THE EFFECT OF RISK MANAGEMENT ON THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY

CHARLES MUTUKU

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTERS

IN BUSINESS ADMINISTARION, SCHOOL OF BUSINESS,

UNIVERSITY OF NAIROBI

OCTOBER, 2016

DECLARATION

I hereby declare that this research Project is my original work and it has not been

Presented for a degree in any University.

Signature-- Date---------------------

CHARLES MUTUKU

D61/74559/2014

This research project is submitted for examination with my approval as

1. Signature-- Date---------------------

SUPERVISOR, UNIVERSITY OF NAIROBI, SCHOOL OF BUSINESS

MR. RONALD CHOGII

2. Signature-- Date---------------------

SUPERVISOR, UNIVERSITY OF NAIROBI, SCHOOL OF BUSINESS

DR. MIRIE MWANGI

ACKNOWLEDGEMENTS

The work presented in this Research Paper would not have been possible without my close association with many people. I take this opportunity to extend my sincere gratitude and appreciation to all those who made this Research paper possible.

I would like to express the deepest appreciation to my supervisors Mr. Ronald Chogii and Dr. Mirie Mwangi for their great contribution and support offered in the development of this research paper. Without their guidance and constant feedback this research paper would not have been achievable.

My thanks also go out to the support I received from my friends who we were undertaking this research within the same period, MBA Class of 2014 and University of Nairobi, School of Business, for the opportunity accorded to further my studies in this program and complete this research project

DEDICATION

This piece of research is dedicated to my late humble father for the greatest influence on my life; Mr. Joseph Mutuku. Dedication also goes to my mother Christina Mutuku her support, encouragement, prayer and constant love has sustained me throughout my life.

.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

CAPM —— Capital Asset Pricing Model

CAR —— Capital Adequacy Ration

CBK —— Central Bank of Kenya

MPT —— Modern Portfolio Theory

NIM —— Net Interest Margin

NPLR —— Non-Performing Loan Ratio

RBA —— Risk Based Approach

ROA —— Return on Assets

ROD —— Return on Deposits

ROE —— Return on Equity

ABSTRACT

In a world that always shows signs of change and with each change coming up with various ways of doing business to achieve results, risk administration and the ways adopted to oversee those identified risks is a basic issue to the company. The late global monetary crisis served as an update that risk management and how the same is honed is very key if executional goals are to be reliably accomplished. Results have shown that entrepreneur's owners and administrators try through all means to sustain execution and now they are compelled to consider the risk management procedures and practices that their companies have embraced to abstain from missing the mark regarding their vital targets. This is significantly more so in the budgetary administrations division which was the most influenced amid the late money related emergency. The main core objectives of this study were to analyze the risk management practices embraced by Kenyan Commercial Banks and to evaluate the impact of these risk management practices on their profitability of the Kenyan banks. The risks management practices adopted by financial institutions are fundamentally classified into; Risks management environment, risks monitoring, risk measurement, internal controls, capital adequacy and investment guidelines and strategic guidelines. The risks management practices where studied by use of a questionnaire and linked to the commercial banks financial performance which was measured by use of ROE. The main objective was to determine the effect of these risk management practices to the financial performance of the commercial banks. With a specific goal to carry out this study, the researcher obtained primary data through an organized survey. This survey was done using a structured questionnaire that was conveyed out to the 42 Commercial Banks in the nation. Equally, secondary data was obtained from the specific banks websites and published financial results. Both sets of data were analyzed using the SPSS tool and a multiple regression equation was established. From the research it was concluded that risk management practices under study significantly affected the financial performance of commercial banks with an exception of capital adequacy and risk monitoring which had a negative effect.

CHAPTER ONE:

INTRODUCTION

1.1Background of the Study

Risk management is defined by ISO, 3000 as the process of identifying, assessing, and prioritizing of risks in an organization which is followed by coordinating and application of available resources in the organization to lower and control the likelihood or to lower the impact of unfortunate events which may lead to the business not realizing its set goals and objectives. Risk management has an objective of ensuring that business set goals are not deflected hence leading to the organization not achieving the set targets (ISO, 31000). Financial Performance has been broadly defined as the way a company measures its performance in monetary terms against its strategic goals over a given time frame.

Studies have shown that risk management in financial institutions is a cornerstone to fair and acceptable banking practice. In such manner all banks in the present-day unstable and flimsy money related environment are confronting various risks to be specific: credit hazard, liquidity risks, remote trade risks, showcase risks and financing cost risks and so on. These mentioned risks among others may in one way or the other lead to closure of commercial banks as a result of inability to meet its financial obligations. We can therefore conclude that, banking is a business of risk hence efficient risk management is a crucial to the survival of commercial banks (Carey, 2001).

In light to this, risk management is very common and even more important in monetary environments than in any other sectors of the economy. The undoubted motivation behind money related organizations is to expand income in terms of profits and offer the value addition to shareholders investments by offering different financial services, and particularly by overseeing risks adequately. A dramatic loss coupled with mismanagement of commercial banks has taken place in the banking industry in Kenya in the last decade. Several Commercial banks that had been doing admirably well all of a sudden stunned by huge misfortunes which led to closure of the operation because of imbalanced credit exposures and failure to mitigate risks in general. In this way, the study has exposed the gap between risk identification, measurement and management practices in the commercial banks and its influence in financial performance (Ismi, 2004).

1.1.1 Risk Management

Risk can be fined as the future impact of hazardous actions that has not been eliminated in an organization. It can also be seen as future uncertainties more often as a result of uncontrolled hazards. If the risks involve skill sets by management, the same situation may result to a different kind of risk (Federal Aviation Administration, 2009). Further to this, risk has been defined as the mix of the probability of an occasion and its results (ISO/IEC direct, 73).The loss can be considered in several ways such as direct financial loss to the business, or can be a misfortune regarding to the business and loss of assets to the business or life. Risk management consists of a series of well elaborated steps whose main objectives are to identify the risks, address, and eliminate risk items before they become either lethal to successful business organization or a major source of expensive rework of an organization processes.

Studies have demonstrated that numerous business projects come up short since the important issues to be dealt with by the company were not considered with high importance or the wrongly identified issues were attended to, (Bruegel and Dutoita, 2000). Risks administration has key influence of organizations vital administration forms. It can be defined as the procedure whereby organizations addresses the dangers appending the business methodically as the business strive to achieve its set goals and objectives. The key principle of risk administration is the identification of the hazards and treatment of those particular dangers. Its objectives and target is to increase the value of all the organization exercises (Boehm, 1989).

To measure the adequacy of the risk management system for identified activities in a banking sector in Kenya in the study, the following measures will be observed: presence of board which active to their roles with coupled with and oversight senior management, presence of an adequate policies and procedures for managing business activities, Adequate risk management and monitoring systems and Comprehensive internal controls such as effective internal audit function, (Central Bank of Kenya, 2005). The study intends to reduce the error term by introducing other independent variables such as investment guidelines and strategies, liquidity adequacy and management efficiency. These independent variables shall be measured by use of a questionnaire.

1.1.2 Financial Performance

Financial performance has been defined as how much monetary goals of an association are being or has been achieved within a specific time period. It can likewise be defined as the way toward measuring the accomplishments of an organization arrangement, methods and widely in its operations as it strives to achieve its financial obligations. It can be utilized to decide association's general money related execution over a timeframe and can likewise be utilized to decide how best organizations in similar industry are performing or to think about businesses or segments in conglomeration. Financial performance is connected to all the activities of an organization with reference to its past, future and other anticipated costs, productivity of the firm, administration duty and responsibility. Subsequently, financial performance can also be used by entities to show how an entity has presented its results as well as how the results of the entity have been achieved. Performance can be utilized to demonstrate an entity's strength, prosperity as well as its dominance in the area of operation. (Trivedi, 2010)

Many different ways have been established to measure financial performance, but all measures as per the discussion should be considered in aggregation. Firm activities such as revenues from Firms operations, other incomes from the business activities or cash flow from operations can be used to measure financial performance depending on the area of operation. Other ways can still be used to measure financial performance which may involve looking deeper to financial statements and determine margin growth rates in different areas. There are number of ratios for evaluating financial performance of business entities. The financial performance of the commercial banks in this study shall be measured by use ratio analysis. The return on equity (ROE) and the return on assets (ROA) are the common and appropriate measures of Financial Performance (Trivedi, 2010). In this study; ROE shall be used to measure the financial performance of the Kenyan Commercial Banks.

1.1.3 Risk Management and Financial Performance

The primary target of bank administration is to expand the shareholder wealth. This primary target more often than not comes at the cost, for example, expanding risks. Business bank confronts a several risks, for example, premium risks, credit risks, reeling risks, business risks such as innovation and operational risks and organizations control, for example, outside trade risks, nation risks, liquidity hazard, and bankruptcy risks (Kaaro, 2007).

