EFFECT OF INTERNAL AUDIT FUNCTIONS ON FRAUD DETECTION IN INSURANCE COMPANIES IN KENYA

MARGARET NJOKI MATHENGE
D61/63906/2011

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION (FINANCE OPTION) SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI

NOVEMBER, 2016
DECLARATION

This project is my original work and has not been presented for a degree in any other University. No part of this project should be reproduced without authority from the author or/ University of Nairobi.

Signature…………………………... Date……………………………………
MARGARET NJOKI MATHENGE       D61/63906/2011

I confirm that the work in this project was done by the candidate under my supervision as the appointed University Supervisor

Signature___________________ Date___________________________
Mr. Martin Odipo
Lecturer
School of Business
University of Nairobi
DEDICATION

I dedicate this project to my family and parents for their moral and financial support and encouragement during the draft of this project. I also dedicate this project to my Lecturers in the School of Business for their Academic support and advice.
ACKNOWLEDGEMENT

My special appreciation goes to my supervisor Mr. Martin Odipo who tirelessly provided guidance throughout the entire research work. Most importantly, thanks to God, for His providence, love and protection in every circumstance. Special acknowledgement is also extended to all the MBA students, workmates, friends and family members for their immeasurable support up to the culmination of this project.
TABLE OF CONTENTS

DECLARATION ........................................................................................................ ii
DEDICATION .......................................................................................................... ii
ACKNOWLEDGEMENT ........................................................................................ iv
TABLE OF CONTENTS .......................................................................................... v
LIST OF TABLES .................................................................................................... ix
LIST OF FIGURES .................................................................................................. x
OPERATIONALIZATION OF TERMS ................................................................... xi
ABBREVIATIONS AND ACRONYMS .................................................................. xii
ABSTRACT ............................................................................................................. xiii

CHAPTER ONE ...................................................................................................... 1
INTRODUCTION ..................................................................................................... 1
1.1 Background of the Study .................................................................................. 1
   1.1.1 Internal Audit Function ......................................................................... 3
   1.1.2 Insurance Fraud .................................................................................... 3
   1.1.3 Insurance Industry in Kenya .................................................................. 7
1.2 Statement of the Problem ................................................................................ 8
1.3 Objectives of the Study .................................................................................. 10
   1.3.1 Main Objective of the Study .................................................................. 10
   1.3.2 Specific Objectives ................................................................................ 10
1.4 Value of the Study .......................................................................................... 11

CHAPTER TWO .................................................................................................... 12
LITERATURE REVIEW ......................................................................................... 12
2.1 Introduction ..................................................................................................... 12
2.2 Theoretical Literature Review ........................................................................ 12
3.7.2 Multicollinearity Test

CHAPTER FOUR
DATA ANALYSIS, FINDINGS AND DISCUSSIONS
4.1 Introduction
4.2 Response Rate
4.3 Respondent Period of Work
4.4 Education Level of Respondents
4.5 Internal Audit Function
4.5.1 Proactive Fraud Audit
4.5.2 Compliance to Policies
4.5.3 Risk Management
4.5.4 Control of Operations
4.5.5 Financial Reporting
4.5.6 Causes of Fraud in Insurance Companies
4.5.7 Measures of Mitigating Insurance Fraud
4.6 Diagnostic Test
4.6.1 Normality Test
4.6.2 Multicollinearity Test
4.5.4 Autocorrelation
4.6 Correlation Statistics
4.7 Regression Analysis

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS
5.1 Introduction
5.2 Summary of the Findings
5.3 Conclusions ................................................................. 61
5.4 Recommendations ....................................................... 61
5.5 Limitations of the Study .................................................. 64
5.6 Suggestion for Further Studies ........................................... 65

REFERENCES ........................................................................ 66
APPENDICES ....................................................................... 74
Appendix 1: Questionnaire ......................................................... 74
Appendix 2: Insurance Fraud as at 1st January, 2015 ...................... 78
Appendix 3: List of Insurance Companies in Kenya ......................... 79
LIST OF TABLES

Table 2.3: Reliability Coefficients ........................................................................34
Table 4.1: Length of Service ................................................................................38
Table 4.2: Education Level of Respondents ..........................................................38
Table 4.3: Proactive Fraud Audit ...........................................................................39
Table 4.4: Compliance to Policies ..........................................................................41
Table 4.5: Risk Management ................................................................................43
Table 4.6: Control of Operations ...........................................................................45
Table 4.7: Financial Reporting ...............................................................................46
Table 4.8: Causes of Fraud in Insurance Companies .............................................48
Table 4.9: Measures of Mitigating Insurance Fraud ..............................................49
Table 4.10: Descriptive Statistics .........................................................................51
Table 4.11: Collinearity Coefficients .....................................................................52
Table 4.12: Correlations Analysis .........................................................................54
Table 4.13: Strength of the Model ........................................................................56
Table 4.14: Significance of the Model ...................................................................56
Table 4.15: Regression Coefficient .......................................................................57
LIST OF FIGURES

Figure 2.1: Conceptual Framework.................................................................29
## OPERATIONALIZATION OF TERMS

**Fraud**
alludes to a deliberate demonstration by at least one people among administration, staff or outsiders, which brings about a distortion of financial statements (Carcello *et al.* 2005).

**Insurance**
alludes to an agreement in which the insured transfers threats of potential misfortune to the insurer who guarantees to repay the one insured in case of losses (Kariuki, 2013).

**Internal Audit**
alludes to an autonomous, objective confirmation and consulting action intended to add value and enhance a company's operations. It assists a company to attain its targets by bringing a systematic (Carey *et al.*, 2006).
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AKI</td>
<td>Association of Kenya Insurers</td>
</tr>
<tr>
<td>ACFE:</td>
<td>Association of Certified Fraud Examiners</td>
</tr>
<tr>
<td>AUASB:</td>
<td>Auditing and Assurance Standards Board</td>
</tr>
<tr>
<td>IIK:</td>
<td>Insurance Institute of Kenya</td>
</tr>
<tr>
<td>IRA:</td>
<td>Insurance Regulatory Authority</td>
</tr>
<tr>
<td>IA:</td>
<td>Internal Audit</td>
</tr>
<tr>
<td>IAS:</td>
<td>Internal Audit Standards</td>
</tr>
<tr>
<td>IC:</td>
<td>Internal Controls</td>
</tr>
<tr>
<td>IFIU:</td>
<td>Insurance Fraud Investigation Unit</td>
</tr>
<tr>
<td>KPMG:</td>
<td>Klynveld, Peat, Marwick and Goerdeler</td>
</tr>
<tr>
<td>NYSE</td>
<td>New York Stock Exchange</td>
</tr>
<tr>
<td>SEC</td>
<td>Securities and Exchange Commission</td>
</tr>
<tr>
<td>US</td>
<td>United States</td>
</tr>
</tbody>
</table>
ABSTRACT

Financial fraud has become one of the challenges of firms operating in the 21st century both in developing and developed countries. For instance in Kenya, insurance companies have continued to record declined financial performance due high cases of fraud (KPMG, 2015). This study aimed at establishing the effect of internal audit functions on fraud detection among insurance companies operating in Kenya. The objectives of the study was to establish the effect of Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting on fraud detection among insurance companies in Kenya. The study adopted a descriptive research designs to establish the statistical relationship between variables of the study. The study adopted a census approach where information was collected from all the 41 Insurance companies in Kenya. The primary data was collected using a structured questionnaire consisting of close-ended and open-ended questions. The analysis was done using Statistical Packages for Social Sciences (SPSS Version21). Data was analyzed using descriptive statistics and t-test was used in testing the significance of the effect between dependent variables and independent variables at 5% level of significance. The analyzed data was presented in tables. Multiple regression analysis was used to determine the statistical relationship between variables. It was established that there was a statistical relationship between Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting and fraud detection among insurance companies in Kenya. It was concluded that insurance companies were likely to gain competitive edge in the changing business environment if only they developed proactive fraud audit systems, compliance systems, risk management systems, internal control systems and financial reporting systems. It was recommended by the study that insurance companies in Kenya should recognize the need of sensitizing employees and customers on the consequences of fraud, train employees on fraud detection in systems, develop risk management systems and review internal control systems to promote the spirit of transparency and accountability.
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

For a greater part of its past, internal auditing has served as a basic managerial strategy involved chiefly of checking documents, ascertaining the number of resources, and answering to the Management Board, Administration or External Auditors (Adeniji, 2004). Firms need to exhibit responsibility in the utilization of shareholders' cash and effectiveness in the conveyance of administrations. Firms now require exceptional competency and expertness from internal audits, and scarce assets must be utilized effectively to minimize and detect fraudulent activities from internal and external stakeholders (Aderibigbe & Dada, 2007). All over the world there is a realization that the Internal Audit function can lead to minimization of fraud among competitive firms (Morgan, 2005).

Fraud is costly at both the societal and authoritative level. One examination presumed that the aggregate monetary cost of fraud surpasses $650 billion every year (ACFE, 2006). The expenses at the hierarchical level are more quick and incorporate the loss of notoriety, a decrease in market capitalization and even the disintegration of the firm. In view of the broad certain and unequivocal expenses of misrepresentation, distinguishing approaches to expand the likelihood of fraud detection is of extraordinary enthusiasm to all partners, but since the association holds a definitive duty regarding any fraud detection, it has the best inspiration to recognize fraud before it can antagonistically affect the money related proclamations (Nila and Viriyanti, 2008). One way firms can upgrade the likelihood of recognizing fraud in its early stage is by distinguishing, enlisting and using inner
evaluators that are most appropriate for the errand of fraud detection (Arens, Elder & Beasley, 2010).

Ashton (1999) assert that both inner and outside auditors accentuate the significance of misrepresentation evaluation and location incompletely because of calls by expert bodies, administrative organizations, and governments. This research likewise adds to the writing around there as it uses an exceptional and rich information set to assess fraud recognition, which is the self-reported misrepresentation from the 2004 KPMG Fraud Survey. This information grows our comprehension of the significance of the inward review work and the part it plays in distinguishing fraud. The outcomes demonstrate a huge positive connection between a firm having an internal audit work and the number and estimation of self-reported (Chime and Carcello, 2000).

Ringer and Carcello (2000) contend that the internal audit capacity is a critical capacity that has been appeared to include worth and lessen recognized mistakes by outer examiners. Its destinations are to enhance the adequacy of risk control, and administration and it is viewed as an imperative administration instrument to shield organizations from inner criminal conduct (Nestor 2004). Moreover, the expert writing proposes that internal audit is an indispensable instrument in misrepresentation recognition when resources are misused by workers or untouchables (Belloli, 2006). Fraud in a audit of a budgetary report has expanded the outer evaluator's duty around there (Auditing and Assurance Standards Board, 2006).
A few studies led locally by KPMG on fraud examination have assessed the capacity of inside inspectors to perform fraud related work. Outside and inward auditors accomplished an abnormal state of agreement in their monetary proclamation misrepresentation hazard appraisals recommending that inside inspectors are as mindful as outer evaluators of where fraud is probably going to be distinguished (Apostolou et al. 2001). While considering fake budgetary reporting, interior evaluators surmise that fraud is the explanation behind a sudden distinction in salary when (1) pay is more noteworthy than anticipated and (2) when obligation agreements are prohibitive, molded on wage being more prominent than anticipated (Church et al. 2001). Therefore, the motivation of this study will be to investigate internal audit function that can be put in place by insurance firms in order to minimize cases of fraud. Appropriate internal audit functions like proactive fraud audit, compliance to policies, risk management, controls of operations and financial reporting will be areas of focus in this study.

1.1.1 Internal Audit Function

Dixon and Woodhead (2006) argue that internal audit is a vital part of the corporate administration structure inside a firm. Corporate administration incorporates those oversight exercises embraced by the governing body and review advisory group to guarantee the honesty of the budgetary reporting process (Public Oversight Board,, 1993). Three monitoring instruments have been distinguished in the corporate administration publications. They are external auditing, internal auditing, and directorships (Anderson et al. 1993, Blue Lace Board of trustees 1999) and in addition the review panel (Institute of Internal Auditors, 2003). As of late, prominent corporate breakdown have centered consideration on corporate
administration furthermore stressed inward evaluating as a feature of the administration procedure.

