

**THE EFFECT OF FRAUD ON FINANCIAL PERFORMANCE OF DEPOSIT
TAKING SAVINGS AND CREDIT CO-OPERATIVE SOCIETIES IN KENYA**

BY

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DECLARATION

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

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DEDICATION

I dedicate this work to my husband, David Marusoi and sons; Griffin and Emmanuel for their moral support, their constant encouragement and demonstrating great concern during my study.

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This research project is as a result of many contributions from various people. First, I am indebted to the all-powerful GOD for all the blessings he showered on me and for being with me throughout the study.

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ABSTRACT

Fraud is a global problem affecting the society as a whole. It cuts across all walks of life. Fraud has been in existence from long time. It is a complex problem since the perpetrators will always try not to leave any trail. Fraud affect organizations through loss of funds which can lead to low amount of funds available for business, can lead to loss of customer confidence and time wasted through investigations. The study sought to determine the effects of the various types of fraud on the financial performance of deposit taking SACCOs in Kenya. The study used a descriptive design. The population of interest in this study was the deposit taking SACCOs that are operating in Kenya between the years 2009 to 2013. The study sampled 10 deposit taking SACCOs in each sector of the Sacco Industry. The sectors are Manufacturing, Health, Financial, Agricultural and Institutional. The total number of the sample was 50 deposit taking SACCOs. The type of data collected for this study was both Primary and secondary data for the purpose of analyzing the effect of financial fraud on financial performance of deposit taking SACCOs in Kenya. Primary data was obtained through self-administered questionnaire so as to collect the required data. Secondary data was obtained from SASRA records on the financial statements of deposit taking SACCOs. The descriptive statistical method; SPSS was used to describe the data and determine the extent used. Descriptive statistics such as frequencies, percentages, means and standard deviation was used to report and present data. The usage of Multiple Regression analysis model was used to determine the effect of independent variables on the dependent variable. Correlation coefficient was used to investigate how the independent variables inter-relate with the dependent variable. Analysis of Variance (ANOVA) was performed to determine the impact of independent variables on the dependent variable in the multiple regression analysis. From the regression model, the study found out that there were factors influencing the financial performance of deposit taking SACCOs in Kenya, which are fraud due to behavioral causes, fraud due to technological causes, fraud due to management causes and fraud due to legal causes. The study found out that the Y-intercept was 0.426 for all years. The four independent variables that were studied explain a substantial 66.4% of financial performance of deposit taking SACCOs in Kenya as represented by adjusted R^2 (0.664). The study therefore concludes that fraud influences the financial performance of deposit taking SACCOs in Kenya.

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LIST OF ABBREVIATIONS

AGM: Annual General Meeting

ATM: Automatic Teller Machine

BFID: Banking Fraud Investigations Department

CFE: Certified Fraud Examiner

GDP: Gross Domestic Product

IQ: Intellectual Quotient

ISA: International Standards on Auditing

ISACA: Information Systems, Audit and Control Association

PIN: Personal Identification Number

PWC: Price Waterhouse Coopers

ROA: Return on Assets

SACCO: Savings and Credit Cooperative Societies

SASRA: Sacco Societies Regulatory Authority

SPSS: Statistical Package for Social Sciences

UN: United Nations

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Fraud is a global problem affecting the society as a whole. It cuts across all walks of life. No person or organization is immune to fraud. Fraud has been in existence from long time. It is a complex problem since the perpetrators will always try not to leave any trail. Fraud affect organizations through loss of funds which can lead to low amount of funds available for business, can lead to loss of customer confidence and time wasted through investigations. According to Association of Certified Fraud Examiners (ACFE) (2012), annual fraud survey report, typical organization loses 5 % of its revenue to fraud each year. According to Kroll (2013), 70 % of companies reported suffering from at least one type of Fraud. This was up from the previous 61% in the year 2012. It is therefore, imperative that organizations should try to minimize the chances of fraud occurring. This can be done through developing anti fraud policies, proper internal controls and good governance among others.

Fraud in Kenya has been on the rise in the past. According to Price Waterhouse Coopers (PWC), annual crime report of 2014 in Kenya, 52% of one in two responded having experienced fraud in the last two years. It has affected most industries. However, financial institutions have been the hardest hit. Financial institutions in Kenya include; Commercial Banks, Micro Finance Institutions and Savings & Credit Cooperative Societies (Deposit taking SACCOs). Cuevas & Fisher (2006) states that Sacco's fall under Financial Intermediaries. These institutions are member owned whose core business is to mobilize saving and enable members to access cheap loans easily. They have not been left behind by the fraud which has hit the corporate world.

Around December 2012, the Business Daily reported massive fraud at Harambee SACCO Ltd. Other Instances of fraud have been reported at United Nations (UN) SACCO, Chai SACCO and Ufundi Sacco.

1.1.1 Fraud

Fraud has been defined differently by different institutions. According to the International Standards on Auditing (ISA), Fraud refers to an intentional act by one or more individuals among management, those charged with governance, employees or third parties involving the use of deception to obtain an unjust or illegal advantage. Information, Systems, Audit & Control Association (ISACA) defines fraud as a deliberate misrepresentation which causes another person to suffer damages, usually monetary losses. Idowu (2009) defines fraud as the intentional misrepresentation, concealment or omission of the truth for the purpose of deception / manipulation to the financial detriment of an individual or organization. The definitions above show that fraud is intentional and meant to derive unlawful gain by the fraudster. It leads to financial loss of the other person.

Several causes of fraud have been identified by various researchers. According to Kanu and Okorafor (2013), causes of fraud depend on the environment. They classified the causes as; Technological, Legal, Personal, Social and Management. Technological causes are those which have been made possible by the advancement in Technology. For example, frauds committed when processing Electronic Funds Transfers (EFT). Legal causes of fraud are those which enhance fraud as a result of inefficient legal system. For example, instances where a fraudster has several fraud cases pending before the court of law and still goes ahead to perpetrate other frauds.

Management causes of frauds are those actions or omissions by management of organizations which lead to fraud. For example, frauds committed due to weak internal control systems. Personal causes of fraud are those perpetrated by individuals due to undeveloped character as a result of poor upbringing. Social causes of frauds are those enhanced due to poor societal values where the society adores a rich person without checking the sources of wealth.

1.1.2 Financial Performance of Deposit Taking SACCOs

SACCOs in Kenya are required every year to register their audited financial statements and reports with the Commissioner of Cooperatives and SASRA which will then evaluate the performance of Sacco's. The report by SASRA evaluates the performance of the Sacco subsector based on the financial data and information extracted from Audited financial statements. It is a legal requirement that the audited accounts of a SACCO be registered with the Commissioner of Cooperatives Development before presentation to members at the AGM (SASRA, report 2012).

According to SASRA report of 2012, the total assets for the SACCO subsector stood at Kshs 216 billion in December 2010, a growth of 11% from the Kshs 194 billion recorded in 2009. The growth in assets was funded mainly by member deposits and share capital at Kshs 164 billion comparing favourably with loans and advances which accounted for 13% or Kshs 158 billion of total assets. This reinforces the fact that SACCOs core business is to lend to their members.

Financial performance in deposit taking SACCOs is measured by the loan portfolio of the SACCO, deposits of members and members' confidence about the Sacco. It is

also measured using financial ratios. Ratios like Return on Assets (ROA) can be used to measure profitability of the SACCO. The ratio is obtained by getting the profits divided by the total assets of the SACCO.

