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**EFFECTS OF FRAUD MANAGEMENT PRACTICES ON THE PROFITABILITY
IN THE INSURANCE INDUSTRY**

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This Research Project has been submitted for examination with my approval as the Supervisor.

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LIST OF ABBREVIATIONS

AKI	Association of Kenya Insurers
IAIS	International Association of Insurance Supervisors
IFIU	Insurance Fraud investigation Unit
IRA	Insurance Regulatory Authority
ROA	Return on Assets



ABSTRACT

The purpose of this research was to study the effect of fraud management practices on the profitability of insurance companies in Kenya. The category of fraud focused on was the policyholder and claims fraud which is defined as the fraud against the insurer in the purchase and/or execution of an insurance product by obtaining wrongful coverage or payment. The deductive arguments adopted were; the reasons for fraud risk management in insurance companies in Kenya based on the International Association of Insurance Supervisors, the fraud management practices carried out by insurance firms in Kenya more specifically aligned with the claims management guidelines stipulated by the IRA under section 8 of the guidelines and finally the relationship between the fraud management practices and profitability of insurance firms in Kenya.

Primary data was collected using a structured questionnaire. Secondary data was collected from the industry statistics provided by AKI for the past three years. The financial data extracted was the net profit and the total assets to obtain the ROA, to indicate profitability. The companies chosen were the top fifteen general insurance companies.

The findings of the study showed that fraud risk management policies in insurance companies in Kenya are driven by the need to meet ethical standards as well as the need to enforce regulatory/supervisory standards. Moreover, the most common fraud management practice was fraud response in which investigations were the most preferred technique. Finally, the results of the regression analysis revealed a low correlation between fraud management practices and profitability.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Insurance is an embodiment of the term “risk transfer” whereby insurance companies step in to provide continuity in an uncertain world. According to IAIS¹ Global Insurance Market Report, globally the insurance sector has remained well-functioning and stable, as evidenced by high capital levels, positive profitability, and a persistent inflow of additional capital. Despite such a remarkable trend, fraudulent insurance activities seem to be a hard nut to crack. The battle against insurance fraud has been a long way coming and as Furlan & Bajec (2008) pointed out, insurance companies globally have identified that problem and have started fighting it.

Chudgar (2015) notes that insurance fraud is one of the most serious problems facing insurers, insurance consumers and regulators. Its existence not only increases the cost of insurance, but also threatens the financial strength of insurers and negatively affects the availability of insurance. Insurance fraud encompasses a wide range of illicit practices and illegal acts involving intentional deception or misrepresentation. The industry has witnessed an increase in the number of fraud cases in the last couple of years. Organizations are realizing that frauds are driving up the overall costs of insurers and premiums for policyholders, which may threaten their viability and also have a bearing on their profitability.

In particular, Cherry (2016) identifies five categories of fraud and in reference to fraud carried out by the policyholder are policyholder fraud and policyholder claims fraud. Where policyholder fraud is fraud committed against the insurer by a policyholder in the purchase of an insurance product through the provision of false information or non-disclosure of relevant information and policyholder claims fraud is fraud committed against the insurer by a policyholder in obtaining wrongful coverage or payment at claim stage.

Risk management is the process of understanding and managing risks that an entity is inevitably subject to in attempting to achieve its corporate objectives. For an organization, risks are potential events that could influence the achievement of the organization’s objectives. Risk

¹ International Association of Insurance supervisors

management is about understanding the nature of such events and, where they represent threats, making positive plans to mitigate them. Fraud is a major risk that threatens the business, not only in terms of financial health but also its image and reputation (Copeland, Weston, Shastri, & others, 1983).

Managing the risk of fraud is conventionally done through fraud prevention and fraud detection. The insurance industry is still in an evolutionary phase and so is the fraud management framework across insurance companies, which is a work in progress (Deloitte, 2013). And as such, the efficiency of managing fraudulent activities is a key element in reducing enormous losses to be incurred and consequently driving profitability of the insurance firms.

1.1.1 Fraud management practices

Given the prevalence of fraud and the negative consequences associated with it, there is a compelling argument that organizations have definitely invest time and resources towards tackling fraud. (Derrig, 2002) states that insurance contracts between the company and the insured are agreements to pay for accidental damages when they occur. He also says that the business of insurance is to pay claims in a timely and efficient manner. Additionally companies are well aware that claimants and providers may have opportunities and incentives to take advantage of accidents, even fabricate or cause them to happen, to obtain payments they might otherwise not deserve.

According to (Crocker & Tennyson, 2002) there are, in principle, two distinct types of strategies that may be adopted by insurers to reduce the incidence of fraudulent claiming. The first is to audit claims that have observable characteristics that are associated with a potential for fraud and then to deny those that are found to be invalid. When the mishap exhibits physical manifestations that can be exploited to identify fraud, the use of costly audits and investigations, coupled with the subsequent denial of payment, can be an effective tool to reduce the costs associated with illegitimate claims. But when accidents are devoid of observable physical markers from which fraudulent behavior may be definitively inferred, auditing may be ineffectual as a deterrent. This leads to the second strategy by which insurers may reduce the incentives of claimants to commit fraud: by systematically underpaying claims,

the insurer erodes the returns to the claimant of investing in privately costly activities designed to inflate claims, which thereby reduces the incidence of fraudulent claiming.

(Morley, Ball, & Ormerod, 2006) confirm that detection typically occurs through the discovery of anomalies or inconsistencies in the information surrounding the claim- (for example, when the circumstances of the claim do not match the account given by the claimant), identification of patterns of claiming behavior (for example, repeated claims for similar losses), or recognition of inappropriate claimant characteristics (for example, aggressive manner, uncertainty and hesitance in supplying information). Investigators, often based in special units in larger companies, receive suspicious claims and investigate them further in an attempt to repudiate fraudulent claims. The process of investigation generally involves seeking further information, either from the claimant or from third party sources, and building up a clear account of anomalies and inconsistencies in the claim coupled with potential motives of the claimant.

The responsibility for detecting fraudulent claims in insurance companies rests heavily with staff at the front line of the claims-handling process (Morley et al., 2006). Claims handlers are often inexperienced, with typical company lifetimes of less than one year, and they often lack sufficient or appropriate training in fraud detection (Doig, Jones, & Wait, 1999).

1.1.2 Profitability of the insurance sector

Notably, insurance companies receive premiums upfront and pay claims later. This collect-now pay-later model means they have to build sufficient claims reserves—just to make sure they are able to fulfill their Insurance Contract Liabilities as they fall due and probably invest the rest in yielding assets (Bodo, 2017). Insurance companies have two main revenue structures that affect their profitability. These include revenue from premiums and revenue from investments. Revenue from premiums relates directly to the cost of financing the claims made by policyholders in a given financial period (Botta, 2014).