The IIA sees the target of internal auditing as both supporting and reinforcing a company's administration systems and assessing and enhancing the viability of risk administration and control (IIA, 1999). The significance of internal auditing has additionally been supported by the choice of the New York Stock Exchange (NYSE) to correct its posting necessities to order that all recorded organizations in the United States (US) have a review board (NYSE, 2003) to liaise between inside inspectors, outside examiners and administration, guaranteeing the autonomy of the review work. There is confirmation in the US that the Securities and Exchange Commission (SEC) additionally appends significance to internal auditing as there have been late situations where authorization activities by the SEC and ensuing settlements have required the registrant to draw in interior auditors (Carcello et al. 2005).

Chepkorir (2010) contend that inside audit assists a firms satisfy its objectives by bringing an effective, prepared approach to manage evaluate and improve the amleness of hazard organization, control, and organization frames. The external auditing action assesses chance exposures identifying with the company's administration, operations and data frameworks. The inward reviewers are required to give proposals to change in those ranges where openings or insufficiencies are distinguished.
1.1.2 Insurance Fraud

Insurance fraud is a purposeful trickiness submitted by candidates, policyholders, petitioners, benefit suppliers, operators, agents, organization workers (Insurance Fraud Investigation Unit, 2015) Fraud may happen amid the way toward purchasing, utilizing and endorsing protection covers. Adeniji (2004) propose that fraud is a purposeful demonstration by at least one people among administration, workers or outsiders, which brings about a deception of budgetary proclamations. Fraud can moreover be viewed as the consider turning, covering, or oversight of reality with the genuine target of disarray/control to the cash related obstacle of an individual or an alliance which moreover merges misappropriation, robbery or any endeavor to take or unlawfully get, misuse or insidiousness the upside of the connection (Carey, Subramaniam and Ching, 2006). Fraud has extended astonishingly over the late years and specialists believe this example is presumably going to continue.

Holtfreter (2004) contends that fraud is an ever display risk to the successful use of assets and it will dependably be an essential worry of administration. ISA 240 'The Auditor's' Responsibility to Consider fraud in Audit of Financial Statements (Revised) insinuates trick as an intentional showing by no less than one individuals among organization, those blamed for organization, laborers or outcasts, including the use of cheating to obtain an uncalled for or illegal ideal position. Foundation of Inside Reviewers (2008) see misrepresentation as a consider double dealing organized furthermore, executed with the strategy to block someone else from
acquiring his property or rights clearly or by suggestion, paying little notice to whether the offender benefits by his/her exercises.

From the examiner's perspective, fraud might be comprehensively named ponder ventures by at least one people to beguile or misdirect with the goal of abusing resources of business, bending association's evident budgetary execution or quality, or generally getting an unreasonable favorable position (Bierstaker, Brody and Pacini, 2006). It might begin as a honest to goodness mix-up, be effectively concealed and form from that point into a completely fledged long haul misrepresentation. It might be built from inside (i.e. workers or directors or both) or from outside (i.e. business contacts or the overall population) or mix of the two. The misuse of resources may include the creation, alterative concealment of bookkeeping records, vouchers and archives, or messing with gear (e.g. meters, documents, compartments) or the abuse of time, property or administrations (Carcello, Hermanson and Raghunandan, 2005).

Gramling, Maletta, Schneider and Church (2004) declare that misrepresentation may happen in light of the fact that duty regarding aversion is not assigned, on the grounds that deceptive nature is acknowledged as inescapable, known cases go unpunished and the ailments spread; since security is thought excessively costly or secured by loyalty bonds. Insurance fraud encompasses various regions and changes broadly in its inclination; it incorporates, yet is not constrained to: exaggerated cases, false claims misfortunes that never happened, numerous cases and acquiring spread on good terms on the premise of false data (Hoffman & Zimbelman, 2009).
1.1.3 Insurance Industry in Kenya

The insurance field assumes a key part in monetary improvement since it is an infrastructure mainstay of the money related services division and the economy in general (AKI, 2015). The monetary significance of the protection division has been expanding in most third world nations. Insurance agencies shape a developing part of the household money related division. They have additionally gotten to be huge players in the worldwide capital markets. The principle players in the Kenyan protection industry are: insurance agencies, reinsurance organizations, protection merchants, protection specialists and the risk administrators. The statute controlling the business is the insurance Act; Laws of Kenya, Chapter 487. The office of the commissioner of insurance was set up under its arrangements to fortify the government control under the Ministry of Finance. There is additionally self-control of protection by the Association of Kenya Insurers (AKI).

The expert body of the sector is the Insurance Institute of Kenya (IIK), which bargains principally with preparing and expert instruction. As of late there was shaped the Insurance Regulatory Authority (IRA) ordered to oversee and direct the Insurance business players. As per the (AKI) Insurance Industry Report for the year 2006, there were 43 authorized insurance agencies in 2006 with 21 companies writing general insurance, 7 writing life insurance while 15 were composite. There were 197 licensed insurance brokers during the year. The gross premium recorded by the business was Ksh 41.68 billion contrasted with Ksh 36.42 billion in 2005 speaking to a development of 14.54%. The gross premium from general insurance was Ksh 29.20 billion while life business premiums and annuities commitments added up to Ksh 12.48 billion. The gross benefit before assessment ascended from
Ksh 4.32 billion in 2005 to Ksh 5.80 billion in 2006 equivalent to an increase of 35%.

The Kenya Insurance Report considers the prospects for both life and non-life insurance providers in the nation. Starting late 2012, we stay of the view that Kenya's insurance part is rapid and strong. Premiums in both significant fragments are around 20% higher than they were in 2011. In spite of the fact that the insurance agencies are little firms by most norms, they are creative and unmistakably comprehend the requirements and difficulties of their clients. Institute of internal auditors(2009) delighted that fraud adversely impacts companies from numerous points of view including money related, notoriety, mental and social ramifications. As per different reviews, financial misfortunes from fraud are noteworthy. Be that as it may, the full cost of misrepresentation is incomprehensible as far as time, profitability, and notoriety including client connections. Contingent upon the seriousness of the misfortune, companies can be unsalvageable hurt because of the money related effect of misrepresentation movement.

1.2 Statement of the Problem

As of late the significance of good corporate administration has gotten noteworthy open and administrative consideration. A significant part of an element's corporate administration is its interior audit work. In the meantime, there has been huge open worry about the level of fraud inside companies. That an examiner has the duty regarding the counteractive action, discovery and reporting of financial scams, other illegal practices furthermore, errors are exceptional among the most far from being
obviously true issues in analyzing, and has been a champion among the most as habitually as could be allowed wrangled about extents among commentators, administrators, media, controllers and the all-inclusive community (Gay et al., 1997). Insurance Fraud investigation Unit report (2015) established that it is assessed 25% of insurance sector revenue is falsely asserted of which 30% is from motor insurance claims and 35% of them are from all medical claims.

Statistics from the Insurance Regulatory Authority in Kenya, a total of 143 cases of medical insurance fraud were reported in 2012 and out of the Sh253.6 million lost, only Sh5.2 million recovered. In the year 2010, the loss ratio for this class of business stood at 81% with an average loss ratio of 78% over a five year period from 2006 to 2010. According to PWC Global Economic Crime report Survey (2009) the use of forensic technology tools were identified as the major means of detecting health insurance fraud in developed countries. The need for a more robust data analytics tools to effectively detect red flags and a dedicated anti-fraud department was identified as the need of the hour in medical insurance fraud mitigation. However, the study focused on forensic audit technologies but not internal audit functions on fraud detection among insurance companies in Kenya.

Insurance Regulatory Authority survey (2015) revealed that Kenyan insurance agencies for the most part reported high misfortune proportions. Somewhere around 2010 and 2013, the misfortune proportions for the business all in all went somewhere around 56% and 60%. Safety net providers have generally depended on speculation pay to go about as a pad for their endorsing comes about. The concentrate facilitate noticed that inescapability of insurance fraud drive up
expenses for all customers and cost the protection business a large number of shillings every year.

Muthama and Gachunga (2014) on the effect of fraudulent practices on the growth of the insurance industry in Kenya established that fake cases represents a huge segment of all cases got by back up plans, and cost billions of shillings yearly. Identifying protection fraud can be troublesome undertaking on account of the surreptitious nature by which the criminal executes the fraud. However, the study focused on fraudulent practices on the growth of insurance companies but not internal audit functions on fraud detection among insurance firms in Kenya.

This research was different from other empirical studies mentioned as it specifically looked at internal audit functions as practices that contributed to detection of fraud in insurance companies in Kenya. The previous studies concentrated on different variables like management of risks and corporate governance but not variables of this study. Therefore, this study sought to answer the question; what was the effect of internal audit functions on fraud detection in insurance companies in Kenya?

1.3 Objectives of the Study

1.3.1 Main Objective of the Study

To establish the effect of internal audit functions on fraud detection in insurance companies in Kenya.

1.3.2 Specific Objectives

The specific objectives of the study were:

1. To determine internal audit functions on fraud detection in insurance companies in Kenya.
2. To establish causes of fraud in insurance companies in Kenya.

3. To assess measures of mitigating causes of fraud in insurance companies in Kenya.

1.4 Value of the Study

Internal audit includes esteem through enhancing the control and checking environment inside companies to distinguish financial scams. The study would be of significance to all the existing firms in the insurance industry in Kenya. The identification of the relationship between internal audit controls and financial scam discovery among insurance agencies would give an understanding other hoping for insurance agencies on what components are imperative for their prosperity. Government offices and approach evaluators may utilize the outcomes to define positive national strategies on a structure that is significant and delicate to the market powers impacting the insurance industry in Kenya and the East African region. The research provides data to potential and current researchers on the relationship between inner review controls and fraud location among organizations in Kenya. This would extend their insight on promoting procedures in the insurance business furthermore recognize ranges of further study.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter outlines theoretical foundation of the study, internal audit functions and fraud detection, causes of fraud in insurance companies, measures of mitigating causes of fraud and knowledge gaps.

2.2 Theoretical Literature Review

This study was anchored on Fraud Triangle Theory, Fraud Scale Theory, Agency Theory and Stewardship Theory as discussed:

2.2.1 Fraud Triangle Theory

Fraud Triangle Theory was established by Donald Cressey (1959). The theory argue that fraud offenders can be categorized into: Independent businessmen, long term violators, and absconders. Independent businessmen are involved in borrowing and they keep the funds for themselves, while long term violators are involved in borrowing to protect family (Ewa, & Udoayang, 2012). The absconders take the cash and run and they are normally unmarried, antisocial people who fault outside impacts or individual deformities for their activities. Pressure is financial, vice and work related while opportunity is in the controls around the working environment, accounting and procedures. Opportunity also is affected by performance apprehension because view of location is the best impediment (Fish, 2012). Shrouded controls don't deflect fraud and the controls can't be unsurprising. It is based on this research gaps that this study will be undertaken to bridge the gap as insurance fraud has continued to exist even with the existence of previous studies as gathered in this literature review (Gramling, 2004).
This theory is applicable to this study based on the assumption that insurance companies in Kenya can establish internal audit functions like; proactive fraud audits, compliance to policies, risk management and reliability of financial reporting to detect fraudulent activities among their clients thus enhancing their profitability.

2.2.2 Fraud Scale Theory

Fraud Scale Theory was established by Steve Albrecht (1986). The theory suggests that the nine causes of fraud include: Living past means, overpowering craving for individual increase, high individual obligation, and close relationship with clients, pay not equivalent with employment, and wheeler-managing, solid test to beat framework, inordinate betting and family/peer weight. He built up the fraud scale which had: Situational weights (Prompt issues with environment and generally obligations/misfortunes caused by individuals), saw openings (achieved by poor controls), Individual respectability (which is affected by individual code of conduct) (Fish, 2012).

This hypothesis is material in this study based on the assumption that insurance companies can experience losses through fraud due to number of motives that include; customers leaving beyond their financial mean, desire for personal gain, personal debts, peer pressure, poor compensation, corrupt culture and strong drive to achieve personal goals.
2.2.3 Agency Theory

Agency Theory was established by Ross and Stephen (1973). The theory was founded on the notion that there must be two parties for any contract to be successful (Adams, 1994). In their case, the employer and employee are the two parties who represent a firm to attain its long range objectives (Clarke, 1990). The relationship between the principal (employer) and agent (employee) determines the performance of any organization in the dynamic business environment. It reveals how to best make connections in which one social occasion chooses the work while another get-together makes the fundamental strides (Ewa and Udoayang, 2012).