The bank's requirement for risks administration is gotten from those organizations' risks which can prompt to the commercial bank underperformance. Issues exuding from of risks administration in managing an account segment and other monetary foundations have higher effect on the establishments as well as on alternate parts of the economy, for example, financial development. (Tai 2004, Tandelilin et al, 2007) suggested that some empirical evidence demonstrated that the past stock return stuns from managing an account segment had huge impact not just on the variances of remote trade and total stock returns, additionally on their costs of the stocks, inferring that money related establishments can be a noteworthy source of infection amid the emergency.

Risk management and financial performance shall be linked by use of a mean score; scores of each risk management procedures will be correlated and linked with the ROE. Since all the commercial banks in Kenya shall participate in the survey, the link shall only be done for all the banks. Risk management practices in this study shall be explained by: Investment guidelines and strategies, risk management environment of the bank, policies and procedures of the bank, risk measurement practices, capital adequacy of the bank, risk mitigation practices by the bank, risk monitoring practices practiced by the bank and the internal control processes in place.

1.1.4 Commercial Banks in Kenya

Kenya as a country has several commercial banks whereby the Central Bank of Kenya serves as the regulator. There are forty two (42) Commercial banks and one (1) Mortgage finance company as per the central bank report, Out of the forty three, thirty nine (39) commercial banks and the one mortgage finance institution are owned privately while the government of Kenya holds majority of stakes in the other three (3) commercial banks. Twenty five (25) of the thirty nine (39) institutions and one (1) mortgage institutions whose ownership are locally controlled while the other fourteen (14) financial institutions are owned by foreign investors, (Central Bank Report, 2016).

Commercial Banks in Kenya operates under supervision of Central Bank which carries a mandate to carry out both on-site and off-site surveillance of operations of the banks. On-site surveillance includes routine checks conducted by CBK employees at the commercial banks places of business operations to check business records and operations to confirm if the bank state of compliance in operation agrees with the set legal and regulations as per the law. Other supervision includes Off-site surveillance which entails the review of the periodic returns done by commercial banks to the CBK. The two systems are based on predetermined criteria which are pegged on the institutions rating (Central Bank of Kenya, act cap 488)

Over the last decade Commercial banks have recorded an improved growth both in their financial performance in profitability and assets base. This has also been a period characterized by several banks going under as a result of miss- management by the management and lack of preparedness in risk mitigation. Commercial banks such as Chase bank, Dubai Bank and Imperial Bank have been put under receivership within the period 2014 and 2015 due to the tight measures put by regulator central bank, (Central Bank of Kenya, 2016).

1.2 Research Problem

In recent times, financial disasters in both financial and nonfinancial organizations have been witnessed. This stress the need for numerous and wide approach in forms of risk management. A financial misadventure is not a new scene in the financial industry. Commercial banks and other financial institutions are supposed to meet the regulatory requirements for risk measurement. Commercial bank managers need adequate and reliable risk measures to reduce the risk of capital staying outside the set limits. Therefore commercial banks managers need mechanisms to monitor and project on positions and adequate credit incentives for the best risk management by business divisions and individuals.

In 2015 and 2016, three commercial banks were put under receivership by central bank on its regulatory practices. In 2015, Dubai Bank was put under receivership due to capital and liquidity deficiencies, in October 2015; Imperial Bank was put under receivership by central Bank due to irregularities and malpractices in the bank, In April 2016, Chase bank was put under receivership due to irregularities and liquidity difficulties and not able to meet its financial obligations on the 6th of April 2016. Poor risks management has played a major role in the failure of commercial banks. Most of the Non-performing loans have led to banks not reaching the profitability targets as planned, (Central Bank of Kenya Report, 2016)

Empirical studies done in Kenya have focused on credit risk management, financial risk management and risk management practices in commercial banks in Kenya. As per the literature review, most studies have used ROA and ROE as a measure of financial performance. The independent variables used in the questionnaire were namely: Risk Management environment, Risk measurement, Risk mitigation, Risk Monitoring, and adequate internal controls. In this study, to reduce the error term, additional variables have been introduced. Liquidity adequacy and investment guidelines and strategies have been introduced as additional variables which will lead to reduced error term in the regression equation and make the regression results more precise.

Capital adequacy and investment guidelines and strategies were added in the variables listed above to reduce the error term and make the results more precise. The additional variables were derived from Rabobank Group). This institution operates under the CRD IV guidelines in capital framework which came to play at the start of January 2014. This guideline constitutes the Basel framework whose main agenda was to align regulatory requirements and procedures with the economic principle guidelines of risk management in financial institutions. The dependent variable (Financial Performance) shall be measured by ROE. This study has therefore filled the existing research and knowledge gap in the methodology by answering the following research question, does there exist a relationship between risk management and financial performance of commercial banks in Kenya.

1.3 Objective of the Study

The goal of the study is to set up the relationship between risk administration and financial performance of Commercial Banks in Kenya.

1.4 Value of the Study

In the theoretical contribution, the study will fill the knowledge gap on the problem of relationship between risk management and financial performance in commercial banks. In addition to the above, the study can add more comprehensive knowledge to the readers in the financial sector. Another addition and contribution is that, the study will make the basis for other researchers who would wish to dig into further studies of the area.

From a practical area, the information in this research will offer a comprehensive guideline to bank managers, investors and other commercial banks employees, depending on the conclusions and results of this research paper. Commercial bank managers could use the information and concentrate to improve banks' performance by working on the risks in banks. Commercial banks can now better and allocate their resources in line with the position of risks.

This research will add to the ever growing number of policies, measures and regulations to be implemented by policy holders. Institutions such as the Capital market Authority, central Banks and financial institutions can adopt our findings for smooth operations and boost investors' confidence. The study shall be used for reference purposes by the financial institutions for implementation of policies in line with risk management. Appropriate risk management in all organizations is associated with good performance due to tight control measures.

CHAPTER TWO:

LITERATURE REVIEW

2.1 Introduction

This chapter discusses on the theoretical review of the study whereby the main theories on risk management will be discussed. The chapter also highlights on the determinants of financial performance in commercial Banks, Empirical review and further conclusions on the chapter. Conclusion on this chapter will be on how this research intends to cover the knowledge gap and the ways in which this research paper intends to fill the knowledge gap.

2.2 Theoretical Review

The section covers the most applicable theories in risk management. The theories discussed are Modern Portfolio theory, Moral Hazard Theory and Merton's default Risk Theory. We shall also discuss which theory we are going to base our research on.

2.2.1 Modern Portfolio Theory

The hypothesis of Modern Portfolio Theory (MPT) is a speculation set forth by Harry Markowitz in his paper. The hypothesis was distributed in 1952 by the Journal of Finance. The venture hypothesis depended on the possibility that risks disinclined financial specialists in the business can build portfolios to expand expected stock returns based on the level of market risks in a speculation, understanding that risks is an inborn and huge piece of higher reward in venture. The hypothesis came to be among the most critical and noteworthy financial speculations in the realm of fund and venture.

The hypothesis is additionally alluded to as portfolio hypothesis and proposes that it is workable for financial specialists to build a proficient bleeding edge of ideal portfolios, which offers the most extreme and conceivable expected returns for a particular given level of risk. It encourages and recommends that, for speculators it is not sufficiently just to center at the normal risks and stock return of one particular stock. By putting resources into numerous stocks, a financial specialist can win in case of broadening, by diminishing the risks in the portfolio given. 'This hypothesis consequently tries to measure the advantages of enhancement.

For most investors, the risk part is that any return from an investment might be lower than the expected returns or put in other words, the variations from the expected stock returns. According to the theory, each stock has its own deviation from the stock mean. This standard deviation from the mean is called risk, (Markowitz, 1952)

The hypothesis likewise clarifies on CAPM. As per CAPM, every single sane financial specialist ought to put the market portfolio, utilized or deleveraged with positions in the risk free resource. Notwithstanding this, CAPM likewise thought of beta which relates an advantage's normal return. Portfolio hypothesis in this way gives a plain setting for comprehension the connections results of orderly risks and rewards. It has extensively formed how monetary institutional portfolios are overseen and persuaded the utilization of dishonorable and aloof speculation methods in the commercial banks. The comprehension of portfolio hypothesis and CAPM is utilized as a part of money related risks administration systems. In connection to this hypothesis, Commercial banks have a commitment to investigate all venture exercises by figuring the normal returns

2.2.2 Moral Hazard Theory

This theory has been widely used in Economics world. The theory argues that one party takes more risks because other parties elsewhere bear the costs for those risks. This may occur where the actions of someone may change to the detriment of another party participating in an active role in economic or financial transactions (Krugman, 2009).