(Nissim, 2010) identifies ratios that are used to evaluate profitability include Return on Equity (ROE), Recurring ROE, and Onetime ROE. These ratios are relevant for essentially all firms, but, are also particularly important when analyzing insurers and other financial service companies. (McClenahan, 2000) asserts that insurance company management and owners will necessarily have different, and not necessarily consistent, needs when it comes to the

measurement of profitability, management will be primarily concerned with the relative risk and return expectations associated with alternative lines of business and jurisdictions. Whereas shareholders will be more interested in returns relative to alternative investments while policyholder-owners of mutual companies will focus on premium savings and dividends (McClenahan, 2000).

There are many ways to calculate insurance profits apart from the standard total rate of return measure. Total rate of return encompasses calculation of total return and the calculation of Return on Equity. Nevertheless insurers are different from other corporations. Other profitability measures applicable to insurance firms are underwriting profits, investments income and operating ratios. It is important to note that underwriting profit or loss is not a significant measure by itself. Other considerations like catastrophes and losses on past policies, investment income and capital gains as a variable should be considered. As they all contribute to profits.

1.1.3 Fraud management practices and Profitability

Financial business performance measures such as EBITDA, EBITDA to Sales ratio are the most sort out indicators of profitability. However in benchmarking how successful insurers are at managing fraud, there lacks precision. Fraud management is best measured in individual segments of the so-called fraud investigation funnel (Furlan, 2014). The fraud investigation funnel as pointed out by Furlan (2014) follows claims from the moment a potentially fraudulent claim is detected through investigation and final resolution.

According to (Muller, Schmeiser, & Wagner, 2016) paper, that study's the effective measures in dealing with the phenomenon of insurance claims' fraud, a model framework is developed. The model is based on a costly state verification setting in which—while policyholders observe the amount of loss privately—the insurance company can decide to audit incoming claims at some cost. The findings of the paper show that in the event of a successful verification- that is the detection of fraudulent behavior auditing claims is profitable to the insurer. This is because in the case of detected fraudulent behavior, no indemnity payments to the policyholder are made. Consequently making this auditing strategy have a positive effect on the insurance company's profitability.

On the same note, the Technology management systems have been developed over the past decade aimed at curbing rising cases of fraud in the insurance industry. The technology advances have made it possible to not only identify fraud and fraudulent activity, but to help prevent fraud before it happens. There is a strong positive relationship between technology management systems' and insurance companies' profitability. There are new technology tools and techniques in the market that insurers use to uncover complex or organized fraud activities using both structured and unstructured data. These include data analytics, predictive modelling, link analysis, automated red flags/business rules, and geographic data mapping (Makatiani, 2016).

1.1.4 Insurance industry in Kenya

The history of the development of commercial insurance in Kenya is closely related to the historical sovereignty of Kenya as a nation. The insurance business dates back to the colonial period when Kenya was colonized by the British (Goko, 2012). Insurance business in Kenya has developed from nowhere and it is now the leading insurance business in East Africa (Goko, 2012). In 2016 KPMG carried out a survey on the insurance industry and the found that Kenya represents East Africa's best developed insurance market and the regions financial focal point. It also reported that it is the market leader in the region with 3% insurance penetration and a highly competitive market comprising of 51 companies. Furthermore, in 2015/16 the insurance industry had gross premiums of \$1.75bn with General insurance business forming the bulk of it.

In spite of this positive news, it is also important to note that, in 2016 general insurers reported net underwriting loss position of Sh390 million. In the previous year, the figure stood at Sh226 million—with the biggest drivers of this bloodbath being motor vehicle and medical business classes (Bodo, 2017). (Odhiambo, 2016) established that companies underwriting personal insurance business such as motor private, medical and personal accident are more exposed to fraud than those underwriting motor commercial, life or fire industrial insurance. Consequently, the losses incurred by these classes are influenced by the fraudulent activities carried out.

Motor assessors and even garages are now colluding to commit fraud with others selling their vehicle across the border and pretending that it has been stolen. Fraudsters are colluding with

garages where damaged panels are fixed in a car to show that the car has been in an accident after the insurance is paid the damaged panels are removed the car is in good condition, these new trends are worrying. In the medical insurance, fraudsters are colluding with hospitals to pretend that they have undergone major surgeries and treatments while health service providers are overpricing people who have been insured. All these fraudulent moves make insurance to price premiums twenty percent higher.

In his article, (Omete, 2017) identifies a strategy employed by Kenya insurers to curb fraud- which is to identify fraudsters as soon as a fraudulent activity is detected. This of course is impossible without sharing accurate and quality data across insurers because such people make it their habit to regularly attempt to pull off such schemes. Data sharing is about to be actualized in the motor insurance once the responsible association, AKI integrates the motor insurance data system to cut fraud.

1.2 Problem statement

The goal of every organization is always to improve its performance. Thus, managers in corporate organizations do all that is necessary to improve their performance and especially their profitability. The insurance sector in Kenya contributes a lot of GDP and positively impacts Kenyans in an enormous way. That is through employment and even more indemnity-protection from potential losses. Insurance helps everyone in the nation during difficult times with the confidence that they will be able to move on afterward. With the importance of this industry in employment creation and indemnity, fraud in this sector especially for medical and motor classes causes the industry to bleed cash that would rather be put into profitable use.

It is therefore important for scholars to focus on the management practices used to combat fraud in Kenya more specifically. Since a lot of research has been done on types, detection and effects of fraud on the insurance firms and the industry they operate in. McKinsey conducted a benchmarking initiative to determine the status of fraud management in the insurance industry (Kuhnt, Lorenz, & Müssig, n.d.). The results were used to identify pitfalls in the fraud management capabilities of insurers. Such pitfalls were- use of IT systems that are obsolete or have not been maintained, there is hardly any modern investigation methods used, use of unspecialized fraud specialists without specific skills and limited importance is put on fraud in operational claims processing.

Odhiambo (2016) claims that very little research has been directed towards understanding the strategies local insurers use to deter, prevent, detect, isolate, measure and their effectiveness. This research project seeks to address the research gaps; specific fraud management practices carried out by Kenyan insurance companies to combat fraud. The profitability of each insurance company upon introduction and use of the fraud management practices.

1.3 Research Objectives

- 1) To identify the reasons for fraud risk management in insurance companies in Kenya.
- 2) To determine fraud management practices carried out by insurance firms in Kenya.
- 3) To determine the relationship between the fraud management practices and profitability of insurance firms in Kenya.

1.4 Research questions

- 1) What are the reasons for fraud risk management in insurance companies in Kenya?
- 2) What are the fraud management practices carried out by insurance firms in Kenya?
- 3) What is the relationship between the fraud management practices and profitability on insurance firms?

1.5 Importance of the study

The study will be beneficial to practitioners in the insurance industry. Insurance general managers will have a firsthand evidence on how fraud management practices may affect their profitability and therefore enable them employ them. A recommendation based on the findings in the study will be important to them also.

The study will as well be of great importance to the Kenyan government, especially Insurance Regulatory Authority who are charged with the mandate of execution and implementation of insurance laws. The recommendations drawn from the study can necessitate new insurance laws to further curb fraud in the general insurance industry.