Chen and Container (2012) contend that money related administration is about hazard, and every speculator gets together with an alternate resilience for hazard. In an office relationship, odds are high that principals and specialists have distinctive hazard resistances, which can prompt to mistaken assumptions and an inability to concede to contributing choices. Notwithstanding when operators act toward principals' objectives, their method for doing as such may struggle with principals' hazard resistences. For instance, in a shareholder-official relationship, an official may wish to gain battling organizations to accomplish the mutual objective of expanding piece of the pie at a rebate, yet this arrangement might be regarded excessively unsafe by a lion's share of shareholders (Cole, 2000).

In the realm of fund, some organization connections are trustee, implying that specialists are lawfully required to act in light of a legitimate concern for their principals (Kantarelis, 2007). Trustee obligations formalize an organization relationship and give more noteworthy security to principals. On account of a
money related organizer who holds influence of lawyer for an individual customer, for instance, that organizer has the privilege to direct monetary exchanges for the benefit of the person without his assent or mindfulness. In this case, the monetary organizer is legitimately required to settle on choices exclusively to the greatest advantage of his customer, instead of getting things done with his customers' cash basically for his very own benefit (Ewa & Udoayang, 2012).

The relationship of the theory to this research is based on the premise that agents of insurance companies are supposed to develop appropriate internal audit practices to will help their firms to mitigate fraudulent activities of internal and external customers. Insurance firms on the other hand should review their compensation policies to enable their agents to meet individual goals using ethical ways rather than fraudulent means. Improving the working conditions and building good relations with employees will contribute to financial performance of insurance firms.

2.2.4 Stewardship Theory

Davis et al. (1997), states that a steward takes care shareholder wealth through firm performance, in light of the route that hence, the steward's utility focuses of confinement are extended. In this point of view, stewards are administrators attempting to ensure and make benefits for the shareholders. In this way, stewardship hypothesis stresses concerning association being as stewards, combining their objectives as a section of the connection (Spencer, 2007). The stewardship point of view recommends that stewards are fulfilled and persuaded when different leveled achievement is refined.
The theory sees the criticalness of association structures that enable the steward and offers most conspicuous self-lead in light of trust (Donaldson and Davis, 1995). It weighs on the position of specialist to act all the more self-representing so that the shareholders' advantages are expanded. When in doubt, this can minimize the expenses went for checking and controlling representative conduct (Tracy, 2008). Jain and Narang (2009) affirm that keeping in mind the end goal to secure their reputations for being pioneers in affiliations, directors are inclined to work the firm to help cash related execution and moreover shareholders' advantages. In this sense, it is assumed that the affiliation's execution can clearly influence perspective of their individual execution.

The relationship of the theory to this research relies on the object that it is the responsibility of managers and directors of firms listed at Nairobi securities exchange to develop strategies that will enhance shareholder value. Policies of diversification, new product development and operational efficiency are internal initiatives implemented by shareholder representatives to maximize shareholder value through dividends. Therefore, policies formulated by firms at Nairobi securities exchange will enhance shareholder value based on profits and dividends. Flexibility of the policies will enable the firms to align their practices to the changing business environment for the benefit of the shareholder.

2.3 Determinants of Fraud Detection

2.3.1 Proactive Fraud and Detection

Proactive fraud audits provide opportunities to auditors in making contributions to the detection of possible fraud. The main phase of an audit is intended to build up if the bookkeeping records are exact and give a dependable premise to the
arrangement of records. By checking all the standard transactions which occurred amid the money related year and the procedure may reveal fraud, with the exception of where imaginary proof have been deliberately made (Norman et al., 2010). Reviewers receive an alternate techniques, which depends widely upon the association's arrangement of interior control and inside checks (Gadziala, 2005).

The examination of the framework is typically finished with the accompanying principal thought: the likelihood of defalcation/fraud, either lasting or brief, the likelihood of unfamiliar blunders happening and the likelihood of records being purposely bended. In the event that the inward control is extremely powerless, it may not be conceivable to express a feeling at all on the records introduced (Nila and Viriyanti, 2008). On the off chance that then again the interior control is solid, there could be a minimization of the sum substantive testing utilized as a part of touching base at a sentiment. At the last phase of a review, the hunt down and examination substantive confirmation may add to an expansive degree in unearthing fraud. The reviewer in playing out his obligation goes for being exhaustive a precise, yet there is undoubtedly some deliberately arranged and exceptionally smart plans can vanquish the most intensive and efficiency of the audits.

Bierstaker et al. (2006) found that organization examiners and clerks tended to rate these strategies as practical in battling fraud, yet the study's subjects in like manner saw that these frameworks were not used once in a while, except for in the greatest affiliations. Cook and Clements (2009) shared their stress over the nonattendance of usage of the best mechanical assemblies that are available and their trust that organization inspectors would develop the capacities vital to continue with the fight against fraud by using the best instruments open. In The IIA's Global Technology
Audit Guide, Fraud Prevention and Detection in an Automated World, the utilization of innovation as a auditing apparatus permits the company auditor to go from utilizing IT as a criminologist control to a nonstop checking system. Information investigation innovation permits inspectors to look at information for signs of fraud (IIA, 2009).

2.3.2 Compliance to Policies and Fraud Detection

Consistence with strategies is a fundamental piece of inner reviewing is substantiating consistence with organization and administrative approaches, techniques, and laws. It is basic to survey whether representatives are leading their undertakings as sought by administration. Affirmation must be acquired that controls are working and mindful gatherings have been relegated. There ought to be composed consistence mandates in such sources as manuals, announcements, and letters (Nila and Viriyanti, 2008).

In consistence testing, the inside auditor seeks proof to substantiate that the company's inner control structure components are executing as expected. A key part of interior auditing manages consistence as to bookkeeping techniques. The bookkeeping framework must work as planned if solid and steady bookkeeping information are to be given. The fitting structures must be utilized as a part of the endorsed way (Pratolo, 2007). Cases of territories subject to consistence testing are measures for information preparing, controller's methods, acquirement, information maintenance necessities of the organization and legislative offices, security approaches, work force organization, arranging, planning, finance, and cost accounts.
Operational reviewing takes a gander at the viability, effectiveness, and economy of operational execution in the business. It analyzes the sensibility of recorded money related data. The execution of administrators and staff are investigated. For instance, there ought to be an examination of operational execution identified with finance, accepting, buying, and cost control. For the most part, operations ought to be led in a manner that outcomes in productivity. An assurance must be made in the matter of whether corporate approaches are being clung to and also whether such strategies are sensible in the present environment or if changes are essential. Territories of wastefulness and uneconomical practice are distinguished (Arens, Senior, and Beasley, 2010).

Reliability is the identity measurement principally in charge of sorting out and coordinating individual conduct, and upright people might be portrayed as capable, moral, industrious, persisting and exhaustive. Borman et al. (1991) exhibit that there is a positive relationship with employment learning. Thusly, the identity characteristic of good faith gives the premise to theory improvement in regards to the forecast of individual execution inside the domain of misrepresentation identification. Reliable examiners are hypothesized to take part in a more industrious, perseverant, sorted out and deliberate way to deal with proof assessment than their less faithful partners.

2.3.3 Risk Management and Fraud Detection
Risk management is one of the proactive audit practice of fraud detection. The inside audit work assumes a novel part in corporate administration by monitoring authoritative dangers and guaranteeing that hierarchical procedures are productive and successfully controlled. Gordon and Smith (1992) found that a control capacity,
for example, that performed by inner audit, can prompt to better firm execution. The interior review action assesses hazard exposures identifying with the firm's administration, operations and data frameworks, in connection to; adequacy and proficiency of operations, reliable quality and uprightness of money related and operational information, protecting of points of interest and consistence with laws, controls, and contracts.

In light of the consequences of the hazard appraisal, the internal reviewers assess the ampleness and viability of how dangers are distinguished and oversaw in the above ranges. They additionally evaluate different perspectives, for example, morals and values inside the association, execution administration, correspondence of hazard and control data inside the association so as to encourage a decent administration prepare (IIA Inquire about Establishment, 2004). An examiner ought to survey the hazard that mistakes and fraud may bring about the money related proclamations to contain material errors. Evaluators ought to then plan the review in order to give sensible affirmation that material mistakes and misrepresentation are distinguished. An element's hazard evaluation for budgetary reporting reasons for existing is its distinguishing proof, examination, and administration of dangers relating to money related articulation arrangement. As needs be, hazard evaluation may think about how possible it is of executed exchanges that stay unrecorded. Evaluating fraud threat is a characteristic part for inside auditors, and one that is with regards to The IIA's misrepresentation related Practice Gauges (IIA, 2009).

In view of the fraud chance evaluation, a hostile to fraud program guarantees that there are satisfactory controls set up to anticipate and distinguish misrepresentation. Despite the fact that the objective of aversion is to prevent fraud from happening, it
is not practical to keep all misrepresentation so it is critical to have controls that take into consideration the provoke and powerful location of any material fakes. Now and again, an association may plan its controls to recognize as opposed to counteract fraud dangers (IIA, 2009). Sackett and DeVore (2006) take note of that individual and situational elements, for example, hierarchical approaches and practices, legitimate culture and inner control frameworks all serve as determinants of counterproductive work practices. These portions are obvious in the work of Chime and Carcello (2000) who recognized various forerunners connected with false money related reporting including such things as quick development, powerless or inadequate inside controls, administrative distraction with meeting profit projections, and forceful administrative states of mind combined with frail control situations.

2.3.4 Control of and Fraud Detection

Controls of operations can contribute to fraud detection among firms. Control practices are the arrangements and systems administration has executed with a specific end goal to guarantee that mandates are completed. One undertaking of internal audit is to guarantee that controls are set up that will recognize fraud furthermore to report misrepresentation, which is upheld by the expert writing that shows shriek passing up the insourced interior reviewer are a compelling fraud identification gadget (Morgan 2005).

Control practices might be grouped into the accompanying classifications: Execution audits, including correlations of real execution with spending plans, conjectures, and earlier period comes about. It likewise include data preparing. Controls identifying with data preparing are for the most part intended to check
exactness, culmination, and approval of exchanges. In particular, controls might be delegated general controls or application controls (Dixon et al, 2006). The previous may incorporate controls over server farm operations, frameworks programming obtaining and support, and get to security; the last apply to the handling of individual applications and are intended to guarantee that transactions that are recorded are legitimate, approved, and finish.

Control practices likewise incorporate physical controls, which include satisfactory defends over the entrance to resources and records, incorporate approval for access to PC projects and documents and intermittent tallying and correlation with sums appeared on control records. It additionally incorporate isolation of obligations, which is intended to lessen the chances to permit any individual to be in a position both to execute and to cover blunders or inconsistencies (fraud) in the typical course of his or her obligations, includes appointing diverse individuals the duties of approving exchanges, recording exchanges, and keeping up authority of benefits.

Assessing and assessing the sensibility, ampleness, and utilization of bookkeeping, money related, and other working data and controls. Viable controls ought to be executed at sensible cost (Gadziala, 2005). The interior auditors are relied upon to give proposals to change in those zones where openings or lacks are distinguished. While administration is in charge of inner controls, the interior review action gives affirmation to administration and the review advisory group that inside controls are powerful and functioning as proposed.

2.3.5 Financial Reporting and Fraud Detection

Financial reporting can lead to fraud detection among competitive firms. Internal auditors assume a vital part in fraud recognition with most fakes distinguished by
the inward audit work (KPMG, 2003). Because of the significance of compelling fraud location, any measures that can upgrade the adequacy of evaluators ought to be of imperative worth. While experience and point of confinement are plainly basic in the region strategy, certain individual qualities might be farsighted of the ability to perceive pressure (Ashton, 1999). Seeing how analysts are seen, and how these discernments incite to convictions in regards to their recognition capacities, is a critical initial phase in relating identity qualities to the adequacy of reviewers.

Auditing is an autonomous evaluation prepare regularly represented by statute for looking at, examining and checking the money related proclamations of any association or element by a qualified individual designated to carry out the employment who tries to built up a sentiment concerning reality, precision, legitimacy, dependability and reasonableness of the declarations what's more, the records on which the affirmations are based and worried with any statutory or different necessities (ACFE, 2008). To make inspecting conceivable, the inner control measures ought to be sufficient and consummate. The bookkeeping framework must be sound and the hierarchical structure must not cover (Gadziala, 2005).

