

**THE EFFECT OF RISK MANAGEMENT ON FINANCIAL PERFORMANCE OF
COMMERCIAL BANKS 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 would like to dedicate my research project to the Almighty God, for His providence and grace without which I would not have accomplished this much, to my husband Andrew for his love and support, to my son Joshua for his inspiration and finally my family for their prayers and support during this study.

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LIST OF ABBREVIATIONS

CBK	Central Bank of Kenya
COSO	Committee of Sponsoring Organizations
CP	Contingency Planning
CRA	Credit Risk Analysis
CRO	Chief Risk Officer
ERM	Enterprise Risk Management
IBEAC	Imperial British East Africa Company
IRC	Incremental Risk Capital Charge
RAA	Practicing Risk Assessment and Analysis
RMON	Risk Monitoring
RMPs	Risk Management Practices
ROA	Return On Assets
ROE	Return On Equity
UAE	United Arab of Emirates
URRM	Understanding Risk And Risk Management
VaR	Value At Risk

ABSTRACT

Risk management is accepted as a major cornerstone of bank management by academics, practitioners and regulators. Financial institutions are bestowed with an imperative responsibility to execute in the economy by acting as intermediaries between the surplus and deficit units, making their job as mediators of critical significance for efficient allocation of resources in the modern economy (El-Hawary *et al.*, 2007). The objective of the study was to determine the effect of risk management on financial performance of commercial banks in Kenya. Descriptive research design was used in this study. Secondary Data was collected from Central Bank and banks financial reports and multiple regression analysis used in the data analysis. From the findings the study found that there was a strong positive relationship between risk management and financial performance of commercial banks in Kenya. The study also found that there was a negative relationship between credit risk, insolvency risk, interest rate sensitivity and financial performance of commercial banks. The study also revealed that there was a positive relationship between capital adequacy, size of the banks, operational efficiency and financial performance of commercial banks. The study recommends that there is need for the commercial banks to effectively manage their risk as it was found that risk management positively influence financial performance of commercial banks. The study further recommends that there is need for the management of commercial banks to constantly check their banks' exposure to edit risk, insolvency risk, and interest rate sensitivity. There is need for the commercial banks to enhance their capital adequacy and operational efficiency with respect to their size .

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Effective risk management is accepted as a major cornerstone of bank management by academics, practitioners and regulators. Acknowledging this reality and the need for a comprehensive approach to deal with bank risk management, the Basel Committee on Banking Supervision adopted the Basel I Accords, followed by the Basel II Accords and recently by the Basel III, to deal with the matter. Moreover, risk management is found to be one of the determinants of returns of banks' stocks (Sensarma and Jayadev, 2009).

The recent global economic and financial crisis erupted in the USA when Lehman Brothers Holdings, Inc. filed for Chapter 11 bankruptcy on 15 September 2008. The spread of this crisis worldwide raised questions about the effectiveness of risk management practices (RMPs) applied by banks, including those applied by well-established banks. Risk management failure is considered one of the main causes of the crisis (Bank for International Settlements, 2009; KPMG International, 2009; Sabato, 2009; Holland, 2010). The US Sarbanes Oxley Act of 2002 was enacted in response to the boom and bust of the dot.com market and obliges all companies quoted on the US stock exchanges to spend considerable sums of money in order to maintain their control systems (Williams *et al.*, 2006).

1.1.1 Risk Management

Risk may be defined as the inconsistency of returns associated with a particular asset (Gitman, 2008). Risk, thereof, is also defined as an amalgamation of the probability of the

occurrence of an event and its consequence (ISO-IEC, 2002). Risk Management is the process of identification, measuring, controlling and monitoring of potential risks that may negatively affect the returns of an organization. Risk Management Practices (RMP) are vital for an organization's strategic management (ISO-IEC, 2002). It is used by a firm's strategic management in order to make positive contribution to the goals, objectives and the portfolio of almost all its activities. RMP shields and creates value for quarter concerned and an organization must integrate organization wide RMP as a nonstop and developing process in order to accomplish its goals.