The study will also be important to researchers who are interested in carrying out further research on insurance fraud. A recommendation on what gaps future studies need to address will be important for further research in Kenya. The paper can also be used as a guide on the strategies used to curb fraud more importantly in the general insurance industry.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the review of literature. More specifically, the chapter presents a review of three theories of fraud management practices namely the Fraud Management Lifecycle Theory, the Fraud Triangle Theory, and the Fraud Diamond Theory. Then, an empirical review is presented followed by a conceptual framework and gaps in research so far. Then a summary of the chapter concludes.

2.2 Theoretical Framework

2.2.1 The Fraud Management Life Cycle Theory

This theory was developed by (Wilhelm, 2004) and entails eight stages of fraud management. These are deterrence, prevention, detection, mitigation, analysis, policy, investigation, and prosecution. The theory notes that effective fraud management requires a balance in the competing and complementary actions within the fraud management. Deterrence, the first stage, is characterized by actions and activities intended to stop or prevent fraud before it is attempted; that is, to turn aside or discourage even the attempt at fraud through, for example, card activation programs. The second stage, prevention, involves actions and activities to prevent fraud from occurring. In detection, the third stage, actions and activities, such as statistical monitoring programs are used to identify and locate fraud prior to, during, and subsequent to the completion of the fraudulent activity. The intent of detection is to uncover or reveal the presence of fraud or a fraud attempt. The goal of mitigation, stage four, is to stop losses from occurring or continuing to occur and/or to hinder a fraudster from continuing or completing the fraudulent activity, by blocking an account, for example.

In the next stage, analysis, losses that occurred despite deterrence, detection, and prevention activities are identified and studied to determine the factors of the loss situation, using methods such as root cause analysis. The sixth stage, policy, is characterized by activities to create, evaluate, communicate, and assist in the deployment of policies to reduce the incidence of fraud. Balancing prudent fraud reduction policies with resource constraints and effective management of legitimate customer activity is also part of this stage. An example is the requirement that any cash transaction over Sh. 1,000,000 be reported. Investigation, the

seventh stage, involves obtaining enough evidence and information to stop fraudulent activity, recover assets or obtain restitution, and to provide evidence and support for the successful prosecution and conviction of the fraudster(s). Covert electronic surveillance is a method used in this stage. The final stage, prosecution, is the culmination of all the successes and failures in the Fraud Management Lifecycle. There are failures because the fraud was successful and successes because the fraud was detected, a suspect was identified, apprehended, and charges filed. The prosecution stage includes asset recovery, criminal restitution, and conviction with its attendant deterrent value.

2.2.2 The Fraud Triangle Theory

In 1950, Donald Cressey, a criminologist, started the study of fraud by arguing that there must be a reason behind everything people do. Questions such as why people commit fraud led him to focus his research on what drives people to violate trust? He interviewed 250 criminals in a period of 5 months whose behavior met two criteria: the person must have accepted a position of trust in good faith, and the person must have violated the trust. He found that three factors must be present for a person to violate trust: non-shareable financial problem, opportunity to commit the trust violation, and rationalization by the trust violator.

When it comes to non-shareable financial problem, Cressey (1953) stated that, “persons become trust violators when they conceive of themselves as having incurred financial obligations which are considered as non-socially sanctionable and which, consequently, must be satisfied by a private or secret means” (Crassey 1953: 741). In addition, Crassey (1953) also mentioned that perceived opportunity arises when the fraudster sees a way to use their position of trust to solve the financial problem, knowing they are unlikely to be caught. As for rationalization, he concluded that most fraudsters are first-time offenders with no criminal record. They see themselves as ordinary, honest people who are caught in a bad situation. This enables them to reason their own criminal actions to themselves in a way that makes it acceptable or justifiable.

2.2.3 The Fraud Diamond Theory

The FDT was first presented by Wolfe and Hermanson (2004). It is generally viewed as an expanded version of the FTT. In this theory, an element termed capability has been added to the three initial fraud elements of the FTT. Wolfe and Hermanson (2004) argued that although

perceived pressure or incentive might coexist with an opportunity to commit fraud and a rationalization for doing so, it is unlikely for fraud to take place unless the fourth element (i.e., capability) is also present. In other words, the potential perpetrator must have the skills and ability to commit fraud.

According to Wolfe and Hermanson (2004:38) “Opportunity opens the doorway to fraud, and incentive (i.e. pressure) and rationalization can draw a person toward it. However, the person must have the capability to recognize the open doorway as an opportunity and to take advantage of it by walking through, not just once, but repeatedly”. With the additional element presented in the FDT affecting individuals’ decision to commit fraud, the organization and auditors need to understand employees’ individual traits and abilities in order to assess the risk of fraudulent behaviors in the public sector.

The elements of FDT are interrelated to the extent that an employee cannot commit fraud until all of the elements are present. The theory proposes that pressure can cause someone to seek opportunity, and pressure and opportunity can encourage rationalization. At the same time, none of these two factors, alone or together, necessarily cause an individual to engage in activities that could lead to fraud until the fraudster has the capability to do so (Hooper and Pornelli, 2010). The additional element, i.e., capability is what differentiates the FDT of Wolfe and Hermanson (2004) from the FTT of Cressey (1950).

2.3 Empirical Framework

Ijeoma & Aronu (2013) studied the impact of fraud management on the survival of firms in Nigeria. Drawing from a sample of 44 staff and using Chi-Square test statistic, the study found that the adoption of holistic approach to fraud management does not help companies in preventing fraud in Nigeria. The results also showed that the successful balancing of activities within and among the fraud management lifecycle does not result in improved fraud management performance in Nigeria. Lastly, the study revealed that the effective coordination of fraud management activities helped in reducing fraudulent activities in Nigeria.

Chiezey & Onu (2013) evaluated the impact of fraud and fraudulent practices on the performance of banks in Nigeria within the period 2001-2011. The study focused on the twenty-four (24) deposit money banks in Nigeria within the period. The paper employed evaluative research design to determine the nature, magnitude and economic consequences of

fraud on banks in Nigeria. Secondary sources of data were utilized for the study. The relationships between fraud cases and other variables were estimated using Pearson Product Moment correlation. Multiple regression analysis was used to ascertain the impact of fraud and fraudulent practices on bank performance in Nigeria within the study period. The study found that fraud and fraudulent activities inflict severe financial difficulties on banks and their customers. They reduce the amount of money available for the development of the economy. The paper recommended that banks in Nigeria need to strengthen their internal control systems and the regulatory bodies should improve their supervisory role in order to check and curtail the incidence of fraud and fraudulent activities in the banking industry in Nigeria.

Mutua & Gachunga (2014) analyzed the effect of fraudulent practices on the growth of insurance industry in Kenya. Survey research design was used in the study and a representative sample size of 290 selected to represent the whole population. Stratified sampling technique was used to get the respondents and questionnaires were employed to gather primary data as well as interviews among the different insurance companies. The results showed that fraudulent practices affected the growth of the insurance industry in Kenya and recommended measures to counter the same.

Amaya & Membwa (2015) assessed the influence of risk management practices on financial performance of life assurance firms in Kenya. The target population was 118 respondents. Census sampling method was used. Questionnaires were used for data collection. The data was analyzed using descriptive statistics which involved the use of percentages, frequency tables and regression equations. The results showed that the risk management practices had a positive influence on the performance of the firms. The study recommended that the management on insurance firms should consider adopting premium valuation methods to ensure financial performance of life assurance firms in Kenya.