To give believability to reports and records along these lines, inspectors must look at records accessible through to distinguish blunders, reveal fraud, identify any kind of irregularity or misleading report, evaluate the amleness or for the most part of the internal control system set up (Roe, 2004). Auditing engages the organization and money related pros have right and profitable information for decisions making satisfactory skill and experience (ACFE, 2008). The interior evaluating calling is guided by the Universal Measures for the expert routine of Inner Reviewing. As
indicated by the Worldwide Guidelines for the expert routine of Inside Evaluating (2008), the reason, power, and duty of the interior review movement must be formally characterized in an inward review contract, predictable with the meaning of inner inspecting, the code of morals, and the measures. The CAE should intermittently survey the inner review contract furthermore, make it available to senior management and the board for endorsement.

The investigation of Roe (2004) concentrated on inner audit independence and corporate administration. The study broke down the inward audit work as a first line security against deficient corporate organization and cash related reporting. With fitting backing from the Top managerial staff Review Board, the internal review employees are suitable position to gather knowledge on unsatisfactory bookkeeping rehearses, deficient inside controls and unsuccessful corporate administration. The aftereffect of the study demonstrated that the inside review degree ought to be broad to address key business issues and also expanding some satisfaction reviews. There is a solid support for inside audit to assume a noteworthy part in checking in similarity in positive way. Accordingly, the Chicago region inside reviews aggregates beforehand have found a way to move past the exchanges organizes and have turned out to be vivaciously occupied with similarity observing (Barriff 2003).

2.4 Empirical Review

Mensah, Aboagye, Addo, and Buatsi (2003) discovered observational proof in Ghana that compelling internal control enhanced great administration hones and diminished the defilements. Pratolo (2007) found that the practical review control had positive association with awesome corporate organization at State Owned Projects in Indonesia. Tantamount with this finding, Nila and Viriyanti (2008)
moreover found that inside review had a positive relationship with extraordinary corporate organization at State Owned Projects in West Java, Indonesia. ACFE (2014) report uncovered that the fake practices considered kept going a normal of year and a half before being recognized.

Measures of mitigating insurance fraud as proposed by Insurance Fraud Investigation Unit report range from; knowing employees, sensitizing employees on fraud and establishing fraud detection systems, implementing internal controls, hiring external fraud examiners and institutionalizing ethical culture among workers as discussed: Fraud guilty parties frequently indicate behavioral attributes that can demonstrate the goal to submit coercion. Watching and listening to workers can help you perceive potential extortion plausibility. It is key for association to be required with their workers and set aside opportunity to wind up more acquainted with them. Everybody inside the connection ought to consider the double dealing threat strategy including sorts of shakedown and the outcomes connected with them. The people who are needing to submit blackmail will understand that organization is watching and will in a perfect world be prevented by this.

A study by IFIU (2015) showed that inside controls are the arrangements as well as projects executed to safeguard your association’s advantages, guarantee the uprightness of its bookkeeping records, and suspect and recognize compulsion and burglary. Disconnection of duties is a fundamental part of inside control that can lessen the danger of shakedown from happening. Documentation is another inside control that can diminish shakedown. Internal control ventures should be watched and reexamined on an enduring reason to ensure they are fruitful and current with creative and diverse advances. Certified Fraud Examiners (CFE), Certified Public
Accountants (CPA) and CPAs who are certified in Financial Forensics (CFF) can assist you in building up antifraud strategies and systems. These experts can give an extensive variety of administrations from finish inward control reviews and measurable investigation to general and essential discussions.

The Association of Certified Fraud Examiners’ (ACFE) 2008 review comes about reported that U.S. companies lost an expected 7% of their yearly incomes to misrepresentation (ACFE 2008). This rate expanded from the evaluated 5% for 2006 and 6% for 2004 (ACFE 2006). With cutbacks and cuts in travel spending plans for inward examiners, there is worry that as monetary burdens increment because of the poor economy there will be more cases of fraud and defilement (Sullivan 2009). As companies work to diminish the frequency of fraud, their hostile to misrepresentation programs keep on relying intensely on the interior review movement. After some time as inward examiners audit frameworks in the association, they build up a general learning of the association's procedures, dangers, control frameworks and work force (IIA, 2009). These components add to their adequacy at recognizing fraud.

In the KPMG India Fraud Survey Report, 2012 among the large companies surveyed, an assessed net reserve funds were about $1 per enrollee and 2008 aggregate net investment funds were about $10 million for the medium-sized organizations while the evaluated net funds for littler organizations, remained at $2.70 per enrollee, and aggregate net investment funds reported were roughly $5 million in 20086. It was further reported that the learning that wellbeing arranges have strong against fraud measures and controls likely counteracted improper billings or claims in any case. Frameworks for handling electronic cases have been
progressively executed to consequently perform reviews and audits of cases information. These frameworks are intended for distinguishing zones requiring extraordinary consideration.

A survey by MaxWorth Associates in Kenya on health insurance revealed that the extent of fraud in the Kenyan health industry, identify the perpetrators, and recommend strategies for minimizing the same, if not eliminating it. It is known that fraud exists but the level of fraud is not known. This is due to inadequate information on the prevalence of medical insurance fraud particularly on the forms and financial loses in Kenya and the region. The study reports revealed that insurance companies in Kenya were experiencing losses due to high cases of fraud in the health insurance by 53%.

2.5 Causes of Fraud in Insurance Companies

Regardless of the attention on keeping up industry security and development, it is additionally perceived that the protection business keeps on misery negative open recognition and picture (IFIU, 2015). This reputational hazard has been mostly ascribed to the impacts of misrepresentation and different misbehaviors harassing the protection business. Protection misrepresentation remains a mind boggling and most noteworthy hazard influencing operations of safety net providers and delegates. Its unavoidable nature as professional wrongdoing infers that its end will undoubtedly be a detestable and costly undertaking.

It is an externality to policyholders, protection recipients and the overall population with its interconnectedness costing protection purchasers and the business group in Kenya a large number of shillings every year in immediate and aberrant costs (AKI, 2015). IRA is alive to this acknowledgment and one of the measures for moderating
the impacts of protection fraud is the foundation of a protection misrepresentation examination unit. This is on the grounds that protection fraud expands the cost of working together, places organizations at hazard and is a main source of insurance agency bankruptcies. It likewise lessens buyers' capacity to raise their way of life because of high cost of getting to protection benefits notwithstanding diminishing the financial capability of the nation (IRA, 2015).

Though focusing on fraud in the insurance business has had a tendency to consume vitality and assets on cases administration, it is by and large perceived that fraud rises above the ambit of cases organization to include shareholders, Sheets of Executives, Administration and staff. Different players in the fraud chain are policyholders, outsider petitioners and experts. Their activities of intentionally giving false, fragmented or deluding data to a backup plan for motivations behind swindling frequently prompts to income issues for the influenced insurance agencies (AKI, 2015).

In our general public where the business culture has been superseded as of late with deceitful practices entered by administration and representatives, the absence of clear comprehension of the obligations of an examiner in connection to fraud identification has regularly prompted to baseless reactions of his part. Evaluators are known to be skilled, legit and autonomous experts who express fair-minded supposition on reality and reasonableness of the money related proclamation as displayed by administration to individuals from the organization (Ashton, 1999). The bookkeeping calling has throughout the years fabricated a notoriety, which urges others to depend upon the sentiments auditors express.
2.6 Conceptual Framework

**Fraud Proactive Audits**
- Internal auditing
- Employee training
- Claim reporting

**Compliance to Policies**
- Compliance to accounting standards
- Compliance to IRA policies
- Payment of premiums

**Risk Management**
- Internal audits
- Fraud systems
- Employee training

**Controls of Operations**
- Contingency plans
- Reporting
- Communication

**Financial Reporting**
- Auditing practices
- Claim payment
- External auditing

**Fraud Detection among Insurance Companies in Kenya**
- High costs of operation
- Document alteration
- Missing of documents
- Claims falsification
- Delayed reporting of claims
- Claimant financial distress

---

**Figure 2.1: Conceptual Framework**
2.7 Summary of Literature and Research Gaps

Previous research done internationally and locally by Insurance Regulatory Authority (2015); PWC Global Economic Crime report Survey (2009); Muthama and Gachunga (2014) MaxWorth Associates (2004) and among others proved that analysts have ceaselessly centered around the individual fraud emerging in the protection business without due thought of preventive measures rather than reactive measures the more concerning issue this causes to the recognitions held by individuals about protection. Examine has not obviously demonstrated the connection between internal audit function and detection of fraud among insurance companies in Kenya.

However, limitations in previous studies is that they were performed by measuring acknowledgments not bona fide execution. Further, the greater part of the past studies investigated were coordinated in made countries whose crucial approach and cash related adjust is not exactly the same as that of Kenya. Therefore, this study is set out to find out the effect of internal audit functions on fraud detection in insurance companies in Kenya and identify reasons for the fraud connected with protection and propose methods for enhancing the circumstance so as to guarantee certainty among the general population and also investigate methods for impelling development in the organizations that arrangement with insuring services.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This section concerns itself on the investigator’s scope of procedural strategies to be employed in the research. These include; research design, selection of the firm target population, data collection instruments, validity and reliability of the instrument and data analysis techniques.

3.2 Research Design

The study adopted a descriptive research design to investigate the effect of internal audit functions on fraud detection in insurance companies in Kenya. Kothari (2004) characterized the research design as a course of action of conditions for get-together and examination of data in a way that normal to join criticalness to the investigation dissuade economy in procedures. The descriptive design strategy was viewed as fitting since it investigated and depicted the relationship between factors in their characteristic setting without controlling them.

Both subjective and quantitative information were acquired for correlation purposes. Cooper and Schindler (2006) recognize the significance of descriptive design particularly when the goal is increasing more extensive comprehension of the setting of the exploration and procedures being established. In addition, they contend that the outline has extensive capacity to create answers to the inquiries of why, where, what and how.
3.3 Target Population

Information was sought from all the Insurance Companies operating in Kenya (41) as shown in appendix (i). This formed the population of the study. The study used the census approach where the entire population of the 41 Insurance Companies was analyzed. According to Kothari (2006), an evaluation was the methodology of efficiently gaining and recording data about the individuals from a given populace. Information from every member of the population was sought to establish the problem under investigation. A census approach was preferred because Insurance Companies in Kenya and regulated by the Association of Kenya Insurers were limited in number and data was collected from each Insurance without difficulty.

3.4 Data Collection

According to Cooper and Schindler (2006), scientific studies can use questionnaires, observation forms, interview schedules and experiments to collect data. Primary data for this research was obtained from participants by the use of structured questionnaires as the major tool of data gathering. In this research, questionnaires were used to gather information from employees of Insurance Companies in Kenya. Questionnaires were issued out to respondents by the researcher within work hours. Drop and pick later method was applied where respondents had no time to respond immediately.

Sekaran (2011) assert that questionnaires were preferred instruments of data collection in scientific studies because of their opportunity to capture respondent opinions in a structured manner and in written form for future reference. They enabled the respondents answer queries uninhibitedly and honestly even on touchy issues since they were not required to state their names, this improved the
probability of getting precise data. Finally, they offered an opportunity of consistency in noting questions permitting an incredible level of correlation in light of the fact that the things were encircled in a similar configuration.

3.5 Validity and Reliability of the Research Instrument

3.5.1 Validity of the Research Instrument

The validity of the instrument was assessed by the investigator through seeking opinions of professionals in the area of research but more particularly the researcher’s supervisor and industry auditors and consultants. Validity entails the appropriateness, meaningfulness what’s more, convenience of deductions an analyst makes in light of the information gathered (Saunders, Lewis and Thornhill, 2009). A suitable surmising was one that was pertinent to the reason for the study while an important deduction was one which said something about the meaning of the information obtained through the use of the instruments. Content, criterion, and construct related validity was measured. Content validity was measured using opinions of insurance expert. Criterion validity was measured using employees of insurance companies and construct validity was measured using theories and variables of the study.