The theory explains that, moral hazard occurs under a situation of information asymmetry where party taking the risk in a financial transaction knows more about the transactions, its intentions than the other party paying for the problems as a result of the risk incurred in the transaction .Economist (Krugman, 2009) described moral hazard as a situation where one party comes up with decisions about how and when to take the risks because another party will bear the costs in the risks

The theory can be seen perceived in a standard case where an agency setting in a bank or Insurance companies. The company has less information about the principal and the insured person can serve as the agent. In the Automobile insurance companies, the theory applies to for drivers; the theory creates an additional incentive for risky and careless driving since other parties will cater a part of the costs of the agent's careless driving and the accidents caused. In addition a similar case is in the presence of unemployment insurance cover, an unemployed people have an additional incentive reluctantly look for employment because other parties will cater for his expenses.

2.2.3. Merton’s Default Risk Model

The model was developed by a financial scholar Robert C Merton in 1970s and it’s used in evaluation of credit risks of cooperation and mortgage firms. The model used to determine the ability of debt owners to service their debts. The model can therefore help security analysts and officers who attempt to determine an organizations credit fault risk will utilize the model in the analysis. The model suggests that the analysts should better value the financial institutions, and also check on its ability to remain liquid through the through the period under analysis and debt maturity.

In (1974) Merton did a paper on the valuation of corporate debt securities in one of his contributions to finance. In the paper Merton he addressed several interrelated questions in finance and economics. In the first contribution he suggested how an investor should understand and explain the credit spreads of an organization. The second issue addressed in the theory was how an investor should design a capital structure of the firm. The dive for this was to determine the optimal structure of the firm.

Based on the theories above, our study will be based on theory number 3, Merton's default Risk Model. This theory is based on some simple assumptions about the capital structure of the l firm's finances. In the event of default, the firm's market value of the assets owned by the firm in relation to the liability of the firm falls below the set certain threshold and therefore the firm is considered to be in default. One of the reasons for the default in the banks is the Credit risk which forms part of the risks based by banks.

2.3 Determinants of Financial Performance in Commercial Banks

The financial performance of money related firms is of enormous significance to financial specialists and different partners in the economy on the loose. For financial specialists the stock profit for their number of speculations is profoundly imperative, and performing business can prompt higher returns for their ventures. Notwithstanding this, gainfulness of a firm will prompt increment in the salary of its representatives, better quality items and administrations for the clients, furthermore better environment and benevolent environment. In these study elements, for example, financial condition, corporate administration, Ownership structure, Firm qualities and strategies, and hazard administration will be examined.

2.3.1 Economic Condition

Monetary states of working nation can influence an association's budgetary execution on different areas, for example, the accompanying: Cost of obligation and different financings can adversely influence the association's capacity to produce benefits and put resources into future tasks (Ntim, 2009). Others incorporates Prices of utilities in the territory, high expenses related in the assembly of different assets, for example, plant and apparatus because of variables, for example, money crumbling., expanded expansion rate versus low salary workers can diminish the popularity for mechanical merchandise created and consequently prompt adversely influencing the organization performance (Forbes,2000)

Commercial banks in Kenya have been highly affected by inflation rates and cost of borrowing and lending rates to borrowers. Unfavorable economic conditions such high interest rates, high inflation rates and low income levels negatively affect financial performance of Banks in Kenya. Economic conditions which have been experienced in the country have been stable despite the political disruptions experienced in the post-election which occurred in the end of 2007 and early 2008.

2.3.2 Corporate Administration

Corporate administration is defined as the practices and the structures that guide how firm sets its destinations, creates set methodologies and persistent arranging, observing and reporting its budgetary execution, and deal with its given risks (Reddy, 2010). Analysts have likewise hypothesized that great corporate administration prompt upgrade of the financial performance of the firm (Chugh et al., 2009).

Numerous studies hold the view that there are two models of corporate structure, the shareholder model and partner held model. Shareholder model has been found to concentrate on the boosting the riches of shareholders while the other model spreads more extensive viewpoint and worries about the more extensive point of view of the firm (Maher and Anderson, 1999). According to his study (Brooks and Iqbal, 2007) discovered that corporate administration on firm performance is expanded by making files for board qualities in the association, straightforwardness and revelation in the firm, and shareholder and possession attributes coupled with satisfactory management. The study therefore subsequently infers that fitting corporate management is an indication of a decent money related performance of the business substance.

2.3.3 Ownership Structure

The theory postulates that Ownership of companies rests on the theory that, there is separation of ownership of the company and the control of the company which in most case is done by the management. Berle and Means, (2000) developed a classification of ownership and identified two types of ownership, whereby there is the firms controlled by the owners and the firms controlled by the management or Managerially-controlled firms.

In reference to agency hypothesis if directors dealing with the firm have possession stake in the firm, they will probably augment shareholders riches when contrasted with case with no shareholding (Dutta, 1999). The Managerial risk and requirements on wealth maximization, restrain the responsibility for in the managers ownership of the firm. (Jensen et al., 1992). The Number of tradable partakes in an organization is conversely identified with insider possession (Lin et al., 2011) as the vast majority of the shares in an organization claimed by the management are not allowed to be traded (Born, 1988)..

2.3.4 Risk Management

Risk management in a firm setting can determine the financial performance of firms. Firms engaging in risky operations attract investors who like to take risks. The relationship between the risk businesses and returns need to be efficiently worked so that the risk taking investors do get the returns associated with the risks undertaken (Forbes, 2002). Risk management is a key determinant in the performance of commercial banks in Kenya, since banking sector is a risk sector.

Risk administration can likewise be viewed as the strategies and instruments put in by the business banks to keep away from dangers. The monetary hypothesis proposes that managers should augment their normal benefit without respect to the variety around its esteem. Santomero, (1995) recorded four methods of reasoning for risk administration practices. These are administrative self-premium, the non-linearity of the organization assess structure, the cost of organization money related distress costs, and the presence of perfect capital market

2.4 Empirical Literature Review

Internationally a good number of studies in the research area have been done; Mohd and Salina (2010) investigated on the relationship between risk administration practices and financial execution of the Malaysian Islamic banks. The period under study covered 2006 to 2008. In order to measure the risk administration practices, the researcher used five component issues in regard to bank supervision practices as per the Basel committee. The five components used in the study are namely, the firm Risk Management Environment, Policies and Procedures of the firm, Risk Measurement procedures, Risk Mitigation, firm Risk Monitoring and firms Internal Control. The components mentioned were then linked with the mean of ROA and ROE. Study revealed that the Islamic banks with higher ROA and ROE tend to have better risk management practices. The study focused only on the 5 independent variables as the risk management measures determining financial performance. This study therefore intends to focus on additional measures hence reducing the error term.

Another study by Yijun, (2014) studied on the effect of credit risk administration practices on the profitability performance of commercial European banks in Europe. The study used regression analysis to determine and predict the relation between the variables under study. Monetary performance of the European banks was measured by ROA and ROE ratios. The independent variable used in the study was none performing Loans Ratio (NPLR) and Capital Adequacy Ratio (CAR). The study inferred that there is a connection amongst CAR and ROA and amongst NPLR and ROA of banks. The study focused on the relationship between risk management and financial performance of banks in Europe. This study has therefore researched on the relationship between risk management practices as whole and financial and monetary performance in Kenya

Study by Oluwafemi and Obawale, (2010) on the Risk Management and Financial Performance of commercial Banks in Nigeria. Data for the study was derived from annual observations of ten Nigeria banks between the period 2006-2009. Profitability of the institutions was in by ratios of ROA and ROE. The independent variables in the study were liquidity, credit and capital risks. The study inferred that there is a critical relationship between bank performance and risks administration. The study also concluded that better risk management in such as management of funds, reducing unnecessary costs such as doubtful advances and obligation value proportion examination brings about higher financial performance. In this way, the analyst held the view that it is of high significance that commercial banks have sufficient risk administration practices.

Locally Kithinji (2010) did a study on Credit Risk Management and Profitability of Commercial Banks in Kenya. This study aimed at assessing the degree to which the credit risk management in practice had contributed to profitability of Kenyan commercial banks. Data on the credit, levels of loans and profits were collected and tested for the period 2004 - 2008. The results of regression and the study showed that, there was no relationship between the variables under study such as profits, measure of credit and the level of advances. The study therefore concluded that Commercial banks that need high profits need to focus on different variables other than concentrating on measure of credit and advances. The relapse model used to show the outcome showed that there was no significance relationship between the variables under study The study depicts a knowledge gap since the study focused only on the credit risk administration in commercial and financial performance.