Kanu & Idume (2016) evaluated the impact of insecure situation and bank fraud on bank performance. Multiple regression analysis was applied to determine if there is any significant relationship between the indicators of bank insecurity, fraud and the earnings before tax (the indicator of bank performance) of the Commercial banks in Nigeria. Data were obtained through secondary sources on the indicators of bank insecurity and fraud and the earnings before tax of Commercial banks in Nigeria for the period 1991 -2013 from Nigeria Deposit

and Insurance Corporation’s Annual Report. The results of the study demonstrate an inverse relationship between Expected Losses on insecurity and Fraud (ELF), Number of Fraud Cases (NFC) and Number of Staff involved in Fraud Cases and earnings before tax of commercial banks in Nigeria. The results of the Granger causality test show a uni-directional causality from bank insecurity and fraud to commercial bank performance. However, the Volume (Amount) of bank insecurity, Fraud cases (VFC) and earnings of commercial banks in the parsimonious ECM show positive but significant relationship.

2.4 Conceptual Framework

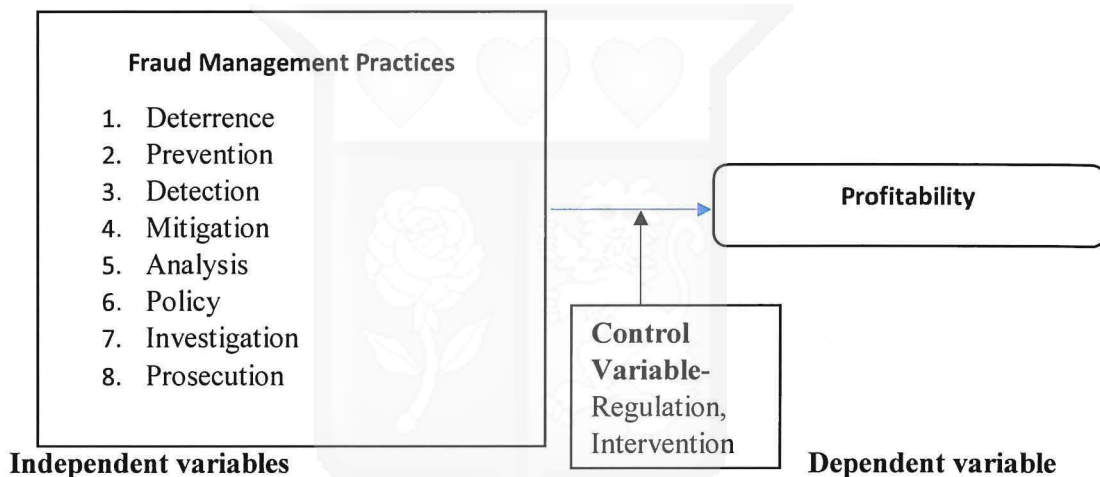


Figure 1: Conceptual Framework

The conceptual framework shows the relationship between fraud management practices and profitability. The aim of this study is to examine this relationship for insurance firms in Kenya. As such, the study adopts the variables in the Fraud Management Lifecycle Theory as the basis of fraud management practices. These form the independent variables. The dependent variable is the profitability of insurance firms.

In addition, control variables like regulation and industry regulator have been factored too.

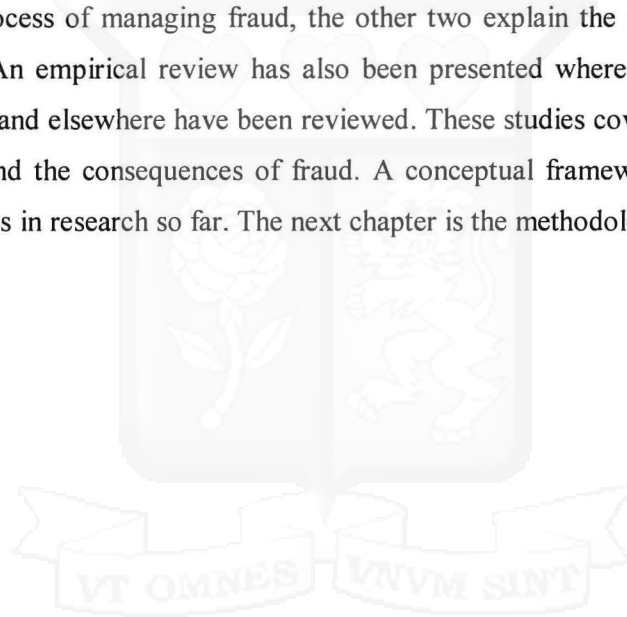
2.5 Research Gaps

While studies have examined fraud in insurance firms as well as fraud management practices in general, most of the studies linking profitability to fraud management practices have not done so explicitly. They have chosen, instead, to examine risk management in general and how

such practices influence performance of firms. Thus, fraud has been examined within the realm of risk management and not as a concept on its own. Given the important of the concept of fraud management for insurance firms in Kenya, it is important that this concept be examined and for a study to unravel whether fraud management practices have a role in the profitability of banks. This is the gap the present study seeks to bridge.

2.6 Summary

This chapter has presented the review of literature. More specifically, the chapter has reviewed three theories of fraud management practices. These are the Fraud Management Lifecycle Theory, the Fraud Triangle Theory, and the Fraud Diamond Theory. While the first theory explains the process of managing fraud, the other two explain the motivations for fraud in organizations. An empirical review has also been presented where a number of studies in Kenya, Nigeria and elsewhere have been reviewed. These studies cover fraud management in organizations and the consequences of fraud. A conceptual framework was then presented followed by gaps in research so far. The next chapter is the methodology.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology. First, a presentation of the research design is provided. This is followed by an explanation on the target population, the sample. A description of data collection method and data analysis procedures.

3.2 Research Design

The design adopted for this study was a casual research and quantitative in nature. A casual research is defined as a research that seeks to link two variables. Causal research attempts to explain the cause and effect relationship between variables. Since this study sought to describe the effect of fraud management practices on the profitability, a casual design was the most appropriate one for the study.

3.3 Population and Sample

The population for this study was the top 15 licensed general insurance companies by end of 2016. These companies are listed in descending order in Appendix I at the end of this study. The companies were chosen based on the gross underwritten premium in the year of 2016.

3.4 Data Collection

Primary data was collected using questionnaires structured based on the objectives of the study. The questionnaire is indicated in Appendix II at the end of the study. It was meant to specifically collect data on the fraud management practices as well as the profitability of the firms. The research instrument was administered through mail and the drop and pick later method. The respondents were mainly be the claim analysts, claim mangers and finance managers in each of the 15 selected firms. A three week period was given for the respondents to fill in the questionnaires after which they were collected for analysis.

This study also used secondary data. This was mainly be collected from the financial statements of the insurance companies and the industry financial reports. Net profit and total assets were importantly collected from the annual reports to model profitability measured as the return on assets (ROA). The data was collected on the variables of interest for a period of three years, period beginning 2014 to 2016. The period gave enough data that would be used in the analysis.

