent. The results are as shown in Table 4.6.

Table 4.6: Fraud Mitigation

Component	Mean	Std. Deviation
The firm has a risk assessment culture	4.77	0.657
The firm has a structure for regulatory compliance strategies	4.67	0.477
The firm has vigorous fraud hotlines	4.49	0.506
The firm Probe suspect financial performance	4.42	0.499
The firm has effective internal audit	4.41	0.513
Aggregate Mean	**4.55**	**0.531**

Source: Research Findings (2017)

The respondents agreed that parastatals in Kenya have managed to mitigate fraud to a very great extent as evidenced by an aggregate mean of (M=4.55, SD= 0.531). The most rated statements were that "The firm has a risk assessment culture" and "The firm has a structure for regulatory compliance strategies" with a mean scores of (M= 4.77, SD= 0.657) and (M= 4.67, SD= 0.477). These statements were rated to a very great extent. The least rated statements were "The firm Probe suspect financial performance" and "The firm has effective internal audit" with a mean scores of (M= 4.42, SD= 0.499) and (M= 4.41, SD= 0.513). This shows the level of agreement among the respondents was to a great extent.

4.7 Multiple Regression Analysis

The research sought to find out the effect of forensic accounting services in fraud mitigation. The fraud services were: litigation support, Segregation of duties, Proactive fraud audit, compliance with policies, robust internal controls, and management controls. Forensic accounting services were regressed against fraud mitigation. The results regression findings are discussed below.

4.7.1 Model Summary

The model summary indicates the magnitude of the relationship between the role of forensic accounting services in the prevention and mitigation of fraud among Kenyan public institutions. The findings are as shown in the Tables 4.7.1.

Table 4.7.1 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.867[a]	.752	.704	.18385
a. Predictors: (Constant), Litigation Support, Segregation of Duties, Proactive Fraud Audit, Compliance With Policies, Robust Internal Controls, Management Override of Controls, Dispute Resolution				

Source: Research Findings (2017).

The study found out that there was strong relationship (R= 0.867) between forensic accounting and fraud mitigation among parastatals in Kenya. Further, the study established forensic accounting accounts for 70.4% of the total variance in fraud mitigation among parastatals as evidenced by an adjusted R-Square value of 0.704.

4.7.2 Analysis of Variance (ANOVA)

The study further sought to establish the reliability of the regression model in establishing the relationship between a forensic accounting and fraud mitigation among parastatals by use of Analysis of Variance. The results are as shown in Table 4.7.2.

Table 4.7.2 Analysis of Variance (ANOVA[a])

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.349	7	.193	2.797	.017[b]
	Residual	2.251	37	.069		
	Total	3.600	44			
a. Dependent Variable: Fraud Mitigation						
b. Predictors: (Constant), Litigation Support, Segregation of Duties, Proactive Fraud Audit, Compliance With Policies, Robust Internal Controls, Management Override of Controls, Dispute Resolution						

Source: Research Findings (2017)

Analysis of Variance recorded a p-value of 0.017 which implies that the regression model had a significance level of 1.7%. This further implies that the model can be relied on in establishing the relationship between forensic accounting and fraud mitigation among parastatals. This is because the recorded p-value was less than the generally accepted value of 0.05.

4.7.3 Coefficients of Determination

The study further sought to know how individual components of forensic accounting affect fraud mitigation parastatals in Kenya. Regression coefficients of determination were computed and the results are as shown Table 4.7.3.

Table 4.7.3: Coefficients of Determination

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.678	1.503		3.113	.004
	Proactive Fraud Audit	.632	.098	.450	6.449	.000
	Compliance With Policies	.627	.127	.432	4.937	.000
	Robust Internal Controls	.594	.156	.389	3.808	.001
	Management Override of Controls	.310	.123	.393	2.520	.016
	Segregation of Duties	.260	.123	.201	2.114	.041
	Dispute Resolution	.218	.073	.140	2.986	.005
	Litigation Support	.701	.154	.604	4.552	.000
a. Dependent Variable: Fraud Mitigation						

Source: Research Findings (2017).