3.5.2 Reliability of the Research Instrument

Reliability involves the extent to which a measuring device is consistent in measuring whatever it measures (Saunders, Lewis & Thornhill, 2012). It involves the extent to which the research tool will provide consistent data after repeated trials. Reliability of the tools was affected by random errors which was a deviation from a genuine estimation because of elements that have not successfully been tended to by the analyst. Dark (2010) propose that the unwavering quality of every
build was inspected to guarantee the things remedially measured their expected develops reliably as suggested.

Inside consistency reliability quality was analyzed by utilization of Cronbach's Alpha coefficient. Cronbach Alpha coefficient had the benefit of providing reliable estimates with just a single organization. Kothari (2006) noticed that acknowledgment value for Cronbach's Alpha is between 0.7. Therefore, the accepted reliability coefficient of this study was 0.7 and above as proposed by Saunders, Lewis and Thornhill (2012).

**Table 2.3: Reliability Coefficients**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cronbach’s Alpha</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraud Proactive Audits</td>
<td>0.742</td>
<td>12</td>
</tr>
<tr>
<td>Compliance to policies</td>
<td>0.735</td>
<td>08</td>
</tr>
<tr>
<td>Compliance to policies</td>
<td>0.795</td>
<td>09</td>
</tr>
<tr>
<td>Controls of operations</td>
<td>0.783</td>
<td>06</td>
</tr>
<tr>
<td>Financial Reporting</td>
<td>0.701</td>
<td>04</td>
</tr>
</tbody>
</table>

After conducting SPSS, the reliability coefficients of the five variables of the study were established to be reliable since reliability figures are more than the expected threshold of 0.7. Therefore, the values correspondent with Cooper and Schindler (2006) who argue that accepted reliability values of scientific studies should meet or exceed 0.7 threshold.
3.6 Data Analysis and Presentation

To analyze the data, the Statistical Package for Social Sciences, (SPSS version 21) software was used. The information gathered was altered, coded and characterized on the premise of likeness and afterward tabulation done. Cooper and Schindler (2006) attest that the center capacity of the coding procedure was to make codes and scales from the reactions, which were abridged and broke down in different ways. To allow quantitative examination, information was changed over into numerical codes in line with the characteristics or estimation of variables. Multiple regression method was adopted to determine the statistical relationship between variables. Descriptive and inferential measurements, for example, distribution frequencies, percentiles and frequency tables was utilized to abridge and relate variables which were accomplished from the issued questionnaires. The analyzed data was presented in form of tables. Specifically the regression model was of the form: \[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon \]

Where;
\[ Y = \text{Fraud Detection in Insurance Companies in Kenya (Profits/Costs/Return on investment)} \]
\[ \beta_0 = \text{Y intercept} \quad \beta_1 \text{ to } \beta_4 = \text{regression coefficients} \]
\[ X_1 = \text{Fraud Proactive Audits (Internal auditing/Employee training/Claim reporting)} \]
\[ X_2 = \text{Compliance to policies (Compliance to accounting standards/Compliance to IRA policies/Payment of premiums)} \]
\[ X_3 = \text{Risk management (Internal audits/Fraud systems/Employee training)} \]
\[ X_4 = \text{Controls of operations (Contingency plans/Reporting/Communication)} \]
\[ X_5 = \text{Financial Reporting (Auditing practices/Claim payment/External auditing)} \]
\[ \epsilon = \text{Error term} \]
3.7 Tests of Significance

The tests that were used to assess the effectiveness of the multivariate econometric model included tests for Normality, multicollinearity and autocorrelation.

3.7.1 Normality Test

One sample Kolmogorov test will be used in the study to test the variables for normality. The null hypothesis for this test is that the variables are not significantly different from a normal distribution. Variables are normally distributed when the p-values of the one sample Kolmogorov - Smirnov scores are insignificant with p-values >0.05 for a confidence interval of 95%. The results of the test are indicated in the table below.

3.7.2 Multicollinearity Test

Multicollinearity refers to the correlation between the independent variables (Saunders, Lewis & Thornhill, 2012). The presence of multicollinearity made it difficult to isolate the impact of each independent variable on dependent. The tolerance of the predictors in the regression model was determined as well as the variance inflation factor. The two were used to assess collinearity and any variable with a VIF higher than 10 was considered to have a problem.
CHAPTER FOUR
DATA ANALYSIS, FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the research findings of the study carried out to examine the effect of internal audit functions on fraud detection in insurance companies in Kenya. The research objectives of the study were: to determine effects of internal audit functions on fraud detection in insurance companies in Kenya, to establish causes of fraud in insurance companies in Kenya and assess measures of mitigating causes of fraud in insurance companies in Kenya.

4.2 Response Rate

In addition, the research sought to obtain the perspectives and opinions of participants with regard to effect of internal audit functions on fraud detection in insurance companies in Kenya. Qualitative information was collected from respondents of the Insurance companies in Kenya who were selected from claim and finance departments. However, after questionnaire administration, only 38 questionnaires were returned duly filled. This contributed to 93% response rate. This response rate was adequate for data analysis and conforms to Kothari (2004) who stipulates that a participation frequency rate of 30% and above is sufficient for examination and reporting. Therefore, a rate of 93% response rate was justifiable under this research. In addition, this section presents discussions on the statistical relationships between variables of the study and further discusses the outcomes of the research in relation to existing empirical publications.
4.3 Respondent Period of Work

The respondents of the study were requested to indicate the time frame they had been employed with their insurance companies and the following were the findings as shown in Table 4.2:

Table 4.1: Length of Service

<table>
<thead>
<tr>
<th>Years</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- 5 Years</td>
<td>04</td>
<td>10</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>11-15 Years</td>
<td>15</td>
<td>37</td>
</tr>
<tr>
<td>15 Years and Above</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Research data

4.4 Education Level of Respondents

The participants of the research were requested to provide their educational level and the results are as shown in Table 4.2:

Table 4.2: Education Level of Respondents

<table>
<thead>
<tr>
<th>Level</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postgraduate</td>
<td>03</td>
<td>10</td>
</tr>
<tr>
<td>Bachelors</td>
<td>27</td>
<td>66</td>
</tr>
<tr>
<td>Diploma</td>
<td>06</td>
<td>20</td>
</tr>
<tr>
<td>Certificate</td>
<td>05</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>41</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Research data
As shown in the Table 4.5, majority (66%) of the respondents were bachelors holders. 20 % of them were diploma holders. 17% of them were certificate holders and 10 % of them were postgraduate holders. The high number of employees with first degree implied that the insurance sector had attracted many people with various qualifications from different areas of specialization. Most of the respondents working with insurance companies did not have business related backgrounds but were engaged by their firms to offer a range of services including marketing and selling of insurance products.

4.5 Internal Audit Function

4.5.1 Proactive Fraud Audit

The participants of the research were requested to state the degree of affirmation with proactive fraud audits that were adopted by their insurance companies to detect fraud and the following were the outcomes as indicated in Table 4.3:

Table 4.3: Proactive Fraud Audit

<table>
<thead>
<tr>
<th>Proactive Fraud Audit</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claims are paid based on factual evidence of the incident</td>
<td>41</td>
<td>3.98</td>
<td>.581</td>
<td>98%</td>
</tr>
<tr>
<td>Insurance companies have internal mechanisms of analyzing customer claims</td>
<td>41</td>
<td>3.88</td>
<td>.444</td>
<td>91%</td>
</tr>
<tr>
<td>Insurance companies train employees on ethical practices during recruitment</td>
<td>41</td>
<td>3.71</td>
<td>.311</td>
<td>73%</td>
</tr>
<tr>
<td>Procedures of claiming are clear and transparent</td>
<td>41</td>
<td>3.42</td>
<td>.341</td>
<td>72%</td>
</tr>
<tr>
<td>Customers are sensitized on the consequences of fraud when signing claim forms</td>
<td>41</td>
<td>2.96</td>
<td>.434</td>
<td>63%</td>
</tr>
<tr>
<td>Insurance companies engage external auditors to analyze financial statements periodically</td>
<td>41</td>
<td>2.77</td>
<td>.383</td>
<td>53%</td>
</tr>
</tbody>
</table>
As indicated in Table 4.3, more than 70% of the participants were in agreement to a larger extent that their insurance companies paid claims based on factual evidence of the incident with a mean of 3.98. Their companies had internal mechanisms of analyzing customer claims with a mean of 3.88. Companies trained their workers on ethical practices during recruitment with a mean of 3.71. Procedures of claiming were clear and transparent with a mean of 3.42. Customers were sensitized on the consequences of fraud when signing claim forms with a mean of 2.96 and external auditors were engaged to analyze financial statements periodically with a mean of 2.77.

These findings implied that, more than 70% of the insurance companies had proactive fraud audits that were adopted to minimize fraud cases in the system despite internal challenges like, employee behaviour, mechanistic structures and management styles that influenced fraud decisions. However, it was also established that majority of the insurance companies sensitized their customers on the consequences of fraud when signing claim forms and engaged external auditors to analyze financial statements periodically on a small extent. This was due to inappropriate mechanisms put in place to sensitize customers on the consequences of falsifying claims and costs associated when engaging external auditors.

These findings correspond with Norman et al., (2010) who argue that both internal and external auditors should be given the opportunity to examine financial statements of an organization in order to reveal gaps that may lead to financial distress among insurance companies. Further Nila and Viriyanti (2008) concurs with these findings by arguing that auditors should use a combination of methods to
cross examine financial statements and systems in order to give valid financial reports to insurance companies for strategic decision making.

4.5.2 Compliance to Policies

The participants of the research were requested to state the extent of affirmation on whether their insurance companies were compliant to policies as a measure of detecting fraud and the following were the outcomes as presented in Table 4.4:

Table 4.4: Compliance to Policies

<table>
<thead>
<tr>
<th>Compliance to Policies</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance Auditors observe International Standards of Accounting when calculating the value of client assets</td>
<td>41</td>
<td>3.18</td>
<td>.281</td>
<td>98%</td>
</tr>
<tr>
<td>Employees of Insurance companies perform their duties with high professionalism</td>
<td>41</td>
<td>3.08</td>
<td>.344</td>
<td>91%</td>
</tr>
<tr>
<td>Appropriate procedures are followed by the organization when paying the claims</td>
<td>41</td>
<td>3.04</td>
<td>.267</td>
<td>73%</td>
</tr>
<tr>
<td>Insurance companies pay their taxes on time</td>
<td>41</td>
<td>3.02</td>
<td>.411</td>
<td>72%</td>
</tr>
<tr>
<td>Customers of insurance companies pay their premiums on time</td>
<td>41</td>
<td>2.96</td>
<td>.564</td>
<td>63%</td>
</tr>
<tr>
<td>Insurance companies follow regulation of IRA</td>
<td>41</td>
<td>2.77</td>
<td>.343</td>
<td>53%</td>
</tr>
</tbody>
</table>

As indicted in Table 4.4, more than 70% of the participants clearly suggested that their Auditors observed International Standards of Accounting when they calculated the value of client assets with a mean of 3.18. Employees performed their duties
with high professionalism with a mean of 3.08. Appropriate procedures were followed when paying the claims with a mean of 3.04. Their companies paid their taxes on time with a mean of 3.02. Customers paid their premiums on time with a mean of 2.96 and their companies followed regulation of IRA with a mean of 2.77.

These findings implied that more than 70% of the insurance companies complied with internal and external policies to minimize cases of fraud despite challenges of consumers paying their premiums on time and complying with IRA regulations. It emerged that most of the customers delayed to pay their premiums due to economic constraints and some insurance companies did not comply with IRA regulations due to inability to meet the minimum standards of the Authority. These findings correspond with Pratolo (2007) who argue that competitive firms can manage to control fraud in the system by applying multiple approaches formulation of ethical code of conduct and observing stands of IRA. Further, Arens, Elder and Beasley, 2010) argue that employee compliance to internal fraud detection policies can enhance organizational profitability and productivity.