This is therefore a cross-sectional study for data will be collected only once.

3.5 Data Analysis

Data was analyzed using both descriptive and linear regression analysis. Objective 1 was analyzed using descriptive statistics especially the mean scores and standard deviations. In order to test for the relationship between fraud management practices and profitability, the regression analysis was used. Analysis will be aided by SPSS version 23.

Regression analysis was used to quantify the relationship between the dependent variable and the independent variables. This technique assisted in coming up with estimated coefficients in the empirical equation that measure the change in the value of the dependent variable for each one unit change in the independent variable, holding the other independent variables constant. The multiple linear regression analysis will also be used to determine how each of the dependent variable relates to ROA. The regression analysis will be in the form below:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where;

Y- Return on Assets (ROA) of insurance firms which is a financial performance measure.

Return on assets was measured using the net profit after tax of the insurance companies divided by the total assets.

α - Constant variables that affect financial performance of insurance companies.

$\beta_1, \beta_2, \beta_3$ -are Parameters which were the coefficient of the independent variables.

X_1 -Preventive fraud risk management practices.

X_2 - Detective fraud risk management practices.

X_3 - Responsive fraud risk management practices.

ε - Error term

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents the results of the study. The chapter begins with a presentation on the reasons for fraud risk management. This is followed by results on anti-fraud measures used by insurance firms in the survey. Finally, the results on the relationship between fraud management practices and profitability conclude the chapter.

4.2 Reasons for Fraud Risk Management

The study sought to understand the reasons why insurance firms put up fraud risk management policies. Specifically, the study sought to examine to drivers of fraud risk management. The results are summarized here in charts and a table.

Figure 2 presents the results on the extent to which direct costs of fraud influence fraud risk management in insurance companies in Kenya. The results show that direct costs of fraud influence fraud risk management to a large/very large extent in 43% of the companies and to a moderate extent in 28% of the firms. This confirms that direct cost of fraud is a moderate factor that drives fraud risk management in insurance firms in Kenya.

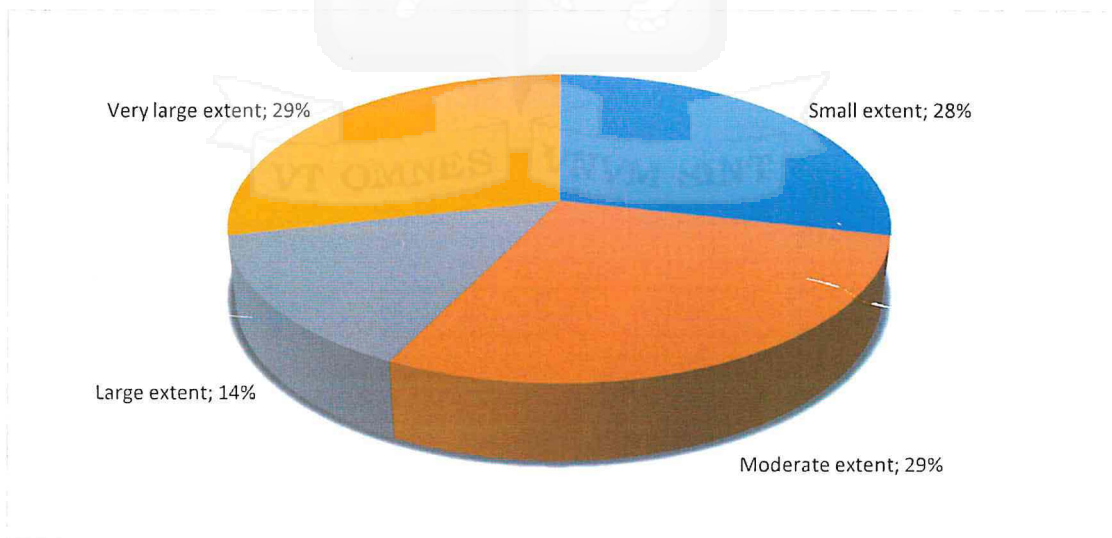


Figure 2: Direct costs of fraud

Figure 3 focuses on the influence of reputational risk on fraud risk management in insurance firms in Kenya. The results reveal that reputational risk is a factor for fraud risk management to a large/very large extent in 64.3% of the companies and a moderate factor in 21.4% of the companies. This confirms that reputational risk has a large influence on fraud risk management in insurance firms in Kenya.

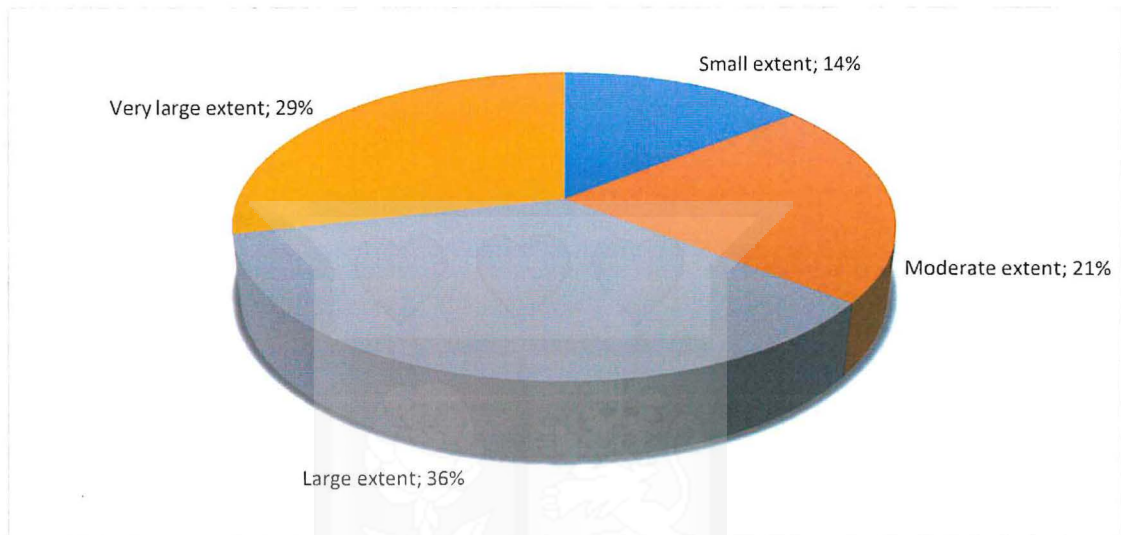


Figure 3: Reputational risk

Figure 4 shows the influence of ethics on fraud risk management policies of insurance firms in Kenya. The results reveal that ethics is a factor that influences fraud risk management to a large/very large extent in 71.5% of the firms and a moderate factor in 21.4% of the insurance companies. This suggests that ethics is a very influential factor on fraud risk management for insurance firms in Kenya.