1.1.3 Relationship between Fraud and Financial Performance of Deposit Taking SACCOS in Kenya

Fraud and Financial performance of an organization are related. This is because financial performance of a firm is measured by Return on Assets, Volume of deposits and number of members. Idowu (2009) defined fraud as the intentional misrepresentation, concealment, or omission of the truth for the purpose of deception to the financial detriment of an individual or an organization which includes embezzlement ,theft or any attempt to steal or unlawfully obtain, misuse or harm the asset of the bank.

Nwankwo (2013), in his study on the implications of fraud on Bank performance found that there is a strong positive relationship between cheque clearing fraud and profitability of the Banks while Chiezey and Onu (2013) found that fraud and fraudulent activities inflict severe difficulties on banks and their customers. Chiezey and Onu (2013) further add that fraud reduces the amount of money available for the development of the economy.

1.1.4 Deposit Taking SACCOs in Kenya

The cooperative movement in Kenya started after independence. It has played an important role in alleviating poverty through wealth creation, food security and

employment generation. The Sacco movement operates under the principles of equity, members' welfare and voluntary membership.

The operations of Savings and Credit Cooperatives Societies (SACCOs) are governed by the Cooperatives Act of 2008 and foreseen by the Commissioner of Cooperatives. However, in the year 2009, an act of parliament was passed which led to the formation of Sacco Society Regulatory Authority (SASRA) with the mandate of regulating deposit taking SACCOs in Kenya.

To date there are approximately 11,000 registered Cooperatives societies countrywide. The membership is over 8 million and has mobilized domestic savings estimates over \$2.5 billion. The cooperative sector plays a significant role in the Kenyan Financial Sector. It contributes 45% of the country's GDP. According to International Cooperative Alliance (ICA, 2002), deposit taking SACCOs remain the most important players in the provision of financial services and have deeper and extensive outreach than any other type of Financial Institution. There is need therefore to understand the effect financial fraud has on Financial Performance of deposit taking SACCOs.

Deposit -taking SACCOs in Kenya are those which operate front office services and act more or less like banks. Members can process their salaries through these deposit taking SACCOs, can access faster loans and can use Automatic Teller Machines (ATM) to access their savings. The number of licensed deposit taking SACCOs in Kenya as at January 2014 stood at 135.

1.2 Research Problem

Fraud is a global problem and affects every business, industry and organization. It leads to losses that continue to pose significant challenges to industries despite significant advances in fraud detection technologies. Global fraud study report to the nations, a publication of the Association of Certified Fraud Examiner (ACFE 2010) on occupational fraud abuse indicate that a typical organization losses 5 % of its annual revenue to fraud. According to Kroll (2013), 70 % of companies reported suffering from at least one type of Fraud. This was up from the previous 61% in the year 2012. Various studies have been done including, Khanna & Arora (2009). The findings of the study included overburdened staff, low compliance level and lack of training as the causes of bank frauds. Other studies include Dunn & Albrecht (2001), Erickson & Maydew (2006), Ball (2006), Hochberg, Sapienza & Jorgensen (2009) and Miller (2006) on the antecedents of fraud.

In Africa many organizations have been affected by fraud. Several studies have been done on the same and mostly focusing on Nigeria. Chiezey & Onu (2013) studied the impact of fraud and fraudulent practices on the performance of banks in Nigeria. Among the findings of the study is the involvement of staff in frauds. The study recommended the need for the Government of Nigeria to strengthen law enforcement institutions to fight fraud. Idowu (2009) did an assessment of fraud and its management in Nigeria Commercial Banks. The study revealed that greed rather than poor salaries is what makes people to commit fraud. Okoye and Gbegi (2013) carried out a study on the evaluation of the effect of fraud and related crimes on the Nigerian Economy. The study revealed that, weak internal controls increase the chances of fraud. Idolor (2010) in his research on Bank Frauds in Nigeria: Causes , Effects and

possible solutions, found out that poor remunerations, lack of proper staff training and lack of proper background check on staff as some of the causes of frauds. According to Akinyomi (2012), greed is a foremost cause of fraud in his study on the examination of fraud in the Nigerian Banking sector and its prevention.

Fraud in Kenya has been on the rise in the past. According to PWC, annual crime report of 2014 in Kenya, 52% of one in two responded having experienced fraud in the last two years. It has affected mostly financial institutions resulting to heavy losses. According to Banking Fraud Investigations Department (BFID), financial institutions in Kenya lost Kshs 1.6 billion between January and September 2013. Locally, Kimani (2011) did a study on fraud risk assessment plan for Barclays Bank of Kenya. The study identified types of fraud affecting the bank to include; identity fraud, use of stolen lost or counterfeit cards and misuse of company assets. Mahinda (2012) did a study on determinants of occupational fraud in Commercial Banks in Kenya. The study revealed that characteristics of Bank employees affect the occupational fraud. Kiragu et al (2013) carried out a study on the effects of Bank growth on occupational fraud risk in Commercial Banks in Kenya. The study revealed that Commercial Banks need to address the issue of occupational fraud from the staff perspective and structural perspective (Bank growth). Njenga and Osiemo (2013) did a study on the anti fraud mechanisms on performance of Micro Finance Institutions. According to Githecha (2013) on his study on the effect of fraud risk management strategies on the financial performance of Commercial Banks in Kenya, the banks should adopt fraud management strategies to reduce financial fraud losses in order to enhance growth in financial performance so as to maximize the bank value. However, these studies have concentrated on the Banks.

While substantial number of studies has been undertaken on the area fraud in the world where the causes of fraud have been identified among others poor internal control systems, greed, lack of punitive measures in the judicial system, poor societal values and advancement in technology. These causes can be grouped as management, personal, legal, social and technological. Here in Kenya, Most studies have concentrated in the Banking Sector and the causes of fraud have been identified as to emanate from Employees perspective. However, no study has focused on the particular causes of fraud and their impact on the financial performance of deposit taking SACCOs. This leaves a wide knowledge gap that this study seeks to bridge. The purpose of this study is therefore to find out the country specific causes and impact of fraud in deposit taking SACCOs in Kenya. The study sought to do so by answering the following research questions; Do personal causes of fraud have an impact on the performance of deposit taking SACCOs in Kenya? How do the management causes of fraud impact on the financial performance of deposit taking SACCOs in Kenya? How do technological causes of fraud impact on Financial Performance of deposit taking SACCOs in Kenya? Do legal causes of fraud impact on financial performance of deposit taking SACCOs in Kenya?

1.3 Research Objective

The purpose of this study was to determine the effects of the various types of fraud on the financial performance of deposit taking SACCOs in Kenya.

1.4 Value of the Study

The finding of this study will be of great importance to the policy makers especially the Commissioner of Cooperatives in Kenya and SASRA, in their efforts to deter,

prevent and at worst detect fraud timely. The regulator should be alert in ensuring that all Sacco's put in place appropriate controls and policies monitors the operation of these controls and their effectiveness. It will also assist SASRA to know when there are distress symptoms and to form measures to further securitize the deposit taking Sacco's and restore members' confidence. The findings of this study will also help members of the Sacco's to know whether their funds are safe in the Sacco's and if not take necessary measures. It will also help employees of the Sacco's to adhere strictly to their Sacco professional ethics and codes of conduct. In addition, the Sacco staff will use the benefit of the findings of the study to re-evaluate themselves and adopt appropriate measures and procedures of controlling or preventing Sacco fraud. The study will add to the wide academia knowledge. The researchers and the academician will find this study useful for further discussion and research.

The recommendations and findings of this study will help the management of the deposit taking SACCOs in Kenya to understand the effects of financial fraud on profitability so as to enhance their growth and success in their business.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section is going to look at the theories which explain financial fraud and empirical studies which have been carried out in this area both in the global perspective and the local perspective.