Wanjohi (2013) did a study on relationship between financial risk management and financial performance of Kenyan commercial banks. The study used the regression analysis equation to determine the relation between the variables .The five components of risk management used as independent variable were the Risk Management Environment of the institution, Risk Measurement skills, Risk Mitigation procedures, Risk Monitoring and Adequate Internal controls of the organization All these five segments of risk administration were then connected with the mean of ROA for the five years (2008-2012). The study established that financial risk management strongly affected the financial performance of Kenyan Commercial banks. The study by wanjohi identifies a knowledge gap since the study only focused on the relationship between financial risk management and financial performance of commercial banks in Kenya. The study used only five independent variables as compared to this study which has employed more independent variables hence reducing the error term.

Kamau (2010) did a study on adoption of risk management by commercial banks in Kenya. His study was based on the 44 active commercial Banks as per CBK 2010. This study sought to identify the risks encountered by commercial banks and the risk management practices adopted by commercial banks to militate against these risks. A census survey was conducted for all the licensed banks in Kenya. Questionnaires were administered to risk management staff. Data was analyzed using SPSS and presented in graphs and in tabular form. The study revealed that credit, operation, reputation and compliance risks as critical and commonly encountered. Liquidity risk was least encountered risk. Majority of the banks were found to use both qualitative and quantitative risk measurement methods.

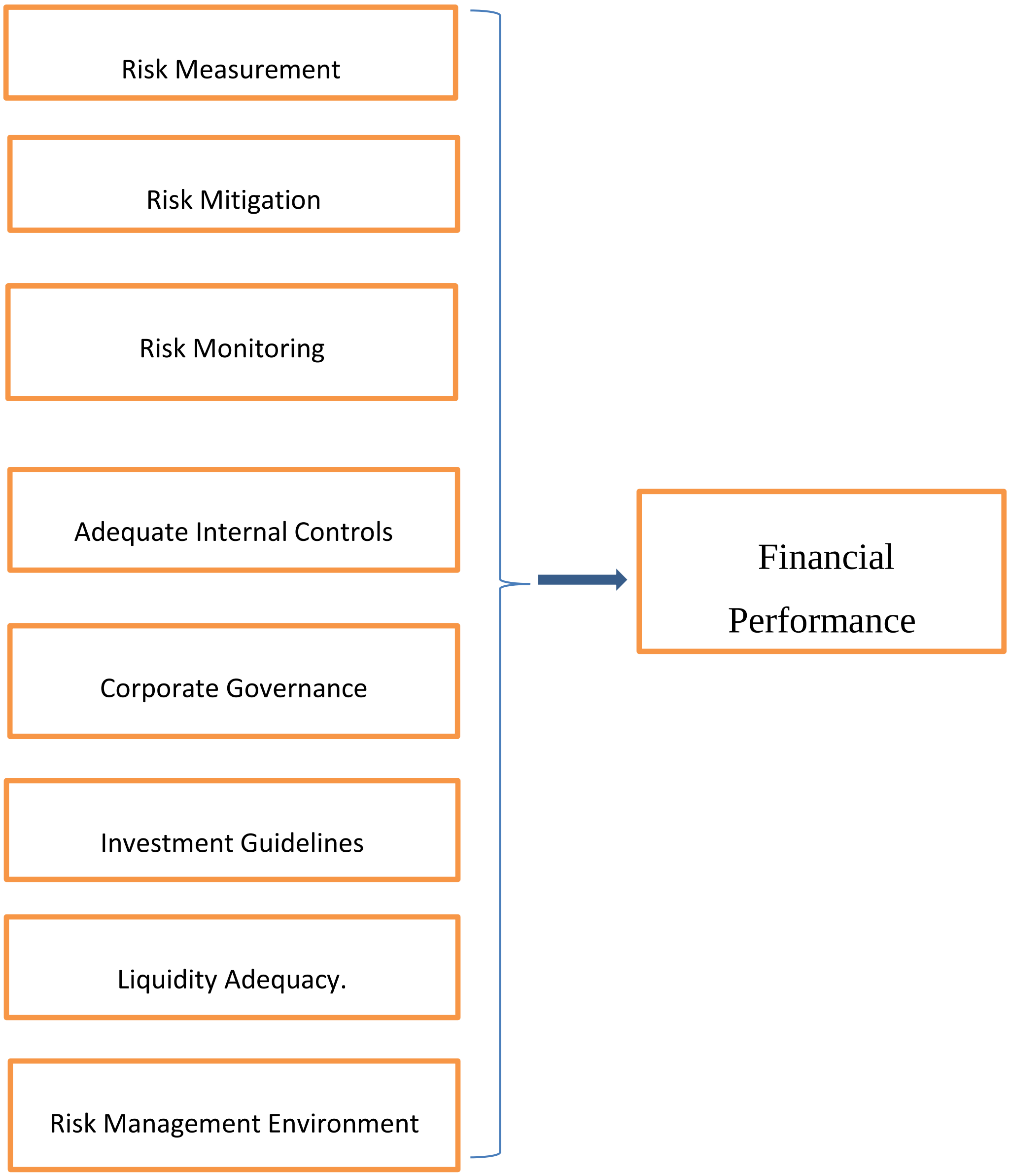
Muteti (2014) did a study on the relationship between financial risk administration and financial performance of Kenyan business banks. The population for this study was Commercial banks in Kenya which stood at 43 as at December 2013 which formed the target population for the study. Data analysis was done using SPSS whereby inferential statistics was applied whereby a multiple regression model was employed. The financial performance was measured by the ratio ROA while the independent variable where: credit risk of the bank, interest rate of the banks, foreign exchange risk, liquidity risk of the bank, capital management , Bank deposits and bank size. The study found that credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size were significantly influencing financial performance of Kenyan business banks. The study focused on ROA as a measure of financial performance. The study also focused on financial risks as independent variable. This study has focused on measures of managing risks as a whole and the relationship to financial performance of banks.

2.5 Conceptual Frame Work

Conceptual framework can be defined as a tool used in the analysis of variables in a study. Conceptual frame work is to show conceptual distinctions, processes or thoughts and organize the ideas in the study. Strong conceptual frameworks should capture the concepts in the study in a way that is real and easy to remember and apply. The main objective of the Conceptual Framework in the study is to show and improve the understanding of the concept risk management by providing a more complete, clear and updated set of concepts such as the dependent and independent variables and the linkages (Tobin, J., Brainard, W. (1968), To achieve this understanding, risk management and financial performance has been conceptualized in the table 2.5.1

Independent variable **Dependent**

Variable



2.6 Summary of Literature Review

From the above and entire chapter, it is evident that financial risk management in the banking sector especially in the financial performance cannot be understated. Risk management is considered as a key concern for all companies. The crisis which has been experienced in the past would have been stayed away from if great risk administration practices had been set up. All the previous studies established that banks should have proper risk management function and better risk management techniques so as to lead to improved financial performance.

Research gaps exist since all the studies reviewed focusing on risk management and financial performance have focused on only five independent variables. Increasing the independent variable therefore resulted to reduction in error term and the results are more accurate and precise. The financial performance was measured by use of ROE ratio. ROE is a proportion utilized as a part of financial performance which demonstrates how much benefit an organization has earned with the aggregate sum of shareholders value put resources into the organization or found on the books. ROE is very crucial to the shareholders for their investment speculations precomputations.

CHAPTER THREE:

RESEARCH METHODOLOGY

3.1. Introduction

The chapter discusses on the presentation and discussion of the appropriate research method to be used to achieve the recommended expectations and meet the purpose of the study. The first subsection covers research design. Subsection two covers the unit of analysis followed by the data collection methods. Lastly we look at how data was analyzed.

3.2 Research Design

The research outline gives the wanted system to the information gathering and its examination Bryman and Bell, (2007), or it can be defined as the arrangement and structure of examination conveyed in order to acquire answers to research questions Cooper and Emory, (1995). This consequently implies it gives the methods fancied for getting the data expected to take care of the exploration issues. The researcher utilized a subjective way to interview bank mangers in the risks division since they are experienced experts who were seen a s a profound comprehension of the theme under study

3.3. Population

The target population is defined as the group of individuals from which the study seeks to generalize it's and concludes on its findings. The target population comprised of the forty two (42) commercial banks as per the appendix 1.