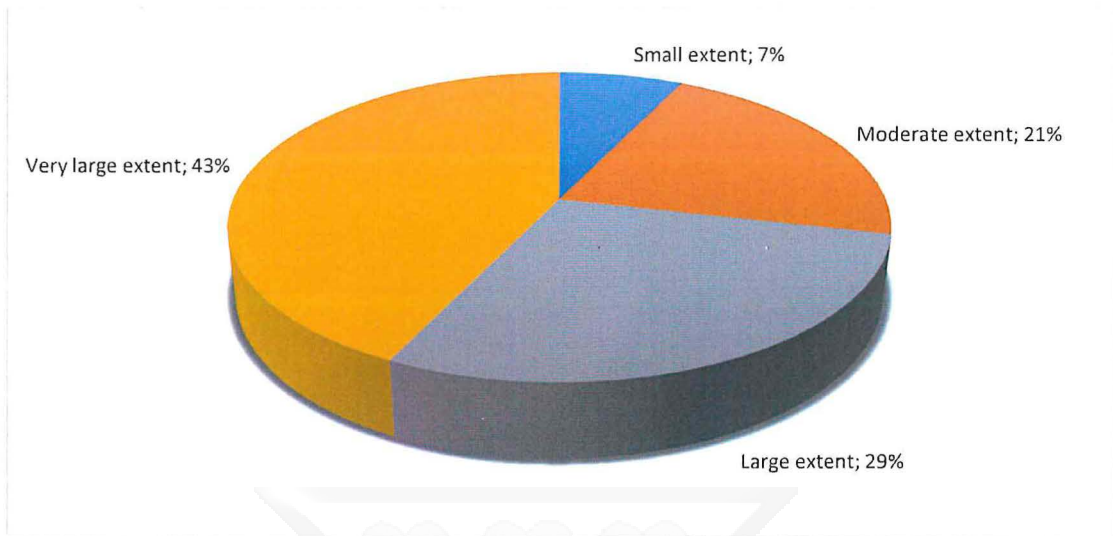


Figure 4: Ethics

Figure 5 presents the results on the influence of regulatory and supervisory standards on fraud risk management in insurance companies in Kenya. The study found that regulations are instrumental in influencing fraud risk management to a large/very large extent in 85.8% of the companies and a moderate factor on 7.1% of the firms. Thus, this confirms that regulatory/supervisory standards are key drivers of fraud risk management policies for insurance companies in Kenya.

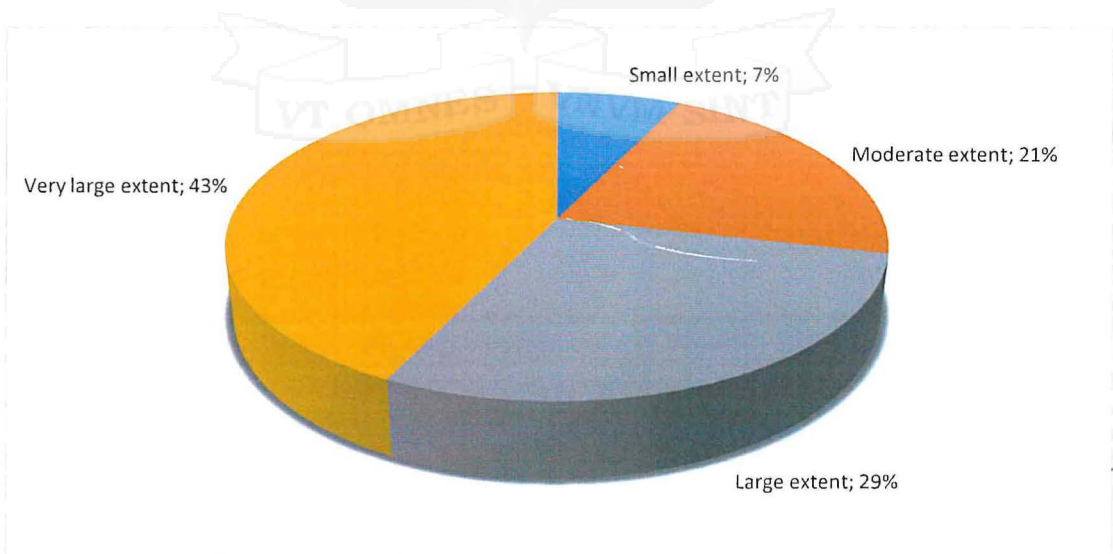


Figure 5: Regulatory/supervisory standards

Table 1 summarises the reasons for fraud risk management policies in insurance companies in Kenya. As shown, the most influential factor is ethics (mode = 5) followed by regulatory/supervisory standards (mode = 4) and reputational risk (mode = 4) and finally direct costs (mode = 2).

Table 1: Reasons for Fraud Risk Management Policies

Factor	Large/Very large extent	Moderate Extent	Small Extent	Mode
Ethics	71.5	21.4	7.1	5
Regulatory/supervisory standards	85.8	7.1	7.1	4
Reputational risk	64.3	21.4	14.3	4
Direct costs of fraud	42.9	28.6	28.6	2

4.3 Anti-Fraud Measures

This section presents the results on anti-fraud practices of insurance companies in Kenya. The results are presented in terms of the fraud prevention practices, fraud detection practices, and fraud response practices. Summarized tabled are used to present the findings.

4.3.1 Fraud Prevention Practices

Table 2 presents the results of the fraud prevention practices by insurance firms in the survey. The results show that the most common fraud prevention practice was product roofing (mode = 4) with 75% of the companies using this practice to a large extent. This was followed by inclusion of fraud prevention characteristics (mode = 4) which was used to a large extent by 66.7% of the firms. The least preferred method was the use of a central anti-fraud function set up by the management (mode = 3) which was used to a large extent by only 30.8% of the firms.

4.3.2 Fraud Detection Practices

Table 3 presents the results on fraud detection practices used by insurance firms in Kenya. The results show that the most common fraud detection technique was checking of internal and external databases (mode = 4) as it was used to a large extent by 84.6% of the firms. This was followed by peer reviews (mode = 4) which was used to a large extent by 71.4% of the companies surveyed. The least common fraud detection method was establishment of systems

and controls for detection of fraud (mode = 3) as it was used to a large extent by only 30.8% of the firms.

4.3.3 Fraud Response Practices

Table 4 shows the results for fraud response practices preferred by the insurance companies in the study. As shown, the most common fraud response practice was conducting internal investigations (mode = 5) as 78.6% of the firms did this to a large extent. This was followed by public disclosure of fraud and misconduct to other insurance firms (mode = 5) as 57.2% of the firms did this to a large extent. The least common fraud response practice was disclosure of fraud to IFIU (mode = 2) which was done to a large extent by only 42.8% of the firms.