Banks must integrate market, credit and operational risk into a single stream of capital measurement to have a comprehensive picture of their entire capital resources and is considered an imperative component of enterprise risk management (ERM) system. This helps bank to establish its overall risk profile, determining how much risk it is taking and the level of diversification it can achieve by entering in different business areas (Tschemernjak, 2004). ERM rigors the extent of risk taking and aversive aptitude to ensure firm's goals and objectives (Steinberg *et al.*, 2004).

An amended rulebook namely *Basel III* was worked out as a repercussion of the 2007-2009 financial crises to take in a number of measures to reinforce the resilience of the banking sector. The fresh capital adequacy framework accentuates immensely on liquidity risk, credit risk and market risk under ordinary and stressed conditions (BCBS, 2009a). It has been made mandatory for banks to maintain a minimum level of capital to cover up losses and to run operating activities as a going concern whereas banks had to endure losses far beyond their

minimum capital requirements throughout the modern financial crisis (BCBS, 2009b). The Basel Committee modified bank regulation at length establishing two supplementary capital requirements, incremental risk capital charge (IRC) and stressed value-at-risk (VaR), escalating the loss engrossing capacity of bank capital (BCBS, 2009b, 2010).

Although credit risk was responsible for substantial price changes in the recent financial crisis, market risk factors like changes in risk premia was the major cause of price fluctuations (Berg, 2010). The risk premia has considerable effects on bond returns as compared to the default risk factors. In order to let bank capital suck up sharp negative price changes in a crisis, the Basel Committee brought into play an additional capital add-on on top of the IRC whilst VaR model under stressed market conditions is mainly used to assess price risk (Elton *et al.*, 2001).

1.1.2 Financial Performance

The financial performance assessment is devoid of such a multitude of options and methodologies despite critical importance of financial sustainability. Though an ambition for sustainable institutions has been often articulated, there was also an opinion that most financial institutions working in this field have been unsustainable. Research studies have shown that this is predominantly connected to the perception of micro borrowers' risk and creditworthiness, and the diseconomies of scale in making small loans (Quach, 2005). According to Dayson *et al.*, (2006), microfinance has been attractive to lending agencies because of demonstrated sustainability and low cost of operations.

Liquidity measures the ability of the business to meet financial obligations as they come due, without disrupting the normal, ongoing operations of the business. Liquidity can be analyzed both structurally and operationally. Structural liquidity refers to the balance sheet (assets and liabilities) and operational liquidity refers to cash flow measures. On the other hand Quach, (2005) indicated that solvency measures the amount of borrowed capital used by the business relative the amount of owner's equity capital invested in the business. In other words, solvency measures provide an indication of the business' ability to repay all indebtedness if all of the assets were sold. Solvency measures also provide an indication of the business' ability to withstand risks by providing information about the firm's ability to continue operating after a major financial adversity.

Profitability measures the extent to which a business generates a profit from the factors of production: labor, management and capital. Profitability analysis focuses on the relationship between revenues and expenses and on the level of profits relative to the size of investment in the business. Four useful measures of firm profitability are the rate of return on assets (ROA), the rate of return on equity (ROE), operating profit margin and net firm income. The ROA measures the return to all firm assets and is often used as an overall index of profitability, and the higher the value, the more profitable the firm business. The ROE measures the rate of return on the owner's equity employed in the firm business. It is useful to consider the ROE in relation to ROA to determine if the firm is making a profitable return on their borrowed money (Zenios *et al.*, 1999).

1.1.3 Effect of Risk Management on Financial Performance

Rasid *et al* (2011), on his study support the theoretical argument brought to light by Soin (2005), Williamson (2004) and Collier *et al.*, (2004) that risk management in an organization influence the organization profitability, through enhanced risk management practices. Rasid *et al.*, (2011) further revealed that risk analysis of financial statement was allegedly the largest contributor towards risk management while budgeting and strategic planning are indispensable players in managing risk which affect the bank's profitability.

Williamson (2004), revealed that a year-to-year cost income ratio, equity to total assets ratio, total asset growth ratio and ratio of loan loss reserve to gross loans positively influences the likelihood of financial distress in the coming year however, macroeconomic information shows little impact on the possibility of financial distress on financial institution (Zaki *et al.*, 2011) and a similar study conducted on German banks by Nuxoll (2003) supports this conclusion.