3.4 Data Collection

In order to get appropriate results, the study used both primary and secondary data. The purpose of using primary source data was to get perception of factual information on issues of risk management by the banks. The primary data for this study was collected using personally administered questionnaires as per appendix 2. The questionnaire was adapted from Khan and Ahmed (2001) and Ariffin et al. (2009).The questionnaire consisted of seven sections. The first was an introduction part to the respondents. The second section was designed to gather information about the risk management environment. The other sections gathered information about risk measurement followed by risk monitoring, risk mitigation and internal control techniques, liquidity adequacy and Investment guidelines and strategies adopted by the commercial banks. The poll was intended to comprise of 5 Likert scale point, 5 for affirmation of strongly agree, 4 for affirmation of agree, 3 for neutral, 2 for disagree and 1 for emphatically disagree with the idea. The auxiliary data was obtained from the CBK Bank Supervision Annual Reports. The five years (2011-2015) annual ROE ratio was averaged to form the dependent variable (financial performance).

3.5 Data Analysis

Descriptive statistics was used to describe the data and examine the relationships between the variables under investigation. Descriptive statistics used included Frequency distributions, measures of central tendency, pie charts and line graphs that described the data. Inferential statistics was used to examine the casual relationships between the financial risk management and the banks financial performance.

3.5.1 Analytical Model

The study utilized the regression analysis with the equation of the form $Y=\alpha+b1\ X1+b2X2+b3X3+b4X4+b5X5+b6X6+b7X7+\varepsilon$. The model provided a statistical technique for estimating the relationship between the risk administration in Kenyan commercial banks and its effect in the financial performance.

$$Y=\alpha+b1\ X1+b2X2+b3X3+b4X4+b5X5+b6X6+b7X7+\varepsilon$$

Where:

α =constant/the interception point of the regression line and the y-axis

b1, b2…..b7 = the coefficients of the independent variables that will be determined.

Y=Financial performance measured by the simple average ROE

X1= Risk Management Environment

X2=Risk Measurement.

X3=Risk Mitigation.

X4=Risk Monitoring.

X5= Adequate Internal Control.

X6= Capital adequacy

X7=Investment guidelines and Strategies

ε = error term

The independent variables X1, X2…… X7 shall be measured as per the table 3.5.1

The questionnaire is as per (Appendix 2)

Table 3.5.1. Measuring the variables

Variable	**Measurement**
ROE	Return on equity (ROE) can be computed as net income returned as a percentage of shareholders equity. A simple average ROE for the five years (2011-2015) was used.
Risk Management Environment	The quantitative points will be assigned (using Likert scale) for the different questions in the section and summing up the quantified score. The results obtained would give an overall picture of the status of risk management in the commercial banks
Risk Measurement	The quantitative assessments of Risk Measurement points will be assigned (using Likert scale for the different questions in the section and summing up the quantified score of 100%. The results of the quantified scores gives an indication of overall index will give a picture of the overall status of risk management in the commercial banks
Risk Mitigation	The quantitative assessment of Risk Mitigation the quantification points will be assigned (using Likert scale) for the different questions in the section and summing up the quantified score of 100%.The results index gives overall picture index which gives an indication of the overall status of risk management in the commercial banks

Risk Monitoring	The quantitative points will be assigned (using Likert scale) for the different questions in the section and summing up the quantified score. The results obtained would give an overall picture of the status of risk management in the commercial banks
Adequate Internal Control	The quantitative points will be assigned (using Likert scale) for the different questions in the section and summing up the quantified score. The results obtained would give an overall picture of the status of risk management in the commercial banks
Capital adequacy	The quantitative assessment of Capital adequacy: the quantification points will be assigned (using Likert scale) for the different questions in the section and summing up the quantified score of 100%.The results an overall picture of the status of risk management in the commercial banks
Investment guidelines and Strategies	The quantitative points will be assigned (using Likert scale) for the different questions in the section and summing up the quantified score. The results obtained would give an overall picture of the status of risk management in the commercial banks

3.5.2 Test of Significance

An F-test was utilized as a part of the study to evaluate how well the arrangement of variables, as a group, clarifies the variety in the variable/viability of the model in general in clarifying the independent variable. T-test was utilized to survey the criticalness of the individual regression parameters/evaluating whether the individual coefficients are factually noteworthy. The noteworthiness of the relapse model will be set at 95% certainty interim and 5% level of significance.

CHAPTER FOUR:

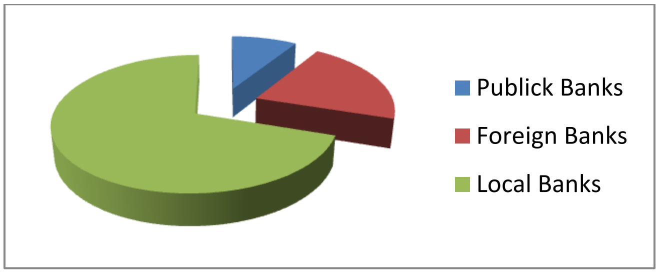
DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

The chapter highlights on the data collected during the research study on risk management and financial performance in the Kenyan commercial banks. This study has therefore made use of Likert scale in collecting and analyzing risk management practices, whereby a scale of 1- 5 points was used in calculating the means and data standard deviations. The findings of the study were presented in tables and charts and suitable explanations were given. The results of financial performance for the commercial banks were presented in a table and an explanation given in prose form. To measure the relationship between risk management practices on the financial performance, regression analysis was carried out as well as correlation analysis. The data has also been displayed using other methods such as graphs and pie charts. This chapter has been concluded by looking at a detailed interpretation of the findings of this research paper.

4.2 Response Rate

The study targeted 42 commercial Banks in Kenya. Out of the target population, only 30 banks filled the questionnaires and returned representing a response rate of 71% which is within the recommended rates as per Mugenda's (2003) accepted significant response rate for statistical data analysis which was established at a minimal of 50% as per the study. The commendable response was realized after the researcher made effort to remind the respondents to fill in the questionnaire and return. Out of the 30 banks which responded, 9% represented public banks, 21% foreign bank and 70% were local banks. The response rate is represented in the graph below.



Source, Research Findings

4.3 Descriptive statistics

In the study, the risk management practices were analyzed as per risk procedures described in the questionnaire. The mean and standard deviations of the variables under study were also analyzed with an objective of examining the effects of risk administration practices on the performance of Kenyan commercial banks. The figures are given in the table 4.1 below

Table 4.1 Descriptive statistics

Risk management Practice	Response rate (%)	Mean	% Mean	STD deviation
Risk Management Environment	71	4.83	96	.379
Risk Measurement	71	4.83	96	.379
Risk Mitigation	71	4.66	92	.479
Risk Monitoring	71	4.50	90	.508
Adequate Internal Controls	71	4.33	87	.758
Capital Adequacy	71	2.83	57	1.23
Investment guidelines and strategies	71	4.50	90	.508

The table above shows the risk management practices with the mean score and the standard deviations from the means of each of the data points collected from the 30 commercial banks. In the table of risk management practices, risk measurement, risk management environment and risk mitigation scored highly across all the banks under study. The standard deviations recorded by risk management, risk measurement and risk mitigation were minimal showing and indication that there was minimal variation in those risk management practices. The Capital adequacy recorded a higher standard deviation indicating a higher variability between the 30 commercial banks under study.

4.4 Correlation Analysis of the Variables

Table 4.2 correlation matrix

	ROE	RME	RM	RMGT	RMRN	AIC	CA	IG
ROE	1							
RME	0.79	1.00						
RM	0.46	0.57	1.00					
RMGT	0.58	0.52	0.02	1.00				
RMRN	0.13	0.03	0.08	0.06	1.00			
AIC	0.75	0.86	0.38	0.45	(0.03)	1.00		
CA	0.23	0.11	0.25	0.39	0.48	0.01	1.00	
IG	0.50	0.21	(0.02)	0.39	0.45	0.24	0.36	1.00

Correlation coefficient varies from -1 to +1. A +1 coefficient is an indication of a perfect correlation while a –1 shows a perfect negative correlation. In this research paper, the correlation coefficient for the variables were positive and significant showing a clear indication that there is a strong correlation between risk management practices and financial performance of commercial banks in Kenya with an exception of internal controls and investment guidelines which had a negative correlation.

Table 4.3 showing the R squared of the Model.

Model	R	R Square	Adjusted R square	Std error of estimate
1	.886	.785	.717	1.447

Source research, Research Finding

The table above shows, R adjusted is 72% indicating how the statistical measures in the above study are closer to the fitted regression line. In this study we relied on adjusted R squared because of the numerous number of study variables in the prediction of the dependent variable.

The standard error shown in the study is 1.447 which indicates a high accuracy of the prediction made in this study. This is a clear indication that 72% percent of changes in Kenyan commercial banks could be attributed to risk management practices under study. R in this study is shown by the correlation coefficient which determines the relationship between the study variables. From the above findings, we can therefore conclude that there is a positive correlation between the study variables.