The co-efficients of determination reveal that at 95% confidence level all the components of forensic accounting had a positive and significant effect on the fraud mitigation parastatals in Kenya. This is evidenced by the high t-values and p-values < 0.05. The values recorded are as follows: Proactive Fraud Audit (t= 6.449, p= 0.000), Compliance with Policies (t= 4.937, p= 0.000), Robust Internal Controls (t= 3.808, p= 0.001), Management Override of Controls (t= 2.520, p= 0.016), Segregation of Duties (t= 2.114, p= 0.041), Dispute Resolution (t= 2.986, p= 0.005) and Litigation Support (t= 4.552, p= 0.000). If forensic accounting was not done among parastatals in Kenya, fraud mitigation would be so low at only 4.678 as evidenced by the regression equation shown below:

$$Y = 4.678 + 0.632X_1 + 0.627X_2 + 0.594X_3 + 0.310X_4 + 0.260X_5 + 0.218X_6 + 0.701X_7$$

Where:

Y – Fraud Mitigation (the dependent variable)

X_1 – Proactive Fraud Audit

X_2 – Compliance with Policies

X_3 – Robust Internal Controls

X_4– Management Override of Controls

X_5 – Segregation of Duties

X_6 – Dispute Resolution

X_7 – Litigation Support

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary, conclusion and recommendations of the study. The chapter also presents recommendations for practice and policy as well as suggestions for further research. The objective of the study was to determine the effect of forensic accounting and fraud mitigation among Parastatals in Kenya.

5.2 Summary of Findings

The objective of the study was to determine the role of forensic accounting in mitigating fraud among Parastatals in Kenya. The data used in this study was collected from respondents using a semi-structured questionnaire. The collected data was coded and keyed into Statistical Package for Social Sciences and then analysed using tabulations, percentages, measures of central tendency and measures of dispersion such as means and standard deviations. Presentation of the study findings was done using frequency tables and figures. Regression and correlation analysis was used to test the strength of the relationship between forensic accounting and fraud mitigation among Parastatals in Kenya.

The study established that all the parastatals in Kenya had a proactive fraud audit function it impacted fraud mitigation to a very great extent. The study also found out that all the parastatals had compliance policies and that the policies affected fraud mitigation to a great extent. Robust internal controls were found to impact fraud mitigation to a very great extent while management override of controls impacted fraud mitigation to a great extent. Ssegregation of duties impacted fraud mitigation to a great extent. Dispute resolution impacts fraud mitigation to a moderate extent. Further, the study found out that litigation processes impacts fraud prevention and detection among parastatals to a very great extent.

Regression analysis revealed that there is a strong relationship (R= 0.867) between forensic accounting and fraud mitigation among parastatals in Kenya with forensic accounting accounts for 70.4% of the total variance in fraud mitigation among parastatals. Further, the study found out that components of forensic accounting (proactive fraud audit, compliance with policies, robust internal controls, management override of controls, segregation of duties, dispute resolution and litigation support) have a positive and significant effect impact on fraud prevention and detection.

5.3 Conclusion

The study concludes that all the parastatals in Kenya have a proactive fraud audit function, robust internal controls and litigation processes which help in fraud mitigation to a very great extent. The study also concludes that parastatals in Kenya have compliance policies, management override of controls and Ssegregation of duties help in fraud mitigation to a great extent. Dispute resolution impacts fraud mitigation only to a moderate extent.

The study further concludes that there is a strong relationship (R= 0.867) between forensic accounting and fraud mitigation among parastatals in Kenya with forensic accounting accounts for 70.4% of the total variance in fraud mitigation among parastatals. Further, components of forensic accounting (proactive fraud audit, compliance with policies, robust internal controls, management override of controls, segregation of duties, dispute resolution and litigation support) have a positive and significant impact on fraud prevention and detection.