Mwangi (2012) revealed that some risk management practices do have significant effect on financial performance more than others i.e. the existence of a risk management policy and the integration of risk management in setting of organizational objectives were considered to be the key risk management practices that had a direct effect on financial performance. This means that although there are other determinants of performance not included in the study, the banks can improve their performance by focusing on developing strong risk management policies and integrating risk management in the process of setting achievable organizational objectives.

1.1.4 Commercial Banks in Kenya

In Kenya the Central Bank of Kenya (CBK) reported that more than 90% of banks in the country were reporting reduced losses as a result of increased risk management and that almost all claimed risk awareness had increased at their institutions. In a survey of banks and mortgage institutions in Kenya, the CBK contacted 43 significant institutions to “assess the adequacy and impact of risk management guidelines” the Central Bank of Kenya had issued in 2013. The development of risk management as an autonomous function in particular has been rapid, with 95% of institutions surveyed saying they had created “independent and well-funded risk management functions”.

A commercial bank is an institution which accepts deposits, makes business loans, and offers related services. Commercial banks also allow for a variety of deposit accounts, such as checking, savings, and time deposit. The government of Kenya acknowledges the financial sector as a key player in the economic recovery process and recognizes the role played by commercial banks. The government through the economic strategy paper of March 2003 spells out measures that it intends to take in order to assist the financial sector to aid in job creation, poverty eradication and economic growth.

The recent global financial crisis served as a reminder that risk management and how the same is practiced is fundamental if performance objectives are to be consistently achieved. It has emerged that as business owners and managers strive to improve and sustain performance they are now also required to consider what risk management practices their organizations have adopted to avoid falling short of their strategic objectives. This is even

more so in the financial services sector which was the most affected during the recent financial crisis.

The types and degree of risks an organization may be exposed to depend upon a number of factors such as its size, complexity, business activities, and volume, these guidelines have identified the following categories of risks as critical risks in financial institutions:- strategic risk; credit risk, liquidity risk, market risk, operational risk, information and communication technology risk, reputational risk, compliance risk and country and transfer risk . In accordance with the Basel Core Principles for Effective Banking Supervision, 'Risk Management Processes' requires that banks and banking groups must have comprehensive risk management processes (including Board and senior management oversight) to identify, evaluate, monitor and control or mitigate all material risks and to assess their overall capital adequacy in relation to their risk profile. These processes should be commensurate with the size and complexity of the institution.

It is therefore a requirement that each institution prepare a comprehensive Risk Management Programme (RMP) tailored to its needs and circumstances under which it operates and establish a Risk Management Function that supervises overall risk management. The function should be independent from those who take or accept risks on behalf of the institution and should report directly to the board or a committee of the board. The risk management function is responsible for ensuring that effective processes are in place for: identifying current and emerging risks; developing risk assessment and measurement systems; establishing policies, practices and other control mechanisms to manage risks; developing risk tolerance limits for senior management and board approval; monitoring positions against

approved risk tolerance limits; and reporting results of risk monitoring to senior management and the board.

To a large extent the Risk Management guidelines put forward by the Central Bank of Kenya have guided commercial banks on Risk management. In most cases banks had adopted a proactive and enterprise wide approach to their risk management practices by having a Risk Department with an independent manager, who reports to the board of directors and had a documented risk management policy which was fairly well communicated throughout all levels of the organization from the Board to Directors. Some Risk management aspects do have significant effect on financial performance more than others i.e. the existence of a risk management policy and the integration of risk management in setting of organizational objectives were considered to be the key risk management aspects that had a direct effect on financial performance.

1.2 Research Problem

Financial institutions are bestowed with an imperative responsibility to execute in the economy by acting as intermediaries between the surplus and deficit units, making their job as mediators of critical significance for efficient allocation of resources in the modern economy (El-Hawary *et al.*, 2007). The sturdiness of the financial institutions is of vital significance as observed during the most modern US financial crisis of 2008 (BNM, 2008). The IMF (2008) anticipated total losses to reach \$945 billion globally by April 2008. World's largest banks announced write-downs of \$274 billion in total on the first anniversary of the credit crunch. While US subprime mortgages and leveraged loans may reach \$1 trillion according to some estimates of July 2008 (Kollewe, 2008).