4.5 Regression Analysis

The detailed analysis of Variance of the risk management practices as per the study and 1financial performance is shown below

Model	**SS**	**Df**	**MS**	**F**	**Sig**
Regression	169.064	7	24.14	11.231	0.00
Error	46.09	22	2.09		
Total	215.09	29			

Source, Research Findings

Table 4.3 above shows the ANOVA presentation. The population parameters were found to have a significance p value of 0% which is lower than the 0.001. This is a clear indication that the data used in the study was adequate and reliable for making conclusion of the variables under study since the value of significance (p-value) is lower than 5%. The F statistic critical at 5% level of confidence was 11.231, the study concludes that since F calculated in the study is greater than the F critical (value = 2.021), then the overall model is significant and that Risk measurement, Risk mitigation, Internal Controls, Risk management environment, Investment guidelines and strategies, Capital Adequacy and Risk monitoring are influencing financial performance of Kenyan commercial banks.

4.6 Coefficients of Regression Equation

Risk mitigation practices		Unstandardized Co- efficient		T	sig
		Beta	Std Error		
Constant	K	0.63	5.1	0.123	0.903
Risk Management Environment	X1	0.94	0.83	1.13	0.271
Risk Measurement	X2	0.88	0.63	1.39	0.177
Risk Mitigation	X3	1.4	1.15	1.23	0.226
Risk Monitoring	X4	-0.199	0.739	-0.27	0.789
Adequate Internal Controls	X5	0.729	0.619	1.16	0.25
Capital Adequacy	X6	-0.186	0.619	-0.30	0.76
Investment guidelines	X7	1.17	0.42	2.73	0.281

Source, Research Findings

The established multiple linear regression equation is

$$Y=0.63+0.94X1 +0.88X2 + 1.4X3 - 0.199X4 +0.073X5 - 0.186X6 +1.17X7 +error.$$

In the above regression equation, it was established that holding the risk management practices in the regression namely: Risk management environment, Risk Measurement, Risk Mitigation, Risk Monitoring, Adequate Internal Controls, capital adequacy and

Investment guidelines at a constant zero , financial performance of commercial banks in Kenya measured by simple average (ROE) would be at 0.63.

Further analysis from study and the regression indicates that, a unit increase in the organizations risk management environment would result to increase to the organizational financial performance of commercial banks by a factor of 0.94, while a unit increases in firms Risk measurement would result to increase in the firm’s financial performance by a factor of 0.88. In addition, an increase in a unit of Risk mitigation would result to increase in firms financial performance by a factor of 1.4, an increase in a unit of Risk monitoring would lead to decline in firms financial performance a by 0.199, while an increase in a unit of adequate internal control would result to increase in firms financial performance by 0.73. The study also revealed that a unit increase in capital adequacy would result to decline in firm’s financial performance by 0.186 and a further unit increase in Investment guidelines and strategies would lead to increase in financial performance of commercial banks in Kenya by 1.17.

4.7 Detailed Analysis of Research Findings

In this study, findings reveal that there is a variation of 94.9% on the financial performance of Kenyan commercial banks due to risk administration practices in the study namely, Risk management Environment, Risk measurement, Risk Mitigation, Risk Monitoring, Adequate internal Controls, Capital adequacy and investment guidelines and strategies, this clearly shows that 78.5 percent changes in profitability of Kenyan banks could be attributed to changes in the above risk management practices. From the findings of correlation coefficient, the study revealed that there is higher relationship between financial performance of Kenyan banks and risk administration methods by the R coefficient of +0.886

From the finding on the ANOVA statics, the study found that there was a low significance level of 0% which indicates that the data used in this study is ideal for concluding on the population's parameter since the value of significance was less than 5%. The study found that credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size were significantly influencing financial performance of Kenyan banks

From the study and above regression equation the researcher found out that holding risk management practices to a level of zero, financial performance of commercial banks in Kenya could remain at 0.63 This research paper therefore concludes that, improving the risk management practices by commercial banks could lead to positive results in the financial performance of the Kenyan banks

In the study the beta coefficients were positive and statistically significant with exception of risk monitoring and capital adequacy which had negative impact. In the regression equation we can measure how strongly each of the variables in study affects the dependent variable (Financial performance of the commercial banks in Kenya.) This analysis can be derived by comparing the magnitude of the beta coefficients of the variables under study. From the regression analysis, Risk measurement has the highest influence on financial performance, followed by risk Management, adequate internal controls, Risk mitigation and lastly Investment guidelines and strategies.

CHAPTER FIVE:

SUMMARY, RECOMMENDATIONS AND CONNLUSIONS

5.1 Introduction

The chapter gives a discussion on the, conclusions of the study and recommendations of the research paper based on the study findings. The main objective as per the study was to determine the relationship between risk management practices and the financial performance of Kenyan commercial banks. This chapter also discusses on the limitations of the study and further areas of research in this specific area of finance.

5.2 Summary

The study relied on both primary and secondary data to determine the relationship of risk management practices in Kenyan commercial banks. The study used statistics such as correlation analysis and regression analysis. The study showed that all the banks in the study adopted and practiced good risk management practices with some showing need for improvements which scored as low as 1 point in the Likert rating. Capital adequacy is poorly implanted as per the research results. The mean score of the capital adequacy for the 30 banks which participated in the study was 3.65. In regard to risk measurement banks have adopted appropriate risk measurement procedures which include the use of computerized systems for estimating variability and risk management. In recommendation the banks should consider complying with the more stringent guidelines of Basel III in additional to the local CBK guidelines on risk management practices. On budget allocation to risk management sections, most banks had no stand-alone budget thus the risk management may not have been fully equipped in terms of resources.

In addition the findings reveal that Kenyan commercial banks are perceived not to use high technically advanced risk measurement procedures and techniques. In the questionnaire, we established that the commercial banks use a number of techniques which are not advanced. On risk mitigation practices it was established that majority of the commercial Kenyan banks had limited use of derivative instruments to mitigate risks in general. For efficiency and improvement in the financial performance of the Banks the areas may need improvement.

Capital adequacy and Investment guide lines were added in the study to reduce the error term. It is worth noting that financial soundness of the commercial banks serves as an ultimate protection of deposit holders and other stake holders. This is dependent on maintaining a strong capital adequacy position. Capital adequacy guidelines are in line with Basel (iii) on enabling the banking industry capabilities to absorb shocks emanating from financial and economic issues. The study revealed that measures such as reports generated by the commercial banks to show cash flow levels at different levels are not generated as per the guidelines. The capital adequacy measurement techniques recommended such as CAR are not used by most of the commercial banks.

Overall the best risk management practices management as per the study is on risk management environment and risk measurement which obtained the highest mean of 96 per cent followed by risk mitigation with a mean of 90 per cent. Investment guidelines, risk monitoring, internal controls and Capital adequacy followed in that order.

5.3 Conclusions

This study has therefore concluded that adequate risk management practices in Kenyan banks will lead to positive performance financially. This has been concluded from the correlation analysis of the variables in the study. The beta coefficients realized in the regression equation were all positive which is a clear indication that an increase in any of the risk management practices would lead to positive results in ROE ratio for the commercial banks.

The study also concluded that risk measurement, Risk management environment and adequate internal controls have the highest impact on financial performance of banks in Kenya. Thus, as each shilling invested in risk measurement techniques and risk management environment techniques and internal control increases revenues generation and the financial performance of commercial banks increases. Therefore commercial banks need to put more efforts in risk management practices in order to improve financial performance of the banks.

The study established that the study variables i.e. risk management practices and financial performance of the banks had significant positive correlation coefficient. We can therefore conclude that the study variables i.e. risk management and financial performances of commercial banks were highly correlated.

5.4 Recommendation

From the findings in the study which were based on factual information from the bank Manager, we recommend the following; Kenyan banks should expound their risk measurements techniques and adopt more technical and reliable measures so as to adequately manage the financial risks resulting from the increased financial innovations in the banking sector The financial innovations have been made a reality by use of advanced information techniques.

Commercial banks should also check their risk management policy, Procedures and practices and streamline them with global standards such as the Basel III accords. This standards are adopted by all financial institutions hence it will be very practical to compare risk mitigation procedures and practices of different financial institutions globally. On budget allocation the banks should ensure risk management sections have a stand-alone budget to ensure resources are availed for the ever changing risk environment. By this they would efficiently manage the financial risk and consequently increase their financial performance.

On the risk management practices, the mentioned above risks are not only the risk management practices influencing financial performance of commercial banks in Kenya. Capital adequacy and investment guidelines were added to the study due to wake of commercial banks going bankrupt due to the inability to meet the financial requirements. In light to this, other risk management practices should be put in to consideration by commercial banks. Capital adequacy and investment guidelines and strategies had a very low mean scores and low beta factor meaning that they were perceived as having less impact in financial performance of commercial banks in Kenya.