4.5.3 Risk Management

The respondents of the research were requested to provide their perspective on the degree to which they were in agreement with risk management initiatives adopted by their insurance companies as a measure of detecting fraud and the following were the outcomes presented in Table 4.5:
Table 4.5: Risk Management

<table>
<thead>
<tr>
<th>Risk Management</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance companies conduct internal audits periodically</td>
<td>41</td>
<td>4.21</td>
<td>.544</td>
<td>73%</td>
</tr>
<tr>
<td>Companies train workers on how to detect fraud cases in the system</td>
<td>41</td>
<td>3.33</td>
<td>.421</td>
<td>61%</td>
</tr>
<tr>
<td>Insurance companies have automated fraud detection systems</td>
<td>41</td>
<td>2.56</td>
<td>.374</td>
<td>60%</td>
</tr>
<tr>
<td>Customers are informed to give accurate information before and after the claim</td>
<td>41</td>
<td>2.42</td>
<td>.343</td>
<td>58%</td>
</tr>
<tr>
<td>Insurance companies partner with other law enforcing agencies to minimize fraud cases</td>
<td>41</td>
<td>2.18</td>
<td>.487</td>
<td>65%</td>
</tr>
</tbody>
</table>

As shown in Table 4.5, more than 60% of the respondents revealed that their insurance companies conducted internal audits periodically with a mean of 4.21. Companies trained their workers on how to detect fraud cases in the system with a mean of 3.33. Companies had automated fraud detection systems with a mean of 2.56. Customers were informed to give accurate information before and after the claim with a mean of 2.42 and their companies partnered with other law enforcing agencies to minimize fraud cases with a mean of 2.18.

These findings implied that majority of the insurance companies continued to minimize fraud cases using various risk management initiatives despite the challenge of technology integration in systems to detect fraud, customer integrity on information given before and after the claim and partnerships with law enforcement agencies to minimize fraud. It emerged that majority of the customers were
willingly giving false information before and after the claim as a way of getting money from their insurers. In addition, it was also difficult for most of the insurance companies to partner with some insurance firms in fraud detection due to high costs associated during investigations process.

These findings correspondents with Sackett and DeVore (2006) who argue that firms are at high risk of losing money through fraudulent activities. High losses experienced by firms is linked with inability of the firm or bank to develop risk control strategies to minimize cases of financial fraud in systems. With the changing trends of fraud cases, insurance companies should partner with law enforcement agencies to curb the vice.

4.5.4 Control of Operations

The participants of the research were requested to state the degree to which they agreed with control practices adopted by their insurance companies as a measure of detecting fraud and the outcomes are as presented in Table 4.6:
As shown in Table 4.6, more than 70% of the respondents indicated that their insurance companies had clear contingency plans that safeguarded their assets from fraud activities with a mean of 3.86. Internal reporting systems were more efficient and effective with a mean of 3.77. Communication among top and lower level employees was effective with a mean of 3.45. Insurance companies recruited people with experience and knowledge in fraud detection with a mean of 2.31. Employees were trained on how to detect fraud cases with a mean of 2.96 and forensic audit reports were relied by insurance companies to pay claims with a mean of 2.96.

These findings implied that majority (80%) of the insurance companies adopted control practices in their operations to minimize fraud cases despite the challenges
of recruiting experienced and knowledgeable people in fraud management and detection. It also emerged that training employees on fraud detection was a complex issue due to changing trends of financial crimes. Further, it was established that most of the insurance companies did not rely on forensic audits to compensate their clients due to lack of financial standards to determine the value of the claim at a particular point in time. These findings are supported by Morgan (2005) who argue that development of budgets, comparisons of actual performance and forecasts are some of the aspects of detecting fraud in the system. Further, Dixon et al, (2006), assert that control should be based on the organizations’ input and output.

4.5.5 Financial Reporting

The participants of the research were requested to state the degree to which they agreed with financial reporting practices adopted by their insurance companies as a measure of detecting fraud and the outcomes are as presented in Table 4.7:

**Table 4.7: Financial Reporting**

<table>
<thead>
<tr>
<th>Financial Reporting</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Claims paid by insurance companies are based on accounting principles</td>
<td>41</td>
<td>2.88</td>
<td>.487</td>
<td>63%</td>
</tr>
<tr>
<td>Insurance companies periodically prepare financial reports on payment of claims</td>
<td>41</td>
<td>2.73</td>
<td>.421</td>
<td>61%</td>
</tr>
<tr>
<td>Transparency and accountability of claims</td>
<td>41</td>
<td>2.56</td>
<td>.374</td>
<td>60%</td>
</tr>
<tr>
<td>Insurance companies train employees on financial reporting on claims paid</td>
<td>41</td>
<td>2.42</td>
<td>.343</td>
<td>58%</td>
</tr>
<tr>
<td>Insurance companies engage external auditors to detect fraud cases</td>
<td>41</td>
<td>1.67</td>
<td>.261</td>
<td>51%</td>
</tr>
</tbody>
</table>
As shown in Table 4.7, more than 60% of the respondents indicated that their insurance companies were observing the practice of financial reporting on a larger extent. For instance, claims paid by insurance companies were based on accounting principles with a mean of 2.88. Insurance companies periodically prepared financial reports on payment of claims with a mean of 2.73. Transparency and accountability of claims with a mean of 2.56. Insurance companies trained employees on financial reporting on claims paid with a mean of 2.42 and Insurance companies engaged external auditors to detect fraud cases with a mean of 1.67.

These findings implied that most of the insurance companies observed financial reporting practices as a measure of detecting fraud despite the challenge of publishing financial statements on claims in the print media, costs associated when engaging external auditors and training workers on fraud detection. Gadziala (2005) argues that firms should base their financial reporting on the accounting standards to eliminate any doubt among stakeholders of an organization. Internal and external auditors financial reports should be subjected to principles of accounting despite the nature and size of the organization. Roe (2004) also concurs that competitive firms should conduct periodical audits to determine the financial position of their firms. It is also noted that, firms should publish their audited financial statement to enable various stakeholders make strategic investment decisions.

4.5.6 Causes of Fraud in Insurance Companies

The participants of the research were requested to state the degree to which they were in agreement on causes of fraud in insurance companies and the results were as presented in Table 4.8:
Table 4.8: Causes of Fraud in Insurance Companies

<table>
<thead>
<tr>
<th>Causes of Fraud in Insurance Companies</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance companies do not have strict penalties to discourage fraudulent activities</td>
<td>41</td>
<td>2.67</td>
<td>.261</td>
<td>51%</td>
</tr>
<tr>
<td>Insurance companies have weak policies of fraud detection</td>
<td>41</td>
<td>2.54</td>
<td>.243</td>
<td>50%</td>
</tr>
<tr>
<td>People commit fraud to recover their premiums</td>
<td>41</td>
<td>2.54</td>
<td>.243</td>
<td>50%</td>
</tr>
<tr>
<td>Insurance companies are flexible to pay claims</td>
<td>41</td>
<td>1.43</td>
<td>.211</td>
<td>47%</td>
</tr>
<tr>
<td>People commit fraud due to negative perception with insurance companies</td>
<td>41</td>
<td>2.77</td>
<td>.654</td>
<td>52%</td>
</tr>
<tr>
<td>Insurance do not sue fraud victims to law enforcement agencies</td>
<td>41</td>
<td>2.45</td>
<td>.623</td>
<td>42%</td>
</tr>
</tbody>
</table>

As presented in Table 4.8, a huge percentage (70%) of the respondents stated that majority of fraud cases experienced by their insurance companies were caused by failure of their insurance companies to subject fraudsters to heavy penalties as stipulated by law with a mean of 2.67. Weak policies of detecting fraud with a mean of 2.54. People committed fraud to recover their premiums with a mean of 2.54. Flexibility of insurance companies to pay claims with a mean of 1.43. People committed fraud due to negative perception with insurance companies with a mean of 2.77 and failure of insurance companies to sue fraudsters with a mean of 2.45.

These findings implied that majority of the insurance companies experienced high cases of fraud because of lack of individual integrity, weaknesses legal systems, weak internal fraud detection policies and employee collusion with clients. These
findings correspond with AKI (2015) that suggest that Insurance companies in Kenya were losing a lot of revenue due to unethical practices among systems that range from lack of employee and customer integrity on information management, lack of automated systems and non-compliance to IRA regulations.

4.5.7 Measures of Mitigating Insurance Fraud

The participants of the research were requested to state the degree to which they were in agreement on measures of mitigating insurance and the results were as presented in Table 4.9:

Table 4.9: Measures of Mitigating Insurance Fraud

<table>
<thead>
<tr>
<th>Measures of Mitigating Insurance Fraud</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance companies understand their employee behaviours</td>
<td>41</td>
<td>3.13</td>
<td>0.144</td>
<td>65%</td>
</tr>
<tr>
<td>Employees of insurance companies are sensitized on fraud</td>
<td>41</td>
<td>3.13</td>
<td>0.287</td>
<td>73%</td>
</tr>
<tr>
<td>Insurance firms have effective fraud systems</td>
<td>41</td>
<td>3.11</td>
<td>0.121</td>
<td>61%</td>
</tr>
<tr>
<td>Insurance companies have internal plans that safeguard assets from fraudsters</td>
<td>41</td>
<td>3.10</td>
<td>0.174</td>
<td>59%</td>
</tr>
<tr>
<td>Insurance companies have automated record keeping system that are more efficient and effective in detecting fraud</td>
<td>41</td>
<td>2.61</td>
<td>0.264</td>
<td>43%</td>
</tr>
<tr>
<td>Insurance companies engage reputable audit firms to investigate cases of fraud</td>
<td>41</td>
<td>2.58</td>
<td>0.187</td>
<td>42%</td>
</tr>
<tr>
<td>Insurance companies pay claims on time</td>
<td>41</td>
<td>2.47</td>
<td>0.273</td>
<td>41%</td>
</tr>
<tr>
<td>Insurance companies compensate their workers competitively</td>
<td>41</td>
<td>2.33</td>
<td>0.196</td>
<td>39%</td>
</tr>
<tr>
<td>Employees of insurance companies have ethical values and understand the impact of fraud to the company</td>
<td>41</td>
<td>2.10</td>
<td>0.198</td>
<td>32%</td>
</tr>
</tbody>
</table>
As indicated in Table 4.9, a huge percentage (70%) of the participants stated that insurance companies were likely to minimize cases of fraud if the insurance companies were in a position to understand employee behavior with a mean of 3.13. Sensitize employees on fraud with a mean of 3.13. Development of fraud system with a mean of 3.11. Development of internal plans that safeguard assets from fraudsters with a mean of 3.10. Automation of records with a mean of 2.61. Engagement of reputable audit firms to investigate cases of fraud with a mean of 2.58. Payment of claims on time with a mean of 2.47. Employee compensation with a mean of 2.33 and development of ethical code of ethics on fraud with a mean of 2.10.

Therefore, the findings implied that insurance companies were likely to minimize financial fraud and maximize profits if they had the capacity to recruit people with integrity character, conduct fraud sensitization campaigns among workers, develop internal mechanisms of minimizing fraud cases, automating claiming processes, engagement of external auditors to audit financial statements, development of effective compensation policies and development of ethical values to guide the behaviour of workers not to collude with fraudsters. These findings correspond with Association of Certified Fraud Examiners’ (ACFE) (2008) which argue that insurance firms are likely to gain competitive edge in the changing business environment if they form co-partnerships with law enforcement agencies to curb fraud cases experienced.
4.6 Diagnostic Test

Diagnostics test were done to ensure that the model was applicable and that all assumptions of the ordinary least squares hold. These test included test for normality, multicollinearity, heteroscedasticity and autocorrelation. Bruce et al (2005) documents that the model should be linear in parameters and independent variables should be uncorrected with the error term and variance of the error term should be constant across all observation.

4.6.1 Normality Test

Descriptive statistics were used to test normality of data. Normality test was used to determine the normal distribution of the sampled data in order to make accurate and reliable conclusions. The means which is a measure of central tendency was used to generalize the findings while standard deviation was used as a measure of dispersion from the mean. The summary of descriptive statistics is shown in table 4.10.