Table 2: Fraud Prevention Practices

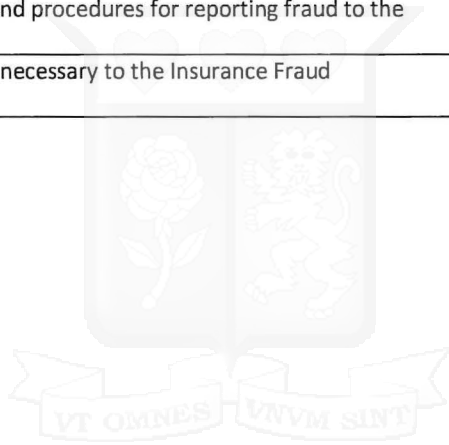
Fraud Prevention Practices	Large/Very large extent	Moderate Extent	Small Extent/Not at all	Mode
Product proofing (The development of an insurance product in such a way that fraud risk and other relevant risks are recognized and dealt with using adequate control measures)	75	16.7	8.3	4
Including fraud preventing characteristics when designing a product.	66.7	33.3	0	4
Systems and controls have been established for detecting and identifying fraud appropriate to the companies' exposures and vulnerability.	38.5	46.2	15.4	3
A central anti-fraud function has been set up by the management. The fraud office has a fraud prevention officer and fraud analysts.	30.8	38.5	30.8	3
Emphasizing the consequences of fraud to the policyholder and claimant in the application form and in the contract.	46.2	46.2	7.7	3
Establishing proper claims reporting procedures (such as clear forms, availability to answer questions)	61.6	38.5	0	3

Table 3: Fraud Detection Practices

Fraud Detection Practices	Large/Very large extent	Moderate Extent	Small Extent	Mode
Checking internal/ external databases	84.6	15.4	0	4
Peer reviews	71.4	21.4	7.1	4
Using professional judgement based on experience	61.6	38.5	0	4
Checking red flag lists automatically- Potential policyholder and claims fraud indicators	61.6	30.8	7.7	4
In making the assessment, insurers do involve those with relevant expertise, for example, fraud experts or claim settlers.	61.6	38.5	0	3
checking red flag lists manually- Potential policyholder and claims fraud indicators	61.6	38.5	0	3
An incident database is being established and maintained. The database contains the names of (former) policyholders, claimants, beneficiaries or third parties who could potentially attempt to defraud the insurers.	57.2	35.7	7.1	3
Using IT tools, such, data mining, neural networks and tools to verify the authenticity of documents	50	42.9	7.1	3
Systems and controls have been established for detecting and identifying fraud appropriate to the companies' exposures and vulnerability.	30.8	69.2	0	3

Table 4: Fraud response practices

Fraud Response Practices	Large/Very large extent	Moderate Extent	Small Extent/Not at all	Mode
Conducting internal investigation	78.6	21.4	0	5
Public disclosure of fraud and misconduct to other insurance companies	57.2	35.7	7.1	5
Prosecution of the offender	50	35.7	14.2	4
Strengthening controls	57.2	35.7	7.1	3
Claims personnel are familiar with the requirements and procedures for reporting fraud to the authorities	57.1	35.7	7.1	3
Disclosing the results of internal investigations where necessary to the Insurance Fraud investigation Unit (IFIU).	42.8	28.6	28.6	2



4.4 Fraud Management Practices and Profitability

This section presents the results for the regression analysis of the relationship between fraud management practices and the performance of insurance companies surveyed.

Table 5: Regression model summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.228 ^a	.052	-.264	.06858322

Table 5 shows the regression model summary. The results show that there is a low correlation between fraud management practices and firm profitability ($r = 0.228$) with the model explaining only 5.2% of the variance in profitability (r -square = 0.052).

Table 6: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.002	3	.001	.164	.918 ^b
	Residual	.042	9	.005		
	Total	.045	12			

Table 6 shows the analysis of variance (ANOVA) results. As shown, the fraud management model is not significant since the F-statistic fails the significance test at 5% level ($F = 0.164$, $p > 0.05$). This shows that the model is not fit to explain the relationship between fraud management practices and profitability as none of the independent variables is significant in the model.

Table 7: Regression model coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.014	.278		-.052	.960
	Fraud detection practices	-.014	.058	-.083	-.241	.815
	Fraud prevention practices	.019	.036	.174	.523	.614
	Fraud response practices	.014	.044	.109	.319	.757

Table 7 presents the model coefficients. The results show that fraud detection has a negative effect on profitability ($B = -0.014$) but the effect is not significant at 5% level ($p = 0.815$). The results also show that fraud prevention has a positive effect on profitability ($B = 0.019$) but the

effect is insignificant at 5% level ($p = 0.614$). Further, the results reveal that fraud response has a positive effect on profitability ($B = 0.014$) but this effect was also insignificant at 5% level ($p = 0.757$). Thus, fraud management practices do not have a significant effect on firm profitability as none of the variables was significant at 5% level of significance.



CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of research findings, conclusions of the study, recommendations for policy and practice, and suggestions for further research.

5.2 Summary of Findings

This study sought to examine the relationship between fraud management practices and profitability of insurance companies in Kenya. But it was first important to understand the drivers of fraud management practices and to also determine the fraud management practices themselves before examining the relationship with profitability.

Results of the descriptive analysis showed that the most common factor that drove fraud risk management practices in insurance firms was ethics followed by regulations. The least common factor was direct costs of fraud. Thus, fraud management was mostly determined by the demand for the companies to enforce adhere to ethical and regulatory standards rather than the costs of the fraud to the company.

The results showed that fraud prevention practices were moderately undertaken by the insurance companies. The most common fraud prevention technique employed by majority of the firms to a large extent was product roofing while the least common technique was having a central anti-fraud function within the insurance companies.

The study also found that fraud detection practices were moderately applied by the insurance companies. The most common fraud detection methods were checking of databases and peer reviews. On the other hand, the least common fraud detection methods were establishment of systems and controls for fraud identification within the firms.

On fraud response, the study found that this was the most preferred fraud management technique applied by majority of the insurance companies. The most common fraud response methods were internal investigations and disclosure of fraud and misconduct to other insurance

companies. On the other hand, the least common method of fraud response was disclosure of fraud to IFIU.

The results of the regression analysis revealed a low correlation between fraud management practices and profitability. Further, the results showed that the model was not fit to explain the relationship between fraud management and profitability of insurance companies. As none of the variables was significant, it was found that there was no significant relationship between fraud management practices and profitability for the insurance firms surveyed.

5.3 Conclusions

The study sought to identify the reasons for fraud risk management in insurance companies in Kenya. The results showed that the major reasons were ethics and regulatory requirements. The study concludes that fraud risk management policies in insurance companies in Kenya are driven by the need to meet ethical standards as well as the need to enforce regulatory/supervisory standards. The cost of fraud is the least driver of fraud management policies in insurance companies in Kenya. This is not surprising as insurance firms are covered for fraud and, therefore, the cost factors are a least of their worries.

The study also sought to determine fraud management practices carried out by insurance firms in Kenya. The results showed that the most common fraud management practice was fraud response in which investigations were the most preferred technique and disclosure to IFIU the least preferred. The least use of disclosure to IFIU can be explained by the fact that such disclosures show the public that the fraud prevention systems in the company are weak and the insurance firms would not want to soil their reputation by disclosing every fraud to IFIU. The preference of fraud response over fraud prevention and detection show that most insurance companies are reactive rather than proactive in their approach to fraud management.

The study further sought to determine the relationship between the fraud management practices and profitability of insurance firms in Kenya. The results showed that there was a very weak correlation between fraud management practices and profitability and that none of the fraud management practices had a significant effect on profitability. This suggests that fraud management practices do not affect the profitability of insurance companies in Kenya.