2.2 Theoretical Framework on Fraud

There are several theories on fraud. Below are some of them.

2.2.1 The Fraud Triangle Theory

It is the most common theory of fraud. It was developed by Donald Cressey in 1971. According to Cressey, there are three factors which make people to commit fraud. These are: Perceived Pressure, Perceived Opportunity and Perceived Rationalization which make up a triangle.

Cressey further describes that every fraud executor is confronted by perceived pressure either work related or personal. The pressures then motivate the individual to commit fraud to meet the expectations of the pressure at hand. The executor of fraud must then believe that he/she can commit fraud without being caught. The opportunity to commit fraud present itself through weak internal controls and inadequate punishment if found.

The third driver of fraud is the ability of the fraudster to find away to rationalize their actions as acceptable. Rationalization refers to the manner in which people think about their work, performance and contribution within the workplace. They therefore, attach a value that they should derive from the company for being productive or delivering something of value (Chiezey & Onu, 2013).

The proposition of this theory is that fraud is perpetrated by individuals who are working for the organization who are able to realize the opportunity and take advantage of. The theory implies that fraud can be reduced significantly if the pressures, opportunities and rationalization of individuals are addressed by the organization.

2.2.2 Differential Association Theory

It was first developed by Criminal scholar Edwin Sutherland in 1974. The theory explains that individuals learn to commit fraud through associations with other fraudsters. It focuses on how individuals learn to become criminals, but it does not concern itself with why they become criminals. The theory therefore implies that if fraud is to be significantly reduced, then the business ethics will have to change.

2.2.3 The Fraud Scale Theory

It was developed in 1984 by three gentlemen i.e Albrecht, Howe & Romney. According to Albrecht et al, fraud triangle should include Personal integrity instead of Rationalization. This is particularly applicable to financial reporting fraud where sources of pressure (e.g. analyst forecasts, management's earnings guidance, a history

of sales and earnings growth) are more observed. They defined personal integrity as the code of ethical behavior each person adopts.

2.2.4 The Fraud Diamond

According to Wolfe & Hermanson, 2004, for fraud to really occur, four elements must be present. These are incentive, opportunity, rationalization and individual's capability.

The theory state that, individual's personal abilities and traits play a major role on whether fraud may actually happen, even with the presence of the other three factors (Pressure, Opportunity & Rationalization). The theory further explains that an incentive to commit fraud in organization may present itself in form of weak internal controls. However, without the right person with the right capabilities to realize that as an opportunity and to be able to exploit it and finally rationale, fraud may never take place. This theory has been supported by the findings that most frauds in organizations are committed by middle level management (59%). The middle level management is composed of people who have the experience on the job and smart enough to realize the opportunities in order to take advantage of them.

The theory further gives the traits of persons with capabilities as (1) The person's position in the organization may furnish the ability to create or exploit the opportunity to commit fraud (2) The person must be smart enough to understand and exploit the internal control weaknesses (3) The right person has a strong ego and great confidence (4) He/she has the capability to coerce others to commit or conceal fraud, a person with a very persuasive personality (5) He/she has the ability to lie effectively and consistently (6) The person is able to deal very well with stress.

2.2.5 Self Control Theory

It is cited by the Gottfredson and Hirschi (1990) states that individuals with low levels of self control are more likely to commit a wide variety of crime and crime related behaviours. Individuals who lack self control tend to be impulsive, insensitive, physical as opposed to mental, risk taking, shortsighted and non-verbal (McMullen , 1999). The theory states that low self control is learned from childhood through parental nurture. It argues that inconsistent parenting practices result in children who are unable to delay gratification, avoid risky behavior, control their impulses and consider the feeling of others.

2.3 Causes of Fraud

Several factors have been found to drive people to commit frauds depending on the enabling environment. Kanu & Okorafor (2013) and Adebisi (2009) identified the various causes of fraud. The most common causes are classified under the following categories; Technological, Management, Legal, Social and Personal.

2.3.1 Technological Causes of Fraud

Kanu & Okorafor, (2013), identifies technological causes of frauds. The study reveals that technology has improved significantly in the modern world. Everything is nearly computerized. One can communicate with persons in far places as if they are near. This has made things easy. However, fraud has also become easy to perpetrate. A fraudster can commit fraud in a fraction of a second without being noticed. This fraud can also take place in a very far distance. Examples of fraud which have been caused by technology include, ATM frauds, Electronic Funds Transfer, Spam Emails. Technological frauds are not easy to detect or prevent. In addition, technological

advancement is a continuous process and hence technological frauds keep on evolving.

2.3.2 Legal Causes of Fraud

Kanu & Okorafor, (2013), classifies legal causes of frauds as those which occur due to the nature and process of legal justice. Due to the nature of fraud cases it takes a very long time to properly investigate them. This therefore implies that the fraudster can commit fraud and move easily before they are brought to book. The legal system also has inefficiencies due to corrupt practices in the legal system, i.e, police, prosecutors and Judges. Therefore the culprits can easily buy their way out. Fraud cases are also bail able and hence one can easily obtain their freedom.

2.3.3 Behavioural Causes of Fraud

According to Adebisi (2009), Personal causes of fraud include individuals who are professional criminals whose specialty is to defraud corporate bodies and banks. These individual will move from one organization or bank to another with the sole objective of committing fraud. In the process they form friendships with other employees to defraud organizations. Personal causes may originate from the upbringing of individuals. Some parents take time to instill good morals in their children while others leave it to the Teachers and the Society to instill values in their children. It may also be as a result of wrong choice of friends and mentors.

According to Kanu & Okorafor, (2013), Social causes are those values which the society value yet in the process of people acquiring them, they involve themselves in fraud. For example, the modern society places high value in accumulation of wealth

without regard to the source. It is also due to the society which practices Nepotism and places less emphasis on professionalism.

2.3.4 Management Causes of Frauds

Kanu & Okorafor, (2013), classifies management causes of fraud as actions or inactions by management of organizations which lead to fraud. These include recruitment of staff without rigorous character checks from previous employers or relevant schools. The management may also place high emphasis on academic qualifications to the detriment of performance leading to certificate manipulations. Low remuneration of employees also leads to fraud especially where the organizations report excessive profits. Weak internal controls, use of inexperienced staff, over reliance on one staff due to competence lead to frauds.

2.4 Types of Fraud

Fraud is a serious problem in the society. It affects every organization and it takes several forms. The following are some of the types of fraud.

2.4.1 Unauthorized Withdrawals

According to Odhiambo (2013), unauthorized withdrawals are where an individual obtain funds from another person's account without proper authorization. It may take the form of an individual forging another person's signature and thereby obtaining money over the counter. It may also take the form of an individual having authorized access to Person Identification Number (PIN) of another person and using it to withdraw cash through Automatic Teller Machine (ATM).

Kanu & Okorafor (2013) carried out a study on the nature, extent and Economic impact of Fraud on Bank Deposits in Nigeria to determine the amount of Bank funds involved in fraud. They collected quarterly Fraud and Forgeries report on Nigerian Banks for the period between 1993 and 2010. The study found that the most frequent type of fraud in Nigerian Banking Industry is fraudulent withdrawals.

2.4.2 Fraudulent Money Transfer

According to Akinyomi, (2012) in his study on the examination of fraud in the Nigerian banking sector and its prevention, fraudulent money transfer is where a fraudster generates a fraudulent request or alters a legitimate Funds Transfer Request for the purpose of committing fraud. The fraudster will then collude with fraudulent Bank staff to withdraw the ill gotten money.

2.4.3 Theft and Embezzlement

According to Akinyomi (2012), theft and embezzlement represent another form of fraud which involves the illegal collection of financial items such as cash, traveler's cheque.