5.5. Limitations of the Study

In the study, an inhibiting factor for the purpose of the research was defined as a factor that led to the researcher not getting adequate information or presumed responses whereby the response given would otherwise different from what was received from the study or what the researcher expected.

The key limitations in this research paper was that, out of the 42 commercial banks listed as the population, only 30 commercial banks gave their feedback as per the questionnaire send out. Some respondents decided to withhold factual information about the cash adequacy risk management practice. Other respondents considered the information seeking in the questionnaire sensitive hence failed to respond appropriately. This reduced the probability of reaching a more conclusive study.

Another challenge the researcher encountered is the fact that the questionnaire were send out at a time when commercial banks are busy as they try to beat out the quarterly reports and monthly compliance reports prepared for the Central Banks of Kenya.. This may have prevented the researcher to seek clarification from the respondents on areas of ambiguity. The researcher may have clarified on areas of questionnaire which might have required clarification.

Lastly, due to some unforeseen constraints such as finances and time, the researcher did not carry out any interviews on the actual impact that risk management has had on the financial performance of the Kenyan banks. This could have limited the data available to the researcher since all the findings were based on questionnaires and the researcher's personal knowledge of the region under study. The time limitation also led to the limitation in number of commercial Banks who participated in the study by filling the questionnaire in time and returning them.

5.6. Areas for Further Research

This research paper recommends some study to be done on the on the relationship between risk management as independent variable and financial performance by use of questionnaire on other monetary institutions like the small finance institutions (MFIs) and SACCOs

In addition to the above recommended research, other research can be recommended on the examination of how Kenyan financial institutions have adopted and embraced the Basel III recommendations and whether the detailed recommendations have affected their financial risk management and the financial performance. Lastly, a study may be directed towards relationship between monetary crisis and financial performance of Kenyan banks.

REFERENCES

Ariffin, N.N. (2003).*Risk Management Practices and Financial Performance of Islamic Banks.* Malaysian Evidence. Unpublished MBA project, University of Malaysia

Boehm, B. & R. Turner (2003).Using Risk to Balance Agile and Plan-Driven Methods. *IEEE Computer*, 36(6), 57-66.

Bruegge, B. & A. H. Dutoit (2000). *Object-Oriented Software Engineering: Conquering Complex and Changing Systems*. Upper Saddle River, NJ, Prentice Hall

Carey, A. A. (2001).Effective Risk Management in Financial Institutions: The turnbull approach. *Journal of Applied Business Research*, 9(3), 24 – 27

Cameron, A.K. & Trivedi, K. (2005). *Services Offered by Commercial Banks.* Macmillan Publishers Limited

Central Bank of Kenya, (2013).*Risk Management Guidelines*. Retrieved on 15 July 2016 at www.centralbankofkenya.go.ke

Central Bank of Kenya, (2015).*Risk Supervisory Report*. Retrieved on 15 July 2016 at www.centralbankofkenya.go.ke

Forbes, K.J. (2002). How Do Large Depreciations Affect Firm Performance? *IMF Staff Papers, Palgrave Macmillan*, 49(1), 214-238.

Gregory, S. H. & Richard, M. C. (1998). What not Survey of Financial Risk Management by Non-Financial Firms. *Financial Management*, 27(5), 70-91.

Gurbuz, A.O, Aybars A, & Kutlu, O. (2010). Corporate governance and financial performance with a perspective on institutional ownership: empirical evidence from Turkey. *Application of Management Accounts*, 8, 21- 38

Ismi, A. (2004). *Impoverishing a Continent*: The World Bank and the IMF in Africa.

Iqbal, J. & Brooks, R. D. (2007). A test of CAPM on Karachi Stock Exchange. *International Journal of Business*, 12, 429-444.

Kariuki, J.K. (2015). *Research on Financial Markets and Policy*. Kenya Bankers Association. WPS 01/15

Kamau, P.N. (2010). *Research on adoption of risk management by commercial banks in Kenya.* Unpublished MBA project, School of Business, University of Nairobi

Kithinji, K.M. (2010). *Research on Credit Risk Management and Profitability of Commercial Banks in Kenya*. Unpublished MBA project, School of Business, University of Nairobi

Lerner, J. (2002). Where Does State Street Lead? A First Look at Finance Patents, 1971-2000. *Journal of Finance*, 57(2), 929-930.

Love, B. & Rachinsky, A. (2007).*Corporate Governance Indices and Firms' Market Values: Time Series Evidence from Russia,* Emerging Mark Review, forthcoming.

Markowitz, H. 1. (1959). *Portfolio selection: Efficient diversification of investments*. New Haven: Yale University Press.

Merton, R. C., (1992*).* Financial Innovation and Economic Performance. *Journal of Applied Corporate Finance*, (4), 12-22.

Miller, M.H. (1991). *Financial Innovation and Market Volatility*. Oxford: Basil Blackwell.

Mutuota, C. (2000).*The Performance of the commercial banks in Kenya:* Unpublished MBA project, School of Business, University of Nairobi

Muteti, S.R. (2014) .*Research on relationship between financial risk management and financial Risk management in Kenya*. Unpublished MBA project, School of Business, University of Nairobi

Mwangi, C. (2007). *Factors influencing financial innovation of companies listed on Nairobi Securities Exchange*. Unpublished MBA project, School of Business, University of Nairobi.

Oluwafemi, A. S. & Simeon, O.S. (2010).Risk Management and Financial Performance of Banks in Nigeria. *International Journal of Economics and Financial Issues* 14(6), 52-56

Omondi, O.G. (2015).*Basel Accords on Risk Management: A Survey of Kenya's Commercial Banks*. Global Economics 3.

Ongore, V.O. (2013).Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues,* 3(1), 237-252

Richard, A.N & Giorgio, P. S. (1995).The role of capital in financial institutions. *Journal of Banking and Finance.* 19(3), 390-393.

Rogalski, R.J. & Seward, J.K. (1991). Corporate issues of foreign currency exchange warrants. *Journal of Financial Economics*. 30, 330-337

Santomero, A. M. (1997). *Commercial Banking Risk Management: an Analysis of the Process.* The Wharton Financial Institutions Center. USA.

Tobin, J. & Brainard, W. (1968), Pitfalls in financial model building. *American Economic Review,* 58(2), 99-122.

Wanjohi, C.M. (2013). *Research on relationship between financial risk management and financial performance of banks in Kenya*. Unpublished MBA project School of Business, University of Nairobi

APENDICES

APPENDIX 1: Directory of Licensed Commercial Banks in Kenya

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank of Kenya
6. CfC Stanbic Holdings
7. Chase Bank Kenya (In Receivership)
8. Citibank
9. Commercial Bank of Africa
10. Consolidated Bank of Kenya
11. Cooperative Bank of Kenya
12. Credit Bank
13. Development Bank of Kenya
14. Diamond Trust Bank
15. Eco bank Kenya
16. Equity Bank
17. Family Bank
18. Fidelity Commercial Bank Limited
19. First Community Bank
20. Giro Commercial Bank
21. Guaranty Trust Bank Kenya
22. Guardian Bank
23. Gulf African Bank
24. Habib Bank
25. Habib Bank AG Zurich
26. Housing Finance Company of Kenya

27. I&M Bank
28. Imperial Bank Kenya (In receivership)
29. Jamii Bora Bank
30. Kenya Commercial Bank
31. Middle East Bank Kenya
32. National Bank of Kenya
33. NIC Bank
34. Oriental Commercial Bank
35. Paramount Universal Bank
36. Prime Bank (Kenya)
37. Sidian Bank
38. Spire Bank
39. Standard Chartered Kenya
40. Trans National Bank Kenya
41. United Bank for Africa
42. Victoria Commercial Bank

APPENDIX 2: QUESTIONNAIRE

This questionnaire is intended to provide information for the study on the effect of risk management on the financial performance of commercial banks in Kenya. Please note that the information provided will be used for academic purpose only and will be treated with utmost confidentiality.

Kindly answer the following questions by ticking (x) in the appropriate box or by giving the necessary details in the spaces provided

TABLE 1. Risk Management Environment, Policies and Procedures

ITEM	1	2	3	4	5
1. A formal risk management system is in place					
2.Board of directors outlines the overall objectives					
3. Overall objectives are communicated to the management and staff					
4. Board of directors approves the overall policies of the institution					
5. Board of directors ensures that management takes necessary actions in risk management.					
6. Internal guidelines are in place to govern the institution					
7. The bank adopts and utilizes guidelines internally generated and by regulatory authorities such as CBK.					
8. The Bank has adopted and utilized Revised CBK Financial Risk management Guidelines					
9. There is a budgetary allocation to the risk management function.					
10. Take Human factors such as human error in place.					
11.Explicitly address uncertainty and assumptions					
12.Ris department is an integral part of the organization processes					
13. Anonymous risk reporting channel e.g. Each team member should have the possibility to report risks that he/she foresees in the project.					
14. Head of risk department reports directly to the board.					