5.4 Policy Recommendations

The study found out that forensic accounting (proactive fraud audit, compliance with policies, robust internal controls, management override of controls, segregation of duties, dispute resolution and litigation support) has a positive and significant impact on fraud prevention and detection. The study therefore recommends that these functions be implemented to the letter as this help public institutions in Kenya to detect and prevent fraud.

5.5 Limitations of the Study

Senior and middle level managers among the parastatals had very busy working schedules. This explains why most of the respondents were low level managers. However, the researcher made every effort to have the questionnaires filled by most of the respondents. That’s how a response rate of 84.91% was achieved.

As a common problem when collecting primary data, the researcher didn’t have absolute control on the veracity of the information provided by the respondents. However, the researcher put every effort to seek clarification one any issues that were not clear.

5.6 Suggestions for Further Research

This study only focused on the role of forensic accounting in fraud mitigation among public institutions in Kenya. There is need for a similar study to be conducted among private institutions in Kenya so as to compare how both public and private institutions deal with the challenge of fraud.

REFERENCES

Albrecht, W. S., Albrecht, C. C., Albrecht, C. O. &Zimbelman, M. F. (2009).*Fraud Examination*.Natorp Boulevard, USA: South-western Cengage Learning.

Albrecht, C., Turnbull, C., Zhang, Y. &Skousen, C. J. (2010).The relationship between South Korean Chaebols and Fraud.*Management Research Review*, 33 (3), 257-268

American Institute of Certified Public Accountants (AICPA) (2003).*Forensic and Litigation Services Committee and Fraud Task Force*.Discussion Memorandum. Forensic Services Audits, and Corporate Governance: Bridging the Gap. New York, NY: AICPA

Baird, J., &Zelin, R. C. (2009).II (2009).An examination of the impact of obedience pressure on perceptions of fraudulent acts and the likelihood of committing occupational fraud.*Journal of Forensic Studies in Accounting and Business*, 1(1), 1-14.

Boritz, J. E., Kotchetova, N., & Robinson, L. A. (2008).*Planning fraud detection procedures: Forensic accountantsvs auditors.* Paper presented at the IFA conference, accessed May.

Cohen, J., Ding, Y., Lesage, C., &Stolowy, H. (2011). Corporate Fraud and Manager's Behavior: Evidence from the Press. *Journal of Business Ethics*, 57(2), 271-315.

Dhar, P. and A. Sarkar, (2010). Forensic accounting: An Accountant’s Vision. *Vidyasagar University Journal of Commerce*, 15(3): 93-104.

Di Napoli, J. A., (2010). An Empirical View of the Transparent Objectivity of Forensic Accounting Expert Witnesses, http://ssrn.com/abstract=1534705

Enofe, A., Okpako, P., &Atube, E. (2013).The impact of forensic accounting on fraud detection.*European Journal of Business and Management*, 5(26), 61-72.

Enofe, A., Ekpulu, G., &Ajala, T. (2015).Forensic accounting and corporate crime mitigation.*European Scientific Journal*, 11(7).

Fiia, F. (2013). Forensic accounting: A tool for fraud detection and prevention in the public sector.(A study of selected ministries in Kogi state). *International Journal of Academic Research in Business and social sciences,* 3(3), 1.

Forensic, K. (2013). Fraud survey 2013. *Montvale*, NJ.

Gbegi.D.O. (2013). The new Fraud Diamond Model-How can it help forensic Accountants in fraud investigation in Nigeria?*European Journal of Accounting Auditing and Finance Research*, 1(4), 129-138.

Gollwitzer, P.M., and R.F. Kinney.(1990). Effects of deliberate and implemental mindsets on Illusion of control.*Journal of personality and social psychology*.56 (4):531-542

Hillison, W., Pacini, C. &Sinason, D. (1999).The internal auditor as fraud- buster. *Managerial Auditing Journal*, 14 (7), 351-363.

Islam, M. J., Rahman, M. H., &Hossan, M. T. (2011).*Forensic Accounting as a Tool for Detecting Fraud and Corruption*: An Empirical Study in Bangladesh.

Kimani, J. (2011). *A study of Fraud Risk assessment plan for Barclays Bank of Kenya.* University of Applied Sciences.