2.4.4 Unauthorized Use of Debit Card

This is where a fraudster obtains a debit card of another person together with the PIN and uses it to buy goods from the internet or at the Point of Sale terminals.

2.5 Empirical Literature

Kanu & Okorafor (2013) carried out a study on the nature, extent and Economic impact of Fraud on Bank Deposits in Nigeria to determine the amount of Bank funds

involved in fraud. Quarterly Fraud and Forgeries report on Nigerian Banks were collected for the period between 1993 and 2010. The study found out that the most frequent type of fraud in Nigerian Banking Industry is fraudulent withdrawals.

Chiezey & Onu (2013) carried out a study on the impact of fraud and fraudulent practices on the performance of banks in Nigeria. The objective of the study was to evaluate the impact of fraud and fraudulent practices on the performance of banks in Nigeria within the period 2001-2011. Evaluative research design was used to determine the nature, magnitude and economic consequences of fraud on banks in Nigeria. 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 out that poor internal controls leads to increase in fraud and fraudulent activities.

Kiragu et al (2013) carried out a study on the effect of Bank growth on occupational fraud risk in Commercial banks in Kenya. The objective of the study was to find out whether Commercial banks growth has had an effect on occupational fraud in Commercial banks. A representative sample of 30 banks was used for the study and Bivariate Linear Regression was used to test the Null Hypothesis. The results of the study were negative and that no significant effect of Bank growth on occupational fraud risk in Commercial banks in Kenya.

Odhiambo (2013) did a study on the effects of financial fraud and liquidity on financial performance of commercial banks in Kenya. The objective of the study was to evaluate the effects of financial fraud and liquidity on the financial performance of

commercial banks in Kenya. The study adopted a descriptive research design. Regression analysis model was used to analysis the data. The study found out that financial fraud loss and liquidity ratios had a strong and significant influence on financial performance of commercial banks in Kenya.

Akinyomi (2012) carried out a study on the examination of fraud in the Nigerian Banking sector and its prevention. The objective of the study was to ascertain the nature and causes of fraud in the Nigerian Banking sector. A well designed questionnaire was administered to 200 staff members of 10 commercial banks in Lagos, Nigeria. Responses to rating-scale questions were tested for significance using the t-test. The findings of the study were that greed was the major cause of fraud; staff members were involved in all stages of fraud including initiation, execution and concealment.

Gikiri (2012) did a study to determine the influence of fraud risk management practices in commercial banks and their effect on fraud risk exposure. The main objective was to find the combined effect of fraud risk management practice, fraud prevention and fraud detection on fraud risk incidence in commercial banks in Kenya.

Akindele (2011) in his study of fraud as a negative catalyst in the Nigerian Banking Industry, found out that lack of training, communication gap and leadership skills were the greatest causes of fraud in Banks. He advised that adequate internal control mechanism be put in place and that workers satisfaction and comfort be taken care of.

Adepoju and Alhassan (2010) carried out a study on the challenges of ATM usage and fraud occurrences in Nigeria. The study sampled 150 ATM users and collected data using close ended questionnaire. The study found out that customers have come to depend on and trust ATM to conveniently meet their banking needs. The study further

revealed that in the recent time there has been a proliferation of ATM frauds in the country even and across the globe. Managing the risk associated with ATM fraud as well as diminishing its impact is an important issue that face financial institutions as fraud techniques have become more advanced with increased occurrences.

Idowu (2009) carried out a study on the assessment of fraud and its management in Nigeria Commercial Banks. Data was collected using questionnaire and analyzed using Chi square. The study found out that greed rather than poor salaries is what makes people to commit fraud and that poor salary is not an excuse to commit fraud.

Khanna & Arora (2009) carried out a study to investigate the reasons for bank frauds and implementation of preventive security controls in Indian Banking Industry. The objective of the study was to evaluate the causes that are responsible for bank frauds. They administered a survey to 253 employees of various banks who were selected through multistage random cluster sampling. The study revealed that Akinfala (2005) carried out a study on job involvement/experience factors and fraudulent behaviours amongst serving and convicted employees. The study revealed that the level of job involvement is a function of three factors; Motivation, Identification and a feeling of pride that people achieve in their jobs.

2.6 Summary of Literature Review

A number of studies have been done in the area of fraud. From the studies above, it is evident that they have dwelt largely on Bank frauds. Specific studies done on the causes of fraud are on the banking sector yet fraud affects all organizations. None of the studies above have focused on deposit taking SACCOs. This is the gap in literature that this study is attempting to fill by empirically investigating the impact of Financial Fraud on performance of deposit taking SACCOs in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section is going to look at the methodology that was used to conduct the study. It specifies the research design, target population, sample, how data was collected and methods to used to analyze data.

3.2 Research Design

The research design is a plan of the methods and techniques to be adopted for collection and analysis of the data required in obtaining answers to research questions. The study used a descriptive design. A descriptive research is a process of collecting data in order to answer questions concerning the current status of the subjects in the study. The research often involves collecting information through data review. This type of research best describes the way things are (Mugenda & Mugenda, 2003). This study described the variables associated with the problem.

3.3 The Population of the Study

According to Cooper & Schindler (2003), a population is the subject such as a person, organization, customer database or amount of quantitative data on which measurement is being taken. This definition ensures that population of interest is homogenous. Population studies are more representative because everyone has equal chance to be included in the final sample that is drawn. The population of interest in this study was the deposit taking SACCOs that are operating in Kenya between the years 2009 to 2013. There are 135 deposit taking SACCOs that involve in deposit

taking operations in Kenya which have been registered by Sacco Societies Regulatory Authority (SASRA).

3.4 Sample of the study

The sample of this study was chosen through stratified sampling. The study sampled 10 Deposit taking SACCOs in each sector of the Sacco Industry. The sectors are Manufacturing, Health, Financial, Agricultural and Institutional. The total number of the sample was 50 Deposit taking SACCOs.

3.5 Data Collection and Research Instruments

Data collection deals specifically with the type of data to be collected and the techniques used. The type of data collected for this study was both Primary and secondary data for the purpose of analyzing the effect of financial fraud on financial performance of deposit taking Deposit taking SACCOs in Kenya. Primary data was obtained through self-administered questionnaire so as to collect the required data. The Questionnaire consisted of a list of open ended and closed ended questions. Closed ended questions help in collecting viable quantitative data while open-ended questions allow the respondents freedom of answering questions and the chance to provide in-depth responses (Mugenda & Mugenda, 2003). Questionnaire is preferred because it is efficient, cheap and easy to administer.

Secondary data was obtained from SASRA records of financial statements of the deposit taking SACCOs. Specifically, Return on Assets (ROA) was obtained from the financial statements of deposit taking Deposit taking SACCOs for the years from 2009 to 2013 in order to measure their financial performance.

3.6 Data Analysis

The data collected was mostly quantitative and was analyzed using;

(a) Descriptive analysis techniques. The descriptive statistical method; SPSS was used to describe the data and determine the extent used. Descriptive statistics such as frequencies, percentages, means and standard deviation was used to report and present data. Financial ratio analysis was used to measure the organization performance (Kothari 2004). Return on Assets (ROA) ratio was specifically used.

(b) The usage of Multiple Regression analysis model was used to determine the effect of independent variables on the dependent variable. Correlation coefficient was used to investigate how the independent variables inter-relate with the dependent variable. Analysis of Variance (ANOVA) was performed to determine the impact of independent variables on the dependent variable in the multiple regression analysis.

3.6.1 Analytical Model

The analytical model for the study was a regression analysis for the independent variables and dependent variable.