Note: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5=Strongly Agree

TABLE 2. Risk Mitigation

ITEM	1	2	3	4	5
1.There are credit limits for individual counterparty					
2. The bank regularly reappraises collateral (assets)					
3. The bank regularly confirms a guarantor's intention to guarantee their financing with a signed document					
4. There is analysis and report writing committee on the credit rating of the prospective investors.					
5. The bank regularly conducts simulation analysis and measure benchmark (interest) rate risk sensitivity.					
6. There are Derivatives instruments to mitigate financial risk.					
7. There is credit rating of prospective investor by pre-visiting desk analysis of data and information collected from the client.					
8. There is credit rating of prospective investor by checking if there are no factual errors or misinterpretations of data provided by prospective investors.					
9. Presence of a permanent risk officer responsible for the organizations risk mitigation procedures.					

Note: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5=Strongly Agree

TABLE 3. Risk Monitoring

ITEM	1	2	3	4	5
1. The credit limits for individual counterparty is strongly monitored by doing background check.					
2. The bank regularly (e.g. weekly) compiles a maturity ladder chart according to settlement date and monitor cash position gap					
3. The bank has in place a regular reporting system regarding risk management for senior officers and management					
4. The bank regularly reviews country ratings if their financing or investments are international					
5. The bank regularly monitors the customer's business performance after the extension of their financing by checking on the bank statements.					
6. The credit limits for individual counterparty are set and monitored strictly					
7. The bank regularly monitors the customer's business performance after the extension of their financing by checking on the audited financial statements.					
8. Maintaining live project risk database. Each risk should have the following attributes: opening date, title, short description, probability and importance					
9. Risks in the institution are ranked in the order of magnitude and frequency.					
10. Risks in the institution are prioritized.					
11. Ongoing feedback communicated to the stakeholders on the risks management.					

Note: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5=Strongly Agree

TABLE 4. Internal Control

ITEM	1	2	3	4	5
1.Principles and procedures relating to decision making processes					
2. Segregation of duties in different approvals levels in the all documents processed by the banks e.g. loan approvals					
3. The bank has countermeasures (contingency plan) against disaster and accidents					
4. The internal auditor is responsible to review and verify the risk management systems, guidelines and risk reports					
5. The bank has backups of software and data files in a different location from the banks office.					
6.The bank has backups of software and data files					
7. There is a Risk Committee in the Board Level responsible for approval of audit plans.					
8. system controls to detect any fraud transactions					
9.Existence of personnel policy on guiding on frauds transactions					
10.The bank personnel are able to tailor a method to fit a precedent situation					
11.The risk personnel ensure that the risk response is followed consistently throughout the organization					
12. Testing, auditing and assessments of bank procedures are performed by independent personnel. Eg external auditors.					
13. Internal auditors report directly to the head of Internal audit at Board level					

Note: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5=Strongly Agree

TABLE5. Risk Measurement

ITEM	1	2	3	4	5
1. There is a computerized support system for estimating the variability of earnings and risk management					
2. The bank regularly conducts simulation analysis and measure benchmark (interest) rate risk sensitivity.					
3.The bank uses Duration Analysis					
4.The bank uses Maturity Matching Analysis					
5. The bank uses Estimates of Worst Case scenarios/stress testing for risk analysis.)					
6.The bank has a quantitative support system for assessing customers' credit standing					
7.The bank use Risk Adjusted Rate of Return on Capital (RAROC)					
8.Adequate quality management processes					
9.Adequate record keeping processes(electronic and Manual files)					
10. Adequate internal audit processes(internal auditors have authority to audit all processes)					

Note: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5=Strongly Agree

TABLE 6. Capital Adequacy

ITEM	1	2	3	4	5
1.The Bank has forecastable and easily analyzed liquidity					
2.The Bank has strategies for continued funding					
3.The Bank has ,counterparty of standard cash management					
4.There standard reports on liquid assets					
5.Standard reports on open lines of credit					
6.There daily analysis of fund demands					
7.Reports on self-supporting in times of cash h crisis					
8. Presence of liquidity needs in times of specific bank shocks.					
9 Capital adequacy measured by use of Capital adequacy Ratio(CAR)					
10. Bank has both tier one and tier two capital					
11. The banks perform a risk weighting for all its assets.					

Note: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5=Strongly Agree

TABLE7. Investment guidelines and Strategies

ITEM	1	2	3	4	5
1.Existence of guidelines plan for the investment project undertaken					
2. Due diligence of the investment opportunities undertaken by the Bank.					
3. The bank considers volatility of the investment projects undertaken.					
4.There is an investment committee in all the investment projects undertaken by the Bank					
5. There is analysis of costs and risks in all investment decisions.					
6. Investments are closely monitored to note any deviations.					
7.strategies are outlined in terms of concentrations and commitments to particular areas of the market					

Note: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5=Strongly Agree

Appendix 3. Data

Name of institution	ROE (%)	RME	RM	RMGT	RMRN	AIC	CA	IG
1. ABC Bank (Kenya)	17.1	1.6	2.1	3.9	4.2	2.2	3.3	4.2
2. Bank of Africa	16.8	3.3	4.5	4.2	4.1	2.3	4.6	4.2
3. Bank of Baroda	18.1	4.1	4.3	4.7	4.6	4.4	4.7	4.2
4. Bank of India	19.2	4.5	4.9	3.4	4.7	4.7	3.9	2.5
5. Barclays Bank of Kenya	19.6	4.1	3.9	4.4	3.7	3.9	3.9	2.5
6. CfC Stanbic Holdings	17.6	2.6	3.1	3.9	4.2	3.2	3.3	4.2
7. Commercial Bank of Africa	21.2	3.8	4.2	4.3	4.1	4.2	3.8	4.6
8. Consolidated Bank of Kenya	15.2	2.5	3.8	4.1	4.1	2.3	3.3	2.7
9. Cooperative Bank of Kenya	20.9	4.1	4.2	4.5	3.8	3.7	3.8	3.2
10. Credit Bank	22.2	4.8	3.9	4.8	4.7	5	3.9	4.6
11. Development Bank of Kenya	14.8	3.1	2.2	4.5	5	2.2	4.1	3.8
12. Diamond Trust Bank	19	4.2	3.6	4.6	3.2	4.5	2.9	2.9
13. Equity Bank	23.3	4.7	4.5	4.7	4.4	4.2	3.9	4.8
14. Family Bank	16.77	2.7	3.5	4.4	4.3	3.7	4.8	4.2
15. Fidelity Commercial Bank Limited	18.1	4.3	4.2	3.8	3.7	4.2	2.4	3.6
16. First Community Bank	22	3.8	4.6	4.3	4.2	3.2	4.4	3.9
17. Giro Commercial Bank	17	2.6	3.1	3.9	4.1	3.2	3.3	4.2
18. Guaranty Trust Bank Kenya	22	4.8	3	4.8	3.2	5	3.9	4.6
19. Guardian Bank	23.2	4.7	4.4	4.7	4.4	4.2	3.8	4.8
20. Gulf African Bank	19.1	4.1	3.6	4.7	3.2	4.5	2.9	2.8
21. Habib Bank	21.8	3.9	4.2	4.3	4	4.2	3.8	4.3
22. I&M Bank	19.4	4.1	3.9	4.4	3.7	3.9	3.9	2.5
23. Jamii Bora Bank	23.22	4.8	3.9	4.8	4.7	5	3.9	4.6
24. Kenya Commercial Bank	24.33	4.8	4.5	4.8	4.7	4.9	4.7	4.6
25. National Bank of Kenya	15.3	2.5	3.8	4.1	4.1	2.3	3.3	2.7
26. NIC Bank	18.77	3.8	4.5	4.2	4.1	3.2	4.6	4.2
27. Paramount Universal Bank	20.2	3.9	4.2	4.5	3.8	3.7	3.8	3.2
28. Prime Bank (Kenya)	18.8	4.3	4.2	3.8	3.9	4.2	2.4	3.6
29. Standard Chartered Kenya	23.2	4.9	3.9	4.8	4.7	5	3.9	4.6
30. United Bank for Africa	23.1	4.4	4.1	4.7	4.4	4.2	3.9	4.8