KPMG.(2004). *Fraud Survey*.Montvale, NJ.

Koh, A. N., Arokiasamy, L., &Suat, C. L. A. (2009). Forensic accounting: Public acceptance towards occurrence of fraud detection. *International Journal of Business and Management*, 4(11), 145.

Kumar,R. (2005). Research Methodology*: A step by step guide for beginners*. New Delhi: SAGE Publishers

Mahinda, C. G. (2012). *Determinants of occupational fraud in commercial banks in Kenya*.University of Nairobi.

Mugenda, Olive M. &Mugenda, A. G., (2003).*Research Methods: Qualitative & Quantitative Approaches*. African Centre for Technology Studies

Mutua, C., (2014).The effect of fraudulent practices on the growth of Insurance Companies in Kenya.*Journal of Management* 2(16) pg. 301-317.

Ngechu M., (2004).*Understanding the Research Process and Methods*: *An Introduction to Research Methods* Nairobi, Acts Press

Nila, P., &Viriyanti. (2008). *The relationship between internal control and good corporate governance (survey on state owned enterprises in Bandung, Indonesia),* Widyatama University working paper.

Norman, C.S., A. Rose, &Rose.J. (2010). Internal audit reporting lines, fraud risk decomposition, and assessments of fraud risk. *Accounting, Organizations and Society*, 35, 546–557.

Okunbor, J. A., &Obaretin, O. (2010).Effectiveness of theApplication of Forensic Accounting Services in Nigerian Organisations.*AAU J. Manage. Science*, 1(1), 171- 184.

Omondi, E. O. (2013). *The impact of forensic accounting services on fraud detection and prevention among Commercial Banks in Kenya*. University of Nairobi.

Owojori, A. (2008). The Role of Forensic Accounting in Solving the Vexed Problem of Corporate World.*European Journal of Scientific Research*, Vol.29, No.2, 183-187.

Popoola, O. M. J., Ahmad, A. C., Samsudin, R. S., &Yussof, R. Z. (2013). *Impact of task performance fraud risk assessment on forensic skills and mindsets: Experience from Nigeria.* Paper presented at the Proceedings of the 8th Asian Business Research Conference, Bangkok, Thailand.

Pratolo, S. (2007).Good corporate governance and the performance of state owned enterprises in Indonesia. *National Symposium of Accounting X*. Makasar, Indonesia.

PricewaterhouseCoopers (2014).*Global Economic Survey. Economic Crime*: A threat to business globally.

Rae, K. &Subramaniam, N. (2008). Quality of internal control procedures: Antecedents and moderating effect on organizational justice and employee fraud. *Managerial Auditing Journal*, 23 (2), 104-124.

Ramaswamy, V. (2011). New frontiers: training forensic accountants within the accounting program. *Journal of College Teaching & Learning* (TLC), 4(9).

Rezaee, Z. (1995). What the COSO report means for internal auditors. *Managerial Auditing Journal*, 10 (6), 5-9.

Singleton, & Aaron. (2010). *Fraud auditing and forensic accounting*: John Wiley & Sons.

Skousen, C.J. and C.J. Wright.(2008). Contemporaneous risk factors and the prediction of Financial statement fraud.*Journal of Forensic Accounting*, 9: 37-62.

Stoel, D., Havelka, D., &Merhout, J. W. (2012). An analysis of attributes that impact information technology audit quality: A study of IT and financial audit practitioners. *International Journal of Accounting Information Systems*, 13(1), 60-79

Sudti, B. (2008). *Corporate Crime and the Criminal Liability of Corporate Entities in Thailand* (From UNAFEI Resource Material Series No. 76, 94-114, 2008, Grace Lord, ed. See NCJ-229030).

Sutherland, Edwin. (1949). *White Collar Crime*. New York: Dryden Press.

Wanjohi, M. (2011).*A study of Rationale for use of Forensic accounting in Reducing audit expectations gap; The case of Central Kenya Cooperative Societies*. Unpublished MCOM project.