The Multi-regression analysis took the form below:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

Whereby;

Y= Financial performance of Deposit taking SACCOs as expressed by ROA- ratio of after tax profits to total assets

X1= % of Fraud due to Behavioral causes

X2= % of Fraud due to Technological causes

X3=% of Fraud due to Management causes

X4=% of Fraud due to Legal Causes

a= The constant of regression

e= The error term.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter discusses the interpretation and presentation of the findings. This chapter presents analysis of the data on the effects of the various types of fraud on the financial performance of deposit taking SACCOs in Kenya. The chapter also provides the major findings and results of the study.

4.1.1 Response Rate

The study targeted a sample size of 50 respondents from which 39 filled in and returned the questionnaires making a response rate of 78%. This response rate was good and representative and conforms to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

4.2 Demographic Characteristics

The study sought to establish the background information of the deposit taking SACCOs including the duration that the deposit taking SACCOs had been in operation and also the estimate membership of the Deposit taking SACCOs.

Table 4.1: Duration that the Deposit taking SACCOs had been in operation

	Frequency	Percent
Less than 2 yrs	2	5.1
2-5 yrs	5	12.8
5-10 yrs	13	33.3
10-20 yrs	8	20.5
More than 20 yrs	11	28.2
Total	39	100.0

The study sought to establish the duration that the Deposit taking SACCOs have been in operation. On the duration that the deposit taking SACCOs have been in operation the findings in table 4.1 show that majority (33.3%) of the deposit taking SACCOs had been in operation for 5-10 years, 28.2% had been in operation for more than 20 years, 20.5% had been in operation for 10-20 years, 12.8 % had been in operation for 2-5 years while 5.1% of the deposit taking SACCOs had been in operation for less than 2 years.

The study also sought to establish the estimate membership of the Deposit taking SACCOs. The findings are as presented in Table 4.2.

Table 4. 2: Estimate membership of the Deposit taking SACCOs

	Frequency	Percent
Less than 1000	10	25.6
2000-5000	12	30.8
5000-10000	15	38.5
More than 10000	2	5.1
Total	39	100.0

According to the findings in Table 4.2, the respondents indicated that majority of the Deposit taking SACCOs (38.5%) had been an estimated membership of 5000-10000, 30.8% had been an estimated membership of 2000-5000, 25.6% had been an estimated membership of less than 1000 while 5.1 had been an estimated membership of more than 10000.

4.3 Descriptive Statistics

The study sought to find out the extent of agreement that various types of frauds occur in the SACCO Sector. The findings are as shown in Table 4.3.

Table 4.3: Extent of agreement that various types of frauds occur in the SACCO Sector

	Mean	Std. Deviation
Unauthorized use of debit card (ATM)	4.1104	1.01102
Theft and Embezzlement	4.0597	.71522
Unauthorized withdrawals	4.0373	.65893
Fraudulent Money transfer	3.9552	1.17335

On extent of agreement that various types of frauds occur in the SACCO Sector, the respondents agreed that the types of fraud that occur in deposit taking SACCOs

include unauthorized use of debit card (ATM) as shown by a mean score of 4.1104, theft and embezzlement as indicated by a mean score of 4.0597, unauthorized withdrawals as expressed by a mean score of 4.0373 and fraudulent money transfer as indicated by a mean score of 3.9552.

The study further wanted to establish the views of the respondents on various causes of fraud in the Sacco Sector. The findings are as presented in Table 4.4.

Table 4.4: Causes of fraud in the Sacco Sector

	Mean	Std. Deviation
Greed	4.3707	0.8569
Inadequate training and re-training	4.3512	0.0907
Poor salaries	4.1067	0.93828
Poor record Keeping	3.6576	0.6139
Poor internal Controls	3.5606	0.6586
Inadequate staffing	3.4848	0.7550
Lack of appropriate punishment to fraudsters	2.8667	0.96329
Personalities of staff	2.6800	0.96926

The respondents also indicated that to a great extent the causes of fraud in the Sacco sector include greed as shown by a mean score of 4.3707, inadequate training and re-training as expressed by a mean score of 4.3512, poor salaries as indicated by a mean score of 4.1067, poor record keeping as shown by a mean score of 3.6576, poor internal controls as indicated by a mean score of 3.5606. Further the respondents also indicated that to a moderate extent the causes of fraud in the Sacco sector include inadequate staffing as shown by a mean score of 3.4848, lack of appropriate

punishment to fraudsters as expressed by a mean score of 2.8667 and personalities of staff as shown by a mean score of 2.6800.

The study also sought to establish the extent that various factors affect fraud in the deposit taking SACCOs. The findings are as presented in Table 4.5.

Table 4.5: Extent that various factors affect fraud in the Deposit taking SACCOs

	Mean	Std. Deviation
Management Actions or Inactions	4.3651	0.8620
Society expectations	4.3246	0.0958
Technological advancement	3.6547	0.6190
Tedious Legal Processes of prosecuting Fraudsters	3.5604	0.6637
Personality Characters of individuals	3.4742	0.7601

The study sought to establish the extent that various factors affect fraud in the deposit taking SACCOs. From the study findings, the respondents were of the view that the factors that affect fraud in the Deposit taking SACCOs to a great extent includes management actions or inactions as shown by a mean score of 4.3651, society expectations as expressed by a mean score of 4.3246, technological advancement as indicated by a mean score of 3.6547 and tedious legal processes of prosecuting fraudsters as expressed by a mean score of 3.5604. The respondents also indicated that the factor that affects fraud in the deposit taking SACCOs to a moderate extent is personality characters of individuals as shown by a mean score of 3.4742

Further the study sought to establish the extent that various factors of fraud affect financial performance of the deposit taking SACCOs. The findings are as shown in Table 4.6.

Table 4.6: Extent that various factors of fraud affect financial performance of the Deposit taking SACCOs

	Mean	Std. Deviation
Tedious Legal Processes of prosecuting Fraudsters	4.2056	0.9792
Technological advancement	3.8833	0.81048
Personality Characters of individuals	3.7478	0.97977
Management Actions or Inactions	3.4252	0.87375
Society expectations	3.3841	0.7995

The study inquired on the extent that various factors of fraud affect financial performance of the Deposit taking SACCOs. The respondents indicated that the factors of fraud that affect financial performance of the deposit taking SACCOs to a great extent include tedious legal processes of prosecuting fraudsters as expressed by a mean score of 4.2056, technological advancement as shown by a mean score of 3.8833, personality characters of individuals as indicated by a mean score of 3.7478. Further, the respondents indicated that the factors of fraud that affect financial performance of the deposit taking SACCOs to a moderate extent include management actions or inactions as expressed by a mean score of 3.4252 and society expectations as shown by a mean score of 3.3841.

The study also sought to establish the respondents rating of Ease of occurrence of fraud in the deposit taking SACCOs for the Last 5 years. The findings are as expressed in Table 4.7.

Table 4.7: Ease of occurrence of fraud in the Deposit taking SACCOs for the Last 5 years

	Mean	Std. Deviation
2009	4.4030	0.67554
2013	4.0819	0.94096
2010	3.8533	0.91080
2011	3.2667	0.96329
2012	3.0733	0.78797

Regarding the ease of occurrence of fraud, the respondents indicated that it was hard for fraud to occur in 2009 as shown by a mean score of 4.4030, 2013 as indicated by a mean score of 4.0819 and 2010 as expressed by a mean score of 3.8533. The respondents also indicated that it was fair for occurrence of fraud in 2011 as shown by a mean score of 3.2667 and 2012 as expressed by a mean score of 3.0733.