Table 4.10: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraud Detection</td>
<td>-</td>
<td>33470000400</td>
<td>3408428041</td>
<td>15500228</td>
</tr>
<tr>
<td>Proactive Fraud Audit</td>
<td>600632734</td>
<td>0.8727</td>
<td>0.0928</td>
<td>0.05603</td>
</tr>
<tr>
<td>Compliance to Policies</td>
<td>0.7527</td>
<td>0.4952</td>
<td>0.0096</td>
<td>0.0472</td>
</tr>
<tr>
<td>Risk Management</td>
<td>0.4406</td>
<td>0.1622</td>
<td>0.1265</td>
<td>0.07175</td>
</tr>
<tr>
<td>Control of Operation</td>
<td>0.1861</td>
<td>0.720</td>
<td>0.1650</td>
<td>0.23670</td>
</tr>
<tr>
<td>Financial Reporting</td>
<td>0.0006</td>
<td>4.0000</td>
<td>0.1700</td>
<td>0.96600</td>
</tr>
</tbody>
</table>
The mean is a summary of the average for all the variables, while standard deviation summarizes the connection of data around the mean, fraud detection had a mean of 3408428041 which represents the mean of internal audit functions on fraud detection as presented in Table 4.10. Proactive Fraud Audit had a mean of 0.0928 which represents average effects of Proactive Fraud Audit to fraud detection. Compliance to Policies had a mean of 0.0096 which represents average effects of Compliance to Policies to fraud detection. Risk Management had a mean of 0.1265 which represents average effects of Risk Management to fraud detection. Control of Operation had a mean of 0.165 which represents average effects of Control of Operation to fraud detection and Financial Reporting had a mean of 0.170 which represents average effects of Financial Reporting on fraud detection.

4.6.2 Multicollinearity Test

Multicollinearity test was performed on the variable as a method for disposing of any connection between's at least two predictor variables which may bring about errors with the results. Multicollinearity exists where at least two predictor variables are very correlated with each other to such an extent that at least two predictor variables measure a similar thing however in various ways. At the point when this exists, the evaluated regression coefficients can vary broadly, making it shaky to decipher the coefficients as a pointer of the predictors' variable (Cooper and Schindler, 2006).
Fields (2009) propose that tolerance value under 0.1 shows a grave collinearity issue. As indicated by Field (2009), when the VIF (Variance Inflated Factor) value is more than 10, then there is a reason for concern. From the table below, it can be seen that all the tolerance values are higher than the acceptable limits of 0.1 and all the VIF values are basically under 10. This implies the information was free from the issue of Multicollinearity. The outline of Collinearity Coefficients is appeared in table 4.11.

**Table 4.11: Collinearity Coefficients**

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>Proactive Fraud Audit</td>
<td>0.831</td>
</tr>
<tr>
<td>Compliance to Policies</td>
<td>0.958</td>
</tr>
<tr>
<td>Risk Management</td>
<td>0.739</td>
</tr>
<tr>
<td>Control of Operation</td>
<td>0.841</td>
</tr>
<tr>
<td>Financial Reporting</td>
<td>0.754</td>
</tr>
</tbody>
</table>

In table 4.11, Financial Reporting had the lowest tolerance level of 0.754 and Proactive Fraud Audit had the highest tolerance level of 0.831 the tolerance level for all the independent variables was less than 0.1 which suggests the presence of multicollinearity problem. Proactive Fraud Audit had the highest VIF of 0.138 and Financial Reporting had the lowest VIF of 0.134, VIF for the variables was less than 10 hence suggest there was multicollinearity among independent variables.

**4.5.4 Autocorrelation**

In this study, the problem of autocorrelation was tested using Durbin Watson statistic. Autocorrelation occurs when the variance of the error term in one-time period is serially correlated with the error term in another time period. The null hypothesis of no autocorrelation is tested against the alternative hypothesis of
autocorrelation and the decision rule is to accept the null hypothesis if obtained critical value is more than 0.5. The $d$ statistics ranges between 0 and 4 with a $d$ statistic of 0 indicating evidence of perfect positive autocorrelation and 4 indicating perfect negative autocorrelation and $d$ ranging between 0 and 0.1 indicate presence of autocorrelation. Considering the Durbin Watson statistics, $d$ value obtained was 0.1 hence implying the presence of autocorrelation.

### 4.6 Correlation Statistics

Pearson’s product moment correlation analysis was used to assess the relationship between the variables while multiple regressions was used to indicate the correlation matrix between the factors (Internal audit functions) on fraud detection among insurance companies operating in Kenya as shown in Table 4.12:

<table>
<thead>
<tr>
<th></th>
<th>Proactive Fraud Audit</th>
<th>Compliance to Policies</th>
<th>Risk Management</th>
<th>Control of Operation</th>
<th>Financial Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Proactive Fraud Audit</strong></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Compliance to Policies</strong></td>
<td>.693</td>
<td>.027</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Risk Management</strong></td>
<td>.0017</td>
<td>.799</td>
<td>.560</td>
<td>.560</td>
<td>.1</td>
</tr>
<tr>
<td><strong>Control of Operation</strong></td>
<td>.434</td>
<td>.539</td>
<td>.270</td>
<td>.356</td>
<td>.1</td>
</tr>
<tr>
<td><strong>Financial Reporting</strong></td>
<td>.0027</td>
<td>.000</td>
<td>.010</td>
<td>.001</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>.334</td>
<td>.239</td>
<td>.170</td>
<td>.156</td>
<td>.153</td>
</tr>
<tr>
<td></td>
<td>.0017</td>
<td>.000</td>
<td>.010</td>
<td>.001</td>
<td>.000</td>
</tr>
</tbody>
</table>

54
As shown in Table 4.12, data on Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting were registered into single factors per figure by getting the midpoints of every component.

Pearson's correlations examination was then directed at 95% certainty interim and 5% confidence level 2-tailed. The table above indicates the correlation matrix between the factors (Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting) on fraud detection among insurance companies operating in Kenya. According to the table, there is a positive relationship between internal audit functions and fraud detection among insurance companies.

Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting were of magnitude 0.710, 0.693, 0.579, 0.434 and 334 respectively. Proactive Fraud Audit having the highest value and Financial Reporting having the lowest correlation value.

4.7 Regression Analysis

Coefficient of determination discloses the degree to which changes in the outcome variable can be clarified by the adjustment in the autonomous factors or the rate of variety in the predictor variable (Fraud detection among insurance firms in Kenya) that is clarified by all the five predictor variables (Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting). After running the regression, the expected value of the error term becomes zero hence the error term is not included in the model. The significance of the model is presented in table 4.13, 4.14 and 4.14 below.
Table 4.13: Strength of the Model

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.923</td>
<td>0.852</td>
<td>0.789</td>
<td>0.6273</td>
</tr>
</tbody>
</table>

From Table 4.13, five independent factors that were studied, explain only 85.2% of internal audit functions and fraud detection among insurance companies as represented by the $R^2$. This therefore means that other factors not studied in this research contribute 14.8% of internal audit functions and fraud detection among insurance companies in Kenya.

Table 4.14: Significance of the Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>0.003</td>
<td>7</td>
<td>.001</td>
<td>3.867</td>
<td>.015b</td>
</tr>
<tr>
<td>Residual</td>
<td>0.068</td>
<td>22</td>
<td>.021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.071</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the ANOVA statistics in Table 4.14, the processed data which is the population parameters, had a significance level of 0.015 and the F value 3.867 which shows that the data is ideal for making a conclusion on the masses' parameter as the estimation of significance (p-value) is under 5%. The result was greater than the critical value an indication that Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting were significantly influencing fraud detection among insurance companies in Kenya. The significance value was less than 0.05 an indication that the model was statistically significant.
Durbin Watson (d) statistics was used to test for autocorrelation which occurs when regression errors are correlated across observations. The presence of autocorrelation may result to a multiple coefficient of determination that is overestimated or t-values that are inflated resulting to a type 1 error. \( R^2 = 0.852 \) implies that 85.2% of the variation in fraud detection is explained by the independent jointly while 14.8% is explained by the error term.

The study also sought to determine the cause effect relationship between dependent variable and independent variable. The regression coefficient and their corresponding t and p value are summarized in Table 4.15.

Table 4.15: Regression Coefficient

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.119</td>
<td>1.2235</td>
<td>1.515</td>
<td>0.0133</td>
<td></td>
</tr>
<tr>
<td>Proactive Fraud Audit</td>
<td>0.887</td>
<td>0.1032</td>
<td>0.152</td>
<td>4.223</td>
<td>0.0122</td>
</tr>
<tr>
<td>Compliance to Policies</td>
<td>0.752</td>
<td>0.3425</td>
<td>0.154</td>
<td>3.424</td>
<td>0.0112</td>
</tr>
<tr>
<td>Risk Management</td>
<td>0.645</td>
<td>0.2178</td>
<td>0.116</td>
<td>3.236</td>
<td>0.0111</td>
</tr>
<tr>
<td>Control of Operation</td>
<td>0.539</td>
<td>0.1937</td>
<td>0.163</td>
<td>3.147</td>
<td>0.0554</td>
</tr>
<tr>
<td>Financial Reporting</td>
<td>0.489</td>
<td>0.1104</td>
<td>0.151</td>
<td>3.134</td>
<td>0.0486</td>
</tr>
</tbody>
</table>

The findings shown in Table 4.15 are for coefficient of determination explains the degree to which fluctuations in the outcome variable can be described by the fluctuations in the predictor variables or the percentile of fluctuation in the outcome variable (fraud detection among insurance companies in Kenya) that is explained by all the five predictor variables (Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting). Multiple regression investigation was led to decide the relationship between inner review...
capacities and fraud discovery among insurance agencies working in Kenya. The regression equation (\( Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \epsilon \))

\[
Y = 1.119 + 0.887X_1 + 0.752X_2 + 0.465X_3 + 0.539X_4 + 0.489X_5
\]

According to the regression equation established, taking all factors into account (Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting) constant would result to at ksh. 1.119 increases in fraud detection. A 1 unit increase in proactive fraud audit would lead to a 0.887 increase in fraud detection among insurance companies in Kenya, a 1 unit increase in compliance to policies would lead to a 0.752 increase in among insurance companies in Kenya, a 1 unit increase in risk management would lead to a 0.465 in fraud detection among insurance companies in Kenya, a 1 unit increase in control of operation would lead to a 0.539 in fraud detection among insurance companies in Kenya and a 1 unit increase in financial reporting would lead to a 0.489 in fraud detection among insurance companies in Kenya. Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting and constant had p-value less than 0.05 which means that these five variables had significant changes for fraud detection among insurance firms. After running the regression, the expected value of the error term becomes zero hence the error term is not included in the model.

At 5% level of significance and 95% level of confidence, Proactive Fraud Audit had 0.0122 significance value, Compliance to Policies had 0.0112 significance value, Risk Management had 0.0111 significance value Control of Operation had 0.0554 and Financial Reporting had 0.0486 significance value. After regression analysis, it can be resolved that there is a significant direct relation between predictor variables
(Proactive Fraud Audit, Compliance to Policies, Risk Management, Control of Operation and Financial Reporting) and dependent variable (fraud detection among insurance companies in Kenya).
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter outlines; summary of research findings based on the research objectives, conclusion, limitations, recommendations and suggestions for further study.

5.2 Summary of the Findings

It was concluded from the findings that a huge percentage (70%) of the insurance companies adopted proactive fraud audits like employee training on fraud, and internal auditing to a large extent to minimize fraud despite the challenge of engaging external auditors and conducting sensitization campaigns among customers on fraud. It was established form the findings that majority (60%) of the insurance companies were complying with internal and external policies like auditing, employee professionalism, submission of taxes and observation of IRA regulations as measures of detecting fraud. The study established that majority of the insurance companies had risk management initiatives like internal audits, enforcement of laws, employee training and automation of systems of detecting fraud despite their level of effectiveness on fraud cases.

It was established that insurance majority (70%) of the insurance companies were striving to apply control practices like development of contingency plans to curb fraud, conducted of internal audits, enhanced communication and trained employees as measures of minimizing fraud cases. It was revealed by the study that insurance companies were did not engage external auditors to audit their financial statements.
due to high costs associated with their services. It emerged that majority of the insurance companies experienced high cases of fraud due to lack of employee integrity, outdated fraud policies, inability to enforce fraud laws and unwillingness of customers to pay their premiums on time. It was also established that insurance companies were likely to achieve their financial goals if they had understood employee behaviours, conducted fraud sensitization campaigns, developed internal fraud detection systems and reviewed their ethical code of ethics to guide employee behaviours.