5.4 Recommendations

The study makes a number of recommendations following the findings and conclusions above on fraud risk management practices. First, the study recommends that insurance companies should start focusing more on fraud prevention measures and especially putting in place systems and controls for fraud prevention. This will cut down the fraud cases within the institutions. As opposed to the current preference for fraud response – a reactive strategy, a focus on preventive and detective measures would make the companies more proactive to fraud risks and, therefore, better manage fraud.

Kenya's insurance industry regulator – the Insurance Regulatory Authority – together with the IFIU should come up with a comprehensive framework for fraud management in insurance companies in Kenya. This should be accompanied by an incentive mechanism for implementation of fraud management framework so as to enhance adoption of fraud prevention and detection measures as well as encourage insurance companies to disclose frauds within their institutions.

While this study finds no significant relationship between fraud management practices and profitability, the study recommends that companies should be wary of the costs of fraud (in terms of financial and reputational costs) they may incur in cases where fraud becomes rampant. Therefore, the management of the firms should work hard to enforce fraud prevention and detection mechanisms within their firms.

5.5 Suggestions for Further Research

Further research is still needed in this area. In future, it would be important to cast wide the number of insurance firms covered to establish whether these results hold for all the firms within the industry. Such an investigation should include a qualitative research approach so as to understand the salient issues within the industry in terms of fraud management. Further studies may also examine why insurance firms prefer reactive strategies to proactive strategies in dealing with fraud management.

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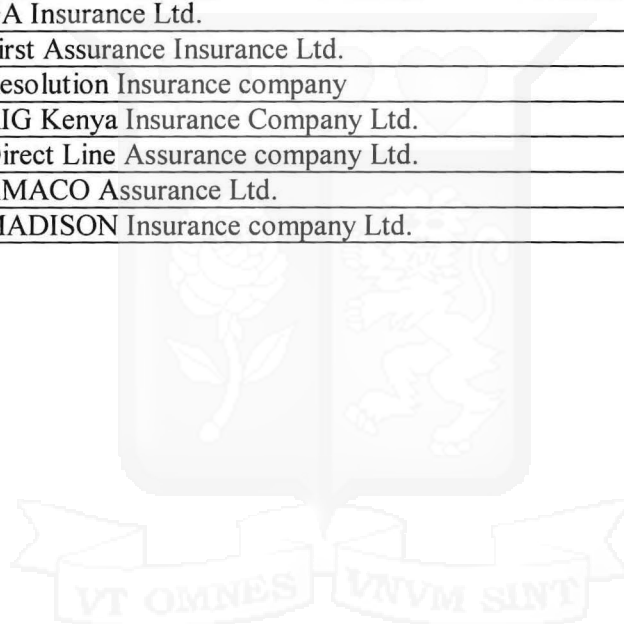


APPENDICES

Appendix I: TOP 15 General Insurance Companies in Kenya

As at 31st December 2016

NUMBER	COMPANY NAME
1	Jubilee Insurance Company Ltd.
2	UAP Insurance Company Ltd.
3	APA Insurance Company Ltd.
4	CIC General Insurance Company Ltd.
5	BRITAM General Insurance Kenya Ltd.
6	AAR Insurance Company Ltd.
7	ICEA LION General Insurance Co. Ltd.
8	Heritage Insurance Company Ltd.
9	GA Insurance Ltd.
10	First Assurance Insurance Ltd.
11	Resolution Insurance company
12	AIG Kenya Insurance Company Ltd.
13	Direct Line Assurance company Ltd.
14	AMACO Assurance Ltd.
15	MADISON Insurance company Ltd.



Appendix II: QUESTIONNAIRE

GENERAL INFORMATION

Name of insurance company?	
Your position in this company?	

Definition of fraud

For the purposes of this questionnaire fraud in insurance is defined as follows. An activity is fraudulent (hereafter referred to as fraud) if it is intended to gain dishonest advantage for the fraudster or for the purposes of other parties.

This may be achieved by: deliberate misrepresentation, suppression or non-disclosure of one or more material facts relevant to a financial decision or transaction.

The main class of fraud under investigation is policyholder fraud and claims fraud. This is the fraud against the insurer in the purchase and/or execution of an insurance product by obtaining wrongful coverage or payment.

1. Reasons for fraud risk management

What level of importance would you assess to the following reasons for insurance companies for managing policyholder and claims fraud risk?

Give your ratings in a Likert scale of 1 to 5 (Where 1 = Not at all 2 = Small extent 3 = Moderate extent 4 = Large extent 5 = Very large extent).

	1	2	3	4	5
Direct costs of fraud					
Reputational risk					
Ethics					
Regulatory/supervisory standards					

2. Anti-fraud measures

In the way that insurance companies deal with fraud risk, a distinction can be made in measures that are directed at fraud risk that are specifically directed at policyholder and claim fraud risk.

What extent do you practice the following responsive fraud risk management practices in prevention, deterrence and detection of fraud incidences in your insurance company?

A. FRAUD PREVENTION PRACTICES

What measures are in your opinion the most effective in the battle against policyholder and claims fraud?

Give your ratings in a Likert scale of 1 to 5 (Where 1 = Not at all 2 = Small extent 3 = Moderate extent 4 = Large extent 5 = Very large extent).

	1	2	3	4	5
Systems and controls have been established for detecting and identifying fraud appropriate to the companies' exposures and vulnerability.					
A central anti-fraud function has been set up by the management. The fraud office has a fraud prevention officer and fraud analysts.					
Emphasizing the consequences of fraud to the policyholder and claimant in the application form and in the contract.					
Product proofing (The development of an insurance product in such a way that fraud risk and other relevant risks are recognized and dealt with using adequate control measures) Including fraud preventing characteristics when designing a product.					
Establishing proper claims reporting procedures (such as clear forms, availability to answer questions)					

B. FRAUD DETECTION PRACTICES

	1	2	3	4	5
Systems and controls have been established for detecting and identifying fraud appropriate to the companies' exposures and vulnerability.					
In making the assessment, insurers do involve those with relevant expertise, for example, fraud experts or claim settlers.					
Client acceptance via; The procedures and controls for claim assessment may include					
• Using professional judgement based on experience					
• checking red flag lists manually- Potential policyholder and claims fraud indicators					
• checking red flag lists automatically- Potential policyholder and claims fraud indicators					
• peer reviews					
• checking internal/ external databases					
• using IT tools, such, data mining, neural networks and tools to verify the authenticity of documents					
An incident database is being established and maintained. The database contains the names of (former) policyholders,					

claimants, beneficiaries or third parties who could potentially attempt to defraud the insurers.					
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C. FRAUD RESPONSE PRACTICES

	1	2	3	4	5
Conducting internal investigation					
Disclosing the results of internal investigations where necessary to the Insurance Fraud investigation Unit (IFIU).					
Prosecution of the offender					
Strengthening controls					
Public disclosure of fraud and misconduct to other insurance companies					
Claims personnel are familiar with the requirements and procedures for reporting fraud to the authorities					