4.4 Regression Results

The study conducted a linear regression model to establish the relationship between causes of frauds and financial performance of Deposit taking SACCOs in Kenya. Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (financial performance of Deposit taking SACCOs) that is explained by all the four independent variables (fraud due to behavioral causes, fraud due to technological causes, fraud due to management causes and fraud due to legal causes).

Table 4. 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.819	0.671	0.664	0.245

Source: Author (2014)

The three independent variables that were studied, explain only 66.4% of the financial performance of deposit taking SACCOs in Kenya as represented by the adjusted R². This therefore means the four variables contribute to 66.4% of financial performance of deposit taking SACCOs in Kenya, while other factors not studied in this research contributes 33.6% of financial performance of deposit taking SACCOs in Kenya. Therefore, further research should be conducted to investigate the other (33.6%) factors influencing financial performance of deposit taking SACCOs in Kenya.

Table 4.9: Summary of One-Way ANOVA results of the regression analysis between financial performance of Deposit taking SACCOs in Kenya and its determinants

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3.268	4	1.209	4.187	0.00116
1 Residual	11.61	35	0.252		
Total	14.878	38			

Source: Author (2014)

From the ANOVA statistics in table 4.9, the processed data, which are the population parameters, had a significance level of 0.00116 which shows that the data is ideal for making a conclusion on the population's parameter. The F calculated at 5% Level of

significance was 4.187. Since F calculated is greater than the F critical (value = 2.64), this shows that the overall model was significant i.e. there is a significant relationship between financial performance of Deposit taking SACCOs in Kenya and its determinants.

Table 4. 10: Regression coefficients of the relationship between financial performance of Deposit taking SACCOs in Kenya and the four predictive variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	0.426	0.217		3.451	0.035
	Fraud due to Behavioral causes	0.479	0.104	0.108	2.246	0.024
	Fraud due to Technological causes	0.761	0.128	0.546	5.967	0.031
	Fraud due to Management causes	0.617	0.452	0.324	3.972	0.024
	Fraud due to Legal Causes	0.501	0.116	0.383	4.124	0.037
Dependent variable: Financial performance of Deposit taking SACCOs						

Source: Author (2014)

The coefficient of regression in Table 4.4 above was used in coming up with the model below:

$$FP = 0.426 + 0.479B + 0.761T + 0.617M + 0.501L$$

Where FP is financial performance, B is fraud due to behavioral causes, T is fraud due to technological causes, M is fraud due to management causes and L is fraud due to legal causes. According to the model, all the variables were significant as their P-value was less than 0.05 at 95% confidence level. The four variables (fraud due to behavioral causes, fraud due to technological causes, fraud due to management causes and fraud due to legal causes) were positively correlated with financial performance of Deposit taking SACCOs in Kenya.

From the model, taking all factors (fraud due to behavioral causes, fraud due to technological causes, fraud due to management causes and fraud due to legal causes) constant at zero, financial performance of Deposit taking SACCOs in Kenya was 0.426. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in fraud due to behavioral causes will lead to a 0.479 increase in financial performance of Deposit taking SACCOs in Kenya, a unit increase in fraud due to technological causes will lead to a 0.761 increase in financial performance of Deposit taking SACCOs Kenya, a unit increase in fraud due to management causes will lead to a 0.617, while a unit increase in fraud due to legal causes will lead to a 0.501 increase in financial performance of Deposit taking SACCOs in Kenya. This deduces that fraud due to technological causes have the most effect to the financial performance of Deposit taking SACCOs in Kenya followed by fraud due to management causes, then fraud due to legal causes while fraud due to behavioral causes had the least effect.

4.5 Summary and Interpretation of Findings

The study found out that the causes of fraud in the Sacco sector include greed as shown by a mean score of 4.3707, inadequate training and re-training as expressed by a mean score of 4.3512, poor salaries as indicated by a mean score of 4.1067, poor record keeping as shown by a mean score of 3.6576, poor internal controls as indicated by a mean score of 3.5606. This is in line with Idowu (2009) who did an assessment of fraud and its management in Nigeria Commercial Banks. The study revealed that greed rather than poor salaries is what makes people to commit fraud. . Idolor (2010) in his research on Bank Frauds in Nigeria: Causes , Effects and possible solutions, found out that poor remunerations, lack of proper staff training and lack of proper background check on staff as some of the causes of frauds. According to Akinyomi (2012), greed is a foremost cause of fraud in his study on the examination of fraud in the Nigerian Banking sector and its prevention.

The study also revealed that the factors that affect fraud in the Deposit taking SACCOs to a great extent includes management actions or inactions as shown by a mean score of 4.3651, society expectations as expressed by a mean score of 4.3246, technological advancement as indicated by a mean score of 3.6547 and tedious legal processes of prosecuting fraudsters as expressed by a mean score of 3.5604. Further the study established that the factors of fraud that affect financial performance of the Deposit taking SACCOs to a great extent include tedious legal processes of prosecuting fraudsters as expressed by a mean score of 4.2056, technological advancement as shown by a mean score of 3.8833, personality characters of individuals as indicated by a mean score of 3.7478.

This correlates with Kanu & Okorafor (2013) who identifies technological causes of frauds. The study reveals that technology has improved significantly in the modern world. Everything is nearly computerized. However, fraud has also become easy to perpetrate. A fraudster can commit fraud in a fraction of a second without being noticed. This fraud can also take place in a very far distance.

From the regression model, the study found out that there were factors influencing the financial performance of Deposit taking SACCOs in Kenya, which are fraud due to behavioral causes, fraud due to technological causes, fraud due to management causes and fraud due to legal causes. The study found out that the Y-intercept was 0.426 for all years. The four independent variables that were studied (fraud due to behavioral causes, fraud due to technological causes, fraud due to management causes and fraud due to legal causes) explain a substantial 66.4% of financial performance of Deposit taking SACCOs in Kenya as represented by adjusted R^2 (0.664). This therefore means that the four independent variables contributes 66.4% of the financial performance of Deposit taking SACCOs in Kenya while other factors and random variations not studied in this research contributes a measly 33.6% of the financial performance of Deposit taking SACCOs in Kenya.

The study established that the coefficient for fraud due to behavioral causes was 0.479, meaning that fraud due to behavioral causes influenced the financial performance of Deposit taking SACCOs in Kenya. The study also deduced that fraud due to technological causes had an influence on financial performance of Deposit taking SACCOs registered in Kenya since it had a coefficient of 0.761. The study further deduced that fraud due to management causes influenced financial

performance of Deposit taking SACCOs in Kenya as it had positive coefficient (0.617). Finally, the study revealed that fraud due to legal causes had an effect of financial performance of Deposit taking SACCOs in Kenya as it had a coefficient of 0.501. All the above findings on the classification of causes of fraud are in line with Kanu & Okorafor, (2013) and Adebisi (2009) who classifies fraud as those caused by management, Technological, Legal, Personal and Social.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary, conclusion and recommendations of the main findings on the effects of the various types of fraud on the financial performance of deposit taking SACCOs in Kenya. The chapter presents the discussions drawn from the data findings analyzed and presented in chapter four. The study was conducted by use of primary and secondary sources such as published reports. The chapter is structured into discussions, conclusions, recommendations and areas for further research.

5.2 Summary of Findings

In determining the effects of fraud on financial performance of deposit taking SACCOs in Kenya, the study found out that there were factors influencing the financial performance of Deposit taking SACCOs in Kenya. The factors are fraud due to behavioral causes, fraud due to technological causes, fraud due to management causes and fraud due to legal causes. The study found out that the Y-intercept was 0.426 for all years. The four independent variables that were studied (fraud due to behavioral causes, fraud due to technological causes, fraud due to management causes and fraud due to legal causes) explain a substantial 66.4% of financial performance of deposit taking SACCOs in Kenya as represented by adjusted R^2 (0.664). The study therefore concludes that fraud influences the financial performance of deposit taking Deposit taking SACCOs in Kenya.