Wanyama, D.W. &Olweny T. (2013).Effects of Corporate Governance on Financial Performance of Listed Insurance Firms in Kenya.*Public Policy and Administration Research*, 3(4), 96-116

Warutere, P. (2006). Detecting and Investigating money laundering in Kenya. Money laundering experiences: *a survey, monograph (124).*

APPENDICES

Appendix I: Questionnaire

This questionnaire has been designed to collect information on the role of forensic accounting on fraud mitigation among Parastatals in Kenya. Please read carefully and answer the questions as honestly as possible. The information gathered was used purely for the purpose of academic research and was treated with utmost confidence.

Instructions

1. Tick appropriately in the box or fill in the space provided.
2. Feel free to give further relevant information to the research.

PART A: BACKGROUND INFORMATION

1. Name of the organization

………………………………………………………………………

2. Your management level in the organization

Senior Level Management ☐

Middle Level Management ☐

Lower Level Management ☐

3. How long have you worked with the organization?

Below 5 years ☐

5 to 10 years ☐

Above 10 years ☐

4. Does your organization have a forensic accounting department?

………………………………………………………………………..

PART B: ROLE OF FORENSIC ACCOUNTING COMPONENTS IN MITIGATING FRAUD IN YOUR ORGANIZATION

Component One: Proactive Fraud Audit

Does the organization have a proactive fraud audit function?

(a) Yes [ ]

(b) No [ ]

To what extent do you agree with the following attributes as ways that proactive fraud audit impact on fraud mitigation in the firm? Use 1- Very low extent, 2-Low extent, 3-Moderate extent, 4- Great extent, 5- Very great extent

Component	**1**	**2**	**3**	**4**	**5**
Checking accuracy of accounting records					
Checking routine transactions					
Investigating errors occurring					
Others (please specify)					

Component Two: Compliance with Policies

Does your organization have a compliance policy?

(a) Yes [ ]

(b) No [ ]

To what extent do you feel that compliance with the policies listed below impacts on fraud mitigation in the firm? Use 1- Very low extent, 2-Low extent, 3-Moderate extent, 4- Great extent, 5- Very great extent

Component	**1**	**2**	**3**	**4**	**5**
Standards for data processing					

Controller's procedures					
Procurement					
Data retention requirements					
Security policies					
Personnel administration					
Other policy (please specify)					

Component Three: Robust Internal Controls

Does the organization have working robust internal controls?

(a) Yes [ ]

(b) No [ ]

To what extent do you agree with the following attributes as ways that robust internal controls impact on fraud mitigation in the firm? Use 1- Very low extent, 2-Low extent, 3-Moderate extent, 4- Great extent, 5- Very great extent

Component	**1**	**2**	**3**	**4**	**5**
code of conduct in the organization					
Robust audit committee					
Regular conduct of fraud risk assessment					
A functional whistle blower					

programme					
Looking at alleged fraud					
Other (please specify)					

Component Four: Management Override of Controls

Does the organization has a working management override controls?

(a) Yes [ ]

(b) No [ ]

To what extent do you agree with the following attributes as ways that management override of controls impact on fraud mitigation in the firm? Use 1- Very low extent, 2- Low extent, 3-Moderate extent, 4- Great extent, 5- Very great extent

Component	**1**	**2**	**3**	**4**	**5**
The management maintains an appropriate level of skepticism					
The firm strengthen committee understanding of the business					
The management brainstorm about fraud risks					
The firm uses the code of conduct to assess financial reporting culture					
The firm ensures that the entity					

cultivates a vigorous whistle-blower program.					
Other (please specify)					

Component Five: Segregation of Duties

Does your firm have clear segregation of duties?