5.3 Conclusions

From the findings of the study, it can be established that insurance companies are likely to gain competitive edge in the changing business environment if they develop proactive fraud audit functions, comply with internal and external regulations, develop risk management approaches, develop control mechanisms to regulate operational activities and improve their financial reporting systems. Insurance companies in companies should rethink on who to develop new products and venture into new areas of production to maximize profits. Fraud being a complicated vice that has contributed to financial distress among firms, it is therefore appropriate for insurance companies in Kenya to partner with other institutions like law enforcement agencies and ICT firms to curb fraud cases. Consumers should be sensitized on the consequences of financial fraud.

5.4 Recommendations

It was established that proactive fraud audits of insurance companies were not hundred percent effective due to changing trends of fraud in the insurance sector. Therefore, it is recommended that management of insurance companies should
focus on industry partnership in order to curb cases of financial fraud. Insurance companies should partner with security and investigation agencies, Information and Communication Technology firms and external auditing firms in order to minimize cases of fraud among the insurance sector in Kenya.

It was established that some (43%) of insurance companies were not compliant with IRA and KRA policies. Therefore, this study recommends that the Government of Kenya in partnership with Regulatory authorities should develop policies that will penalize insurance companies that violate or evade complying with the expected business standards. Heavy penalties should be imposed on firms that are not complying with Insurance Regulatory Authority (IRA) and Kenya Revenue Authority (KRA).

It was established that to some extent, risk management approaches adopted by insurance companies in Kenya had some weaknesses ranging from employees and systems. Therefore, this study recommends that management of insurance companies should create a fraud management unit that collects, analyses and interprets fraud related cases. It is likewise suggested that Insurance agencies ought to contrast their misrepresentation identification frameworks and those of created nations to minimize high instances of extortion and monetary pain among insurance firms.

It was revealed by the study some (41%) of the insurance companies had weak control practices in their operations. Therefore, this study recommends that insurance companies should automate the internal processes to enhance efficiency
and effectiveness. Insurance companies should develop budgets and forecast the future changing business trends using appropriate internal control mechanisms.

It was revealed by the study that insurance companies were engaged external auditors to audit their financial statements on a small extent due to high costs associated with their services. Therefore, it is recommended that insurance should enhance transparency and accountability through publication of audited financial statements on the print media in order to enhance stakeholder confidence. Internal auditors should be encouraged to observe International Accounting Standards when conducting internal audits. On the other hand, insurance companies should encourage both internal and external audits as approaches of enhancing accuracy of accountability and transparency.

It was established by the study causes of fraud among insurance companies in Kenya were lack of penalties among fraudsters, weak internal policies that regulated fraud cases, weaknesses of law enforcement agencies and unethical individual behaviours. Therefore, it is recommended that for insurance companies should impose heavy penalties on fraudsters, review internal policies that regulate fraud cases, partners with law enforcement and investigation agencies and sensitize employees and customers on the implication of fraud before and after filling claims.

It was indicated that insurance companies in Kenya were likely to minimize fraud cases if they understood the behaviour of their employees, sensitized employees on consequences of fraud, developments of forensic audit functions that are ICT compliant, engagement of external auditors to audit financial statements, developments of mechanisms that will enhance payment of claims, review of
compensation policies and development of ethical code of ethics to govern employee behaviours issues related to fraud.

5.5 Limitations of the Study

Selecting the insurance sector in Kenya was one of the weaknesses of the study because financial fraud is common vice in every organization. This challenge was minimized by the researcher suggesting other studies to be conducted in other sectors to establish the effect of internal audit functions on fraud detection. The researcher established that most of the respondents were occupied during the administration of the questionnaires. The challenge was overcome by administering questionnaires during weekends when employees were less occupied. The researcher found it difficult to get some information from respondents due to misunderstanding of the questions. The challenge was overcome by clearly explaining the objective of the study to respondents.

Time constraint was a major challenge to the researcher during data collection. This was overcome through administering the questionnaire using distributing the questionnaires and collecting them later on in order to give respondents enough time to respond to questions. Inadequate cooperation from the respondents due to fear and victimization from the top management influenced the information collected. This challenge was overcome by explaining to the respondents the objective of the study and assuring the respondents of confidentiality and privacy of the information given. Accessing secondary data of the insurance companies was a challenge to the researcher due to the sensitivity of the research.
topic. This challenge was overcome by seeking permission and a letter from the University to authorize the study.

Due to the high volume data that needed to be collected for this study, there may have been human errors during data entry. This may have occurred due to time limit which could not allow for double checking the entries. This can result in errors that ruin statistical results and conclusions by for example affecting the coefficients incorrectly. Data entered incorrectly can change the interpretations and findings of the study. These errors would have been minimized by having methods for detection and prevention of data errors.

5.6 Suggestion for Further Studies

It is strongly recommended that further research should be carried out to establish other internal audit functions on fraud detection among insurance companies and other financial institutions. Other studies should seek to investigate the effect on internal strategies on fraud prevention among insurance companies in Kenya. This study was confined to the insurance companies in Kenya and its findings may not be applicable to other sectors therefore, it is recommended that the study is replicated in other sectors to establish the challenges of fraud detection and what measures would be taken by the firms to deal with the financial fraud.
REFERENCES


APPENDICES

Appendix 1: Questionnaire

SECTION A: DEMOGRAPHIC CHARACTERISTICS

Please supply the required data by filling in the blanks where space is provided or by ticking [√] against the most appropriate answer.

I respondents name……………………………………………………………………..

[Optional]

1. What position do you hold in your Insurance company?..................................

2. How long have you worked in your Insurance company?
   a) 1- 5year [   ]
   b) 6-10 year [   ]
   c) 11-15 years [   ]
   d) 15 years and above [   ]

3. What is your highest Academic level?
   a) Certificate [   ]
   b) Diploma [   ]
   c) Degree [   ]
   d) Masters [   ]
   e) PhD [   ]

SECTION B: INTERNAL AUDIT FUNCTION AND FRAUD DETECTION IN INSURANCE COMPANIES IN KENYA

Please tick the following statement on Likert Scale ranging from strongly disagree to strongly agree

Where; 5= (Very Large Extent) 4= (Large Extent) 3= (Small Extent) 2= (Very Small Extent) 1= (Not at All)
4. Tick the extent to which you agree with the following statements with regard to fraud detection in your insurance company?

<table>
<thead>
<tr>
<th>Proactive Fraud Audit</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Insurance companies engage eternal auditors to analyze financial statements periodically</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Companies internal mechanisms of analyzing customer claims</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Insurance companies train employees on ethical practices during recruitment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Procedures of claiming are clear and transparent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Customers are sensitized on the consequences of fraud when signing claim forms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Claims are paid based on factual evidence of the incident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Tick the extent to which you agree with the following statements with regard to fraud detection in your insurance company?

<table>
<thead>
<tr>
<th>Compliance to Policies</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Insurance Auditors observe International Standards of Accounting when calculating the value of client assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Employees of Insurance companies perform their duties with high professionalism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Appropriate procedures are followed by the organization when paying the claims</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Insurance companies pay their taxes on time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Customers of insurance companies pay their premiums on time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Insurance companies follow regulation of IRA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Tick the extent to which you agree with the following statements with regard to fraud detection in your insurance company?

<table>
<thead>
<tr>
<th>Risk Management</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Insurance companies conduct internal audits periodically</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Insurance companies partner with other law enforcing agencies to minimize fraud cases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Companies train workers on how to detect fraud cases in the system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Insurance companies have automated fraud detection systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. Customers are informed to give accurate information before and after the claim

6. **Tick the extent to which you agree with the following statements with regard to fraud detection in your insurance company?**

<table>
<thead>
<tr>
<th>Control of Operations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Insurance companies have clear contingency plans that safeguard their assets from fraud activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Internal reporting systems are more efficient and effective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Communication among top and lower level employees is effective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Insurance companies recruit people with experience and knowledge in fraud detection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Employees are trained on how to detect fraud cases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Forensic audit reports are relied by insurance companies to pay claims</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. **Tick the extent to which you agree with the following statements with regard to fraud detection in your insurance company?**

<table>
<thead>
<tr>
<th>Financial Reporting</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Claims paid by insurance companies are based on accounting principles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Insurance companies periodically prepare financial reports on payment of claims</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Transparency and accountability of claims</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Insurance companies train employees on financial reporting on claims paid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Insurance companies engage external auditors to detect fraud cases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
8. Tick the extent to which you agree with the following statements with regard to fraud detection in your insurance company?

<table>
<thead>
<tr>
<th>Causes of Fraud in Insurance Companies</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Insurance companies do not have strict penalties to discourage fraudulent activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Insurance companies have weak policies of fraud detection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. People commit fraud to recover their premiums</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Insurance companies are flexible to pay claims</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. People commit fraud due to negative perception with insurance companies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Insurance do not sue fraud victims to law enforcement agencies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. What are other causes of fraud among insurance companies in Kenya?

........................................................................................................................................................................

9. Tick the extent to which you agree with the following statements with regard to fraud detection in your insurance company?

<table>
<thead>
<tr>
<th>Measures of Mitigating Insurance Fraud</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Insurance companies understand their employee behaviours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Employees of insurance companies are sensitized on fraud</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Insurance firms have effective fraud systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Insurance companies have internal plans that safeguard assets from fraudsters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Insurance companies have automated record keeping system that are more efficient and effective in detecting fraud</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Insurance companies engage reputable audit firms to investigate cases of fraud</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Insurance companies pay claims on time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Insurance companies compensate their workers competitively</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Employees of insurance companies have ethical values and understand the impact of fraud to the company</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. What are other measures insurance companies can put in place to mitigate fraud cases?

........................................................................................................................................................................

Thanks for your Cooperation
### Appendix 2: Insurance Fraud as at 1st January, 2015

<table>
<thead>
<tr>
<th>Classification</th>
<th>Nature of Fraud</th>
<th>Frequency</th>
<th>Severity (KES)</th>
<th>Total</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Frequency</td>
<td>Severity (KES)</td>
</tr>
<tr>
<td>Motor</td>
<td>Fraudulent injury claims</td>
<td>9</td>
<td>3,750,000</td>
<td>17</td>
<td>18,135,379</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Forged insurance certificates</td>
<td>1</td>
<td>10,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fraudulent damage/theft claims</td>
<td>7</td>
<td>14,375,379</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical</td>
<td>Fraudulent claims</td>
<td>4</td>
<td>67,200</td>
<td>4</td>
<td>67,200</td>
<td></td>
</tr>
<tr>
<td>Policyholders</td>
<td>Fraudulent claims by policyholder for default insurance program for sale of air tickets</td>
<td>1</td>
<td>238,975,430</td>
<td>1</td>
<td>238,975,430</td>
<td></td>
</tr>
<tr>
<td>Insurance agents/agencies</td>
<td>Theft</td>
<td>2</td>
<td>513,400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Insurance commissions</td>
<td>1</td>
<td>20,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life assurance</td>
<td>Fraudulent life claims</td>
<td>1</td>
<td>2,000,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>26</td>
<td>259,711,409</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Source: Insurance Fraud Investigation Unit (IFIU), 2015)
Appendix 3: List of Insurance Companies in Kenya

1. Apollo Life Assurance
2. APA
3. Africa Merchant Assurance
4. British American Insurance (K)
5. Chartis Kenya Insurance
6. Cannon Assurance
7. CIC Insurance Group
8. CFC Life Assurance
9. Corporate Insurance
10. Direct line Assurance
11. East Africa Reinsurance
12. First Assurance Fidelity
13. GA Assurance
14. Gateway Insurance
15. ICEA Lion General Insurance Co. Ltd
16. Invesco Assurance Co. Ltd
17. Africa Assurance
18. Kenindia Assurance
19. Kenya Orient Insurance
20. Kenya Alliance Intra
21. Madison Insurance
22. Mayfair Insurance
23. Mercantile Insurance
24. Metropolitan Life Kenya
25. Old Mutual Life Assurance
26. Occidental Insurance
27. Pacis Insurance
28. Pan Africa Life Assurance
29. Phoenix of East Africa Assurance
30. REAL Insurance
31. Tausi Assurance
32. Takaful Insurance of Africa
33. The Jubilee Insurance of Kenya
34. The Heritage Insurance
35. The Monarch Insurance
36. UAP Insurance
37. UAP Life Assurance
38. Shield Insurance
39. Pioneer Assurance
40. Xplico Insurance Co. Ltd
41. Exponential insurance Co.Ltd

(Source: Association of Kenya Insurers, 2015)