5.3 Conclusions

In view of the craze for money, and the prevailing harsh economic environment, big time frauds are on the increase in Kenya, deposit taking SACCOs are losing amounts running into millions of shillings to fraudsters on a daily basis in most cases, when the frauds are detected early; amounts already drawn are usually difficult to recover. Even where Sacco inspectors discover fraud and there is the possibility of recovering some of the frauds, the cooperation of the police has not been particularly encouraging. Also in some cases, top levels of management that do not want negative publicity for the Sacco try to hide certain cases. A sound and effective control system will not only prevent fraud but will at an early stage detect it.

From the regression model, the study found out that there were factors influencing the financial performance of deposit taking SACCOs in Kenya, which are fraud due to behavioral causes, fraud due to technological causes, fraud due to management causes and fraud due to legal causes. The study found out that the Y-intercept was 0.426 for all years.

The four independent variables that were studied (fraud due to behavioral causes, fraud due to technological causes, fraud due to management causes and fraud due to legal causes) explain a substantial 66.4% of financial performance of Deposit taking SACCOs in Kenya as represented by adjusted R^2 (0.664). This therefore means that the four independent variables contributes 66.4% of the financial performance of Deposit taking SACCOs in Kenya while other factors and random variations not studied in this research contributes a measly 33.6% of the financial performance of Deposit taking SACCOs in Kenya.

The study concludes that fraud due to behavioral causes influenced the financial performance of Deposit taking SACCOs in Kenya. The study also concludes that fraud due to technological causes had an influence on financial performance of Deposit taking SACCOs registered in Kenya. The study further concludes that fraud due to management causes influences financial performance of Deposit taking SACCOs in Kenya. Finally, the study concludes that fraud due to legal causes has an effect of financial performance of Deposit taking SACCOs in Kenya. This is in line with Kanu & Okorafor, (2013) who classifies fraud as caused by management, technological, Legal and Behavioural factors.

5.4 Recommendations, Limitations and Suggestions

This section looks at the recommendations from the study findings, limitations and suggestions for further research.

5.4.1 Policy Recommendations

The study recommends that deposit taking SACCOs should increase their employee requirements pertaining to qualifications; draw up more efficient screening techniques and ascertain that references are not fictitious at the recruitment stages. They should also ensure that there is segregation of duties, efficient internal controls, jobs satisfactions and job enrichment. The task of deposit taking SACCOs management is challenging enough without the even present risk of fraud, so awareness should also be created so as to 'nip' the situation in the 'bud' before anything serious occurs. This requires more than just sound judgment and dynamic action; it calls for commitment that can only be gained if the management has ensured that all the motivational incentives have been put in place. A total alertness that takes nothing for granted and

awareness that trust could be misplaced, this being a diligent and painstaking approach.

Furthermore, training techniques should be upgraded to test honesty and integrity and not just technical skills. This should entail extensive training programme regularly done, as well as personality tests and Intellectual Quotient (IQ) tests so as to understand the personality and character of the trainee. This would reduce negligence and carelessness in carrying out basic procedures that could pose as loopholes for fraud.

The study recommends the Sacco management to come up with a policy which clearly indicates steps to be taken on any staff found committing fraud. This will help reduce internal fraud which is more elaborate in the bank than external.

5.4.2 Limitations of the Study

There were quite a number of challenges encountered when carrying out the study research and most particularly during the process of data collection. Due to inadequate resources, the researcher conducted this research under constraints of finances. In addition the respondents had to be pushed to assist with data. This was done through many calls to remind them. Others thought that the information they were requested to volunteer was confidential.

Another limitation is developing a model which would enable a researcher to study the relationship between the various variables. Further, the model may not be reliable due to some shortcoming of the regression models. Due to the shortcomings of

regression models, other models can be used to explain the various relationships between the variables. When developing this model, there was a great need to define the dependent variables and independent variables. If the model is not correct, the process of analysis may not give the right results. In this case, multiple linear regression was used since there were multiple variables which required to be studied. Further, the data was tedious to collect and compute as it was in very raw form due to lack of standardized financial statements from various deposit taking SACCOs which made the data computation even harder.

5.4.3 Suggestions for Further Research

This study has explored the effect of fraud on financial performance of deposit taking SACCOs in Kenya and established that fraud has a strong influence on financial performance of deposit taking SACCOs. The overall effect of fraud can therefore not be ignored at any cost. There is therefore need to respond to these fraud related risks. This study has recommended adoption of various reforms in the deposit taking SACCOs and in other arms of the government to reduce fraud related risks in the deposit taking SACCOs in Kenya. The study further recommends that another study needs to be done with an aim of investigating the effectiveness of the strategic responses to fraud related risks in the deposit taking SACCOs in Kenya.

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APPENDICES

Appendix I: List of Deposit Taking Deposit taking SACCOs Licensed in Kenya as at January 2014

1. Afya Sacco Society Limited.
2. Airports Sacco Society Limited.
3. Asili Sacco Society Limited.
4. Bandari Sacco Society Limited.
5. Baraka Sacco Society Limited.
6. Biashara Sacco Society Limited.
7. Bingwa Sacco Society Limited.
8. Boresha Sacco Society Limited.
9. Bureti Sacco Society Limited.
10. Busia Teso Teachers Sacco Society Limited.
11. Capital Sacco Society Limited.
12. Centenary Sacco Society Limited.
13. Chai Sacco Society Limited.
14. Chemelil Sacco Society Limited.
15. Chepsol Sacco Society Limited.
16. Chuna Sacco Society Limited.
17. Comoco Sacco Society Limited.
18. Cosmopolitan Sacco Society Limited.
19. County Sacco Society Limited.
20. Daima Sacco Society Limited.
21. Dhabiti Sacco Society Limited.
22. Dimkes Sacco Society Limited.
23. Egerton University Sacco Society Limited.

24. Enea Sacco Society Limited.
25. Fariji Sacco Society Limited.
26. Fortune Sacco Society Limited.
27. Fundilima Sacco Society Limited.
28. Githunguri Dairy & Community Sacco Society Limited.
29. Gusii Mwalimu Sacco Society Limited.
30. Harambee Sacco Society Limited.
31. Hazina Sacco Society Limited.
32. Imarika Sacco Society Limited.
33. Imarisha Sacco Society Limited.
34. Imenti Sacco Society Limited.
35. Isiolo Teachers Sacco Society Limited.
36. Jamii Sacco Society Limited.
37. Jijenge Sacco Society Limited.
38. Kakamega Teachers Sacco Society Limited.
39. Keiyo Teachers Sacco Society Limited.
40. Kenpipe Sacco Society Limited.
41. Kenversity Sacco Society Limited.
42. Kenya Acheivas Sacco Society Limited.
43. Kenya Bankers Sacco Society Limited.
44. Kenya Cannery Sacco Society Limited.
45. Kenya Highlands Sacco Society Limited.
46. Kenya Midland Sacco Society Limited.
47. Kenya Police Staff Sacco Society Limited.
48. Kambaa Dairy Rural Sacco Society Limited.
49. Kingdom Sacco Society Limited.