(a) Yes [ ]

(b) No [ ]

To what extent do you agree with the following attributes as ways that segregation of duties impact on fraud mitigation in the firm? Use 1- Very low extent, 2-Low extent, 3-Moderate extent, 4- Great extent, 5- Very great extent

Component	**1**	**2**	**3**	**4**	**5**
The organization does not let the person writing the cheques to reconcile the bank statement					
The organization does not let the person initiating the purchase order approve the payment					
The management brainstorm about fraud risks					
The organization assign different people responsibility for authorizing transactions					

The organization assign different people responsibility for recording transactions					
The organization assign different people responsibility for maintaining custody of assets					
Other (please specify)					

Component Six: Dispute Resolution

Describe the extent to which the following apply in the firm in dispute resolution. Use 1-Very low extent, 2-Low extent, 3-Moderate extent, 4- Great extent, 5- Very great extent

Component	**1**	**2**	**3**	**4**	**5**
Risk based processes(3rd party determines the outcome of a dispute based on laws)					
Interest based neutrals (manages dispute resolution and leave decision making authority to parties themselves)					
Negotiations(Includes all efforts by individual disputants to resolve conflict themselves)					

Component Seven: Litigation Support

To what extent do you agree with the following attributes as ways that litigation processes impact on fraud prevention and detection in the firm? Rate your agreement with the following statements using the likert scale below: (Please tick appropriately) Key: 1-Cannot tell, 2- Strongly Disagree, 3-Disagree, 4-Agree, 5-Strongly Agree

Component	**1**	**2**	**3**	**4**	**5**
Analysis of the financial components of the initial complaint					
Accounting and financial analysis for damages					
Preparation of disclosure statements including expert report					
Presentation of expert testimony					
Discovery, interrogatory preparation and requests for production					

PART C: FRAUD MITIGATION

To what extent do you agree on fraud mitigation in the firm? Rate your agreement with the following statements using the likert scale below: 1- Very low extent, 2-Low extent, 3-Moderate extent, 4- Great extent, 5- Very great extent

(Please tick appropriately)

Component	**1**	**2**	**3**	**4**	**5**
The firm has effective internal audit					
The firm has vigorous fraud hotlines					
The firm has a structure for regulatory compliance strategies					
The firm Probe suspect financial performance					
The firm has a risk assessment culture					

Thank you for your co-operation

Appendix II: List of Targeted Parastatals

Agriculture

1. Coffee Board of Kenya
2. Kenya Dairy Board
3. National Cereals and Produce Board
4. Agricultural Development Corporation
5. Agricultural Finance Corporation
6. Kenya Forestry Research Institute
7. Kenya Plant Health Inspectorate Services
8. New KCC

Service

1. National Hospital Insurance Fund
2. Kenya Revenue Authority
3. Communication Commission of Kenya
4. Kenya Bureau of Standards
5. Kenya Roads Board
6. National Social Security Fund
7. Public Procurement Oversight Authority
8. Sports Stadia Management Board
9. National Council For Law Reporting
10. National Irrigation Board

Industry

1. Kenya Industrial Estates

2. Postal Corporation of Kenya

3. Kenya Airports Authority

4. Export Processing Zone Authority

5. Kenya Pipeline Company

6. Telkom Kenya

7. Kenya Ferry Services Limited

8. Kenya Electricity Generating Company

9. Kenya Civil Aviation Authority

10. Industrial and Commercial Development Corporation

11. South Nyanza sugar Company

12. National Museums of Kenya

13. National Oil Corporation of Kenya

14. Kenya National Shipping Line

15. Kenya Ordinance Factories Corporation

16. Kenya Railways Corporation

Banking and Finance

1. National Bank of Kenya

2. Kenya Commercial Bank

3. Capital Markets Authority

4. Kenya Bankers Association of Kenya

5. National housing Corporation

6. Insurance Regulatory Authority

Education

1. University Of Nairobi

2. Kenyatta University

3. Kenya National Library Services

4. Higher Education's Loans Board

5. Kenya Literature Bureau

6. Kenya College of Communication and Technology

7. Kenya institute of Administration

8. Egerton University

9. Teachers Service Commission

10. Commission for Higher Education

11. University of Nairobi Enterprises & Services Ltd

12. Kenya Institute of Public Policy Research and Analysis

13. Moi University

Source: GOK (2017)