50. Kipsigis Edis Sacco Society Limited.
51. Kite Sacco Society Limited.
52. Kitui Teachers Sacco Society Limited.
53. KMFRI Sacco Society Limited.
54. Konoin Sacco Society Limited.
55. K-Unity Sacco Society Limited.
56. Laikipia Teachers Sacco Society Limited.
57. Lengo Sacco Society Limited.
58. Magadi Sacco Society Limited.
59. Magereza Sacco Society Limited.
60. Maisha Bora Sacco Society Limited.
61. Marakwet Teachers Sacco Society Limited.
62. Marsabit Sacco Society Limited.
63. Mentor Sacco Society Limited.
64. Meru South Farmers Sacco Society Limited.
65. Metropolitan Sacco Society Limited.
66. Miliki Sacco Society Limited.
67. MMH Sacco Society Limited.
68. Mombasa Port Sacco Society Limited.
69. Mombasa Teachers Sacco Society Limited.
70. Medete Tea Growers Sacco Society Limited.
71. Muhigia Sacco Society Limited.
72. Murata Sacco Society Limited.
73. Mwalimu National Sacco Society Limited.
74. Mwito Sacco Society Limited.
75. NACICO Sacco Society Limited.

76. Nafaka Sacco Society Limited.
77. Naku Sacco Society Limited.
78. Nandi Hekima Sacco Society Limited.
79. Narok Teachers Sacco Society Limited.
80. Nassefu Sacco Society Limited.
81. Nation Sacco Society Limited.
82. Nawiri Sacco Society Limited.
83. Ndege Chai Sacco Society Limited.
84. Ndosha Sacco Society Limited.
85. Ng'arisha Sacco Society Limited.
86. Nitunze Sacco Society Limited.
87. NRS Sacco Society Limited.
88. Ntiminyakiru Sacco Society Limited.
89. Nyahururu Umoja Sacco Society Limited.
90. Nyala Vision Sacco Society Limited.
91. Nyambene Arimi Sacco Society Limited.
92. Nyamira Tea Farmers Sacco Society Limited.
93. Nyeri Teachers Sacco Society Limited.
94. Orient Sacco Society Limited.
95. Puan Sacco Society Limited.
96. Safaricom Sacco Society Limited.
97. Sheria Sacco Society Limited.
98. Simba Chai Sacco Society Limited.
99. Siraji Sacco Society Limited.
100. Skyline Sacco Society Limited.
101. Solution Sacco Society Limited.

102. Sot Tea Growers Sacco Society Limited.
103. Sotico Sacco Society Limited.
104. Stake Kenya Sacco Society Limited.
105. Stima Sacco Society Limited.
106. Sukari Sacco Society Limited.
107. Supa Sacco Society Limited.
108. Tai Sacco Society Limited.
109. Taifa Sacco Society Limited.
110. Taita Taveta Teachers Sacco Society Limited.
111. Taraji Sacco Society Limited.
112. Tembo Sacco Society Limited.
113. Tenhos Sacco Society Limited.
114. Tamani Sacco Society Limited.
115. Tharaka Nithi Teachers Sacco Society Limited.
116. Times U Sacco Society Limited.
117. Tower Sacco Society Limited.
118. Trans-National Times Sacco Society Limited.
119. Ufanisi Sacco Society Limited.
120. Ukristo na Ufanisi Sacco Society Limited.
121. Ukulima Sacco Society Limited.
122. Unaitas Sacco Society Limited.
123. United Nations Sacco Society Limited.
124. Universal Traders Sacco Society Limited.
125. Vision Point Sacco Society Limited.
126. Wakenya Pamoja Sacco Society Limited.

127. Wakulima Commercial Sacco Society Limited.
128. Wanaanga Sacco Society Limited.
129. Wananchi Sacco Society Limited.
130. Wanandege Sacco Society Limited.
131. Wareng Teachers Sacco Society Limited.
132. Washa Sacco Society Limited.
133. Waumini Sacco Society Limited.
134. Winas Sacco Society Limited.
135. Yetu Sacco Society Limited.

Source: Sacco Societies Regulatory Authority

Appendix II: Questionnaire

This Questionnaire is to collect data for purely academic purposes. The study seeks to investigate **the effects of Fraud on Financial Performance of Deposit Taking SACCOS in Kenya**. All information will be treated confidentially. Do not put any name or identification on this questionnaire.

SECTION A: BACKGROUND INFORMATION

Kindly answer the following questions by ticking (√) against your preferred choice (s).

1. Please indicate the Deposit taking SACCOs SECTOR of business

(a) Manufacturing

(b) Agricultural

(c) Financial

(d) Institutional

2. How long has the Sacco been in operation?

(a) Less than 2 yrs

(b) 2-5 yrs

(c) 5-10 yrs

(d) 10-20 yrs

(e) More than 20 yrs

3. What is the estimate membership of the Sacco?

- (a) Less than 1000
- (b) 2000-5000
- (c) 5000-10000
- (d) More than 10000

SECTION B: FRAUD AND FINANCIAL PERFORMANCE

4. **What are your views on the following statements regarding the types of fraud in the SACCO Sector?** *(Circle the number closest to your view)*

Use a scale of 1 to 5 where 5 = highly frequent, 4=frequent, 3=less frequent, 2=rarely frequent, 1= not frequent

(a) Unauthorized withdrawals	1	2	3	4	5
(b) Fraudulent Money transfer	1	2	3	4	5
(c) Unauthorized use of debit card (ATM)	1	2	3	4	5
(d) Theft and Embezzlement	1	2	3	4	5
(e) Any other? Please specify	1	2	3	4	5

5. **What are your views on the following causes of fraud in the Sacco Sector?**

(Circle the number closest to your view)

Use a scale of 1 to 5 where 5 =highly agree, 4=agree, 3=indifferent, 2=disagree a,
1= high disagree

(a)Greed	1	2	3	4	5
(b) Poor Record keeping	1	2	3	4	5
© Poor internal Controls	1	2	3	4	5
(d) Inadequate staffing	1	2	3	4	5
(e) Inadequate training and re-training	1	2	3	4	5
(f) Poor salaries	1	2	3	4	5
(g) Lack of appropriate punishment to fraudsters	1	2	3	4	5
(h) Disgruntled staff	1	2	3	4	5
(i) Intelligent staff who want to check whether controls are existing	1	2	3	4	5
(j) Any other? Please specify	1	2	3	4	5

6. To what extent do the following factors contribute to fraud in your Sacco? Use a scale of 1-5 where 5=very great extent; 4=Great extent; 3=Moderate extent; 2=Low extent and 1=Very low extent. (Circle the number closest to your view)

Management Actions or Inactions	1	2	3	4	5
Technological advancement	1	2	3	4	5
Tedious Legal Processes of prosecuting Fraudsters	1	2	3	4	5
Intelligent staff who want to check whether controls are existing	1	2	3	4	5
Disgruntled staff	1	2	3	4	5
Society expectations (peer pressure)	1	2	3	4	5

7. To what extent do the following factors of fraud affect financial performance of your Sacco? Use a scale of 1-5 where 5=very great extent; 4=Great extent; 3=Moderate extent; 2=Low extent and 1=Very low extent. *(Circle the number closest to your view)*

Management Actions or Inactions	1	2	3	4	5
Technological advancement	1	2	3	4	5
Tedious Legal Processes of prosecuting Fraudsters	1	2	3	4	5
Personality Characters of individuals	1	2	3	4	5
Society expectations	1	2	3	4	5

8. How easily can you rate occurrence of fraud in your Sacco for the Last 5 years? Use a scale of 1-5 1= very frequent, 2= frequent, 3=less frequent, 4=hardly frequent, 5= not frequent

(Circle the number closest to your view)

2013	1	2	3	4	5
2012	1	2	3	4	5
2011	1	2	3	4	5
2010	1	2	3	4	5
2009	1	2	3	4	5