The stability of the entire economy is affected by a crumple of the financial institutions, as a result a robust risk management system is mandatory to keep the financial institutions up and running (BNM, 2008; Blunden, 2005). A new rulebook by the name of *Basel III* was formulated as a repercussion of the 2007-2009 financial crises so as to take in a number of measures in order to reinforce the resilience of the banking sector (BCBS, 2009a). Risk management is the total process of identifying, controlling and minimizing the impact of uncertain events. Since the banks carry the bigger and ultimate burden in the cost of these losses, they should therefore be at the fore front in managing the risks. Risk management if successful, avoids or mitigate costly risks while increasing the payoff by managing the risks effectively. Risk management is an issue that needs to be stressed and investigated, especially in the banking industry, where the need for a good risk management structure is extremely important.

The recent global financial crisis served as a reminder that risk management and how the same is practiced is fundamental if performance objectives are to be consistently achieved. Every bank is faced with several types of risks key among them being strategic risk and financial risk. Risk management is a key factor which determines the level of progress of the banks. In most cases banks had adopted a proactive and enterprise wide approach to their risk management practices by have a risk department with a manager, and had a documented risk management policy which was fairly well communicated throughout all levels of the organization from the Board to Staff. Risk management practices do have significant effect on financial performance more than others i.e. the existence of a risk management policy and

the integration of risk management in setting of organizational objectives were considered to be the key risk management practices that had a direct effect on financial performance.

There are few local studies on risk management which include; Kimeu (2008) who studied credit risk management techniques of unsecured banks loans of commercial banks in Kenya, Ngare (2008) who studied credit risk management practices by commercial banks, Simiyu (2008) studied techniques of credit risk management in microfinance institutions in Kenya, Mutwiri (2007) studied credit risk management practices by oil companies in Kenya, Muteru (2007) who studied credit risk management practices by Pharmaceuticals manufacturing firms in Kenya, Mwirigi (2006) who studied credit risk management techniques adopted by micro finance institutions in Kenya and Njiru (2003) who studied credit risk management by coffee co-operatives in Embu District.

While the above research outcomes provide valuable insights in credit risk management, there is no known research which has been carried out on the effects of risk management on financial performance of commercial banks in Kenya. The study therefore sought to fill this gap by answering the following research question, what is the effect of risk management on financial performance of commercial banks in Kenya?

1.3 Objective of the Study

To determine the effect of risk management on financial performance of commercial banks in Kenya

1.4 Value of the Study

Risk management is the human activity which integrates recognition of risk, risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources. The significance of studying risk management is that it may help in variation of the actual outcome from the expected. It can make the difference between survival and failure of a company and may prevent large losses which may cripple a firm. Risk management can improve profits by reducing expenses as well as increasing income. This may be through lowering expenses through preventing or reducing accidental losses as a result of certain low cost measurers or transferring potentially serious losses to others at the lowest transfer fees possible and preparing the firm to meet most economically, those losses it has decided to retain.

The regulator (Central Bank of Kenya) may use this study to design and improve on the current risk management framework for all commercial banks in Kenya. The findings of this study may be a value addition to literature review. Therefore, students of risk management, finance, insurance, governance, information technology, human resource management, and law may find this research finding critical in terms of broadening their minds in this area.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the existing literature on risk management and their effects on financial performance of commercial banks; in specific the chapter reviews the theoretical review, empirical review, concept of Risk management practice and the chapter summary.

2.2 Theoretical Review

This study will be guide by the following theories as it seeks to establish the effects of risk management practice son performance of commercial banks in Kenya.

2.2.1 Risk Management Theory

Wenk (2005), states that the Risk Management model consists of risk identification, risk assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities. Risks can come from uncertainty in financial markets, project failures, legal liabilities, credit risk, accidents, natural causes and disasters as well as deliberate attack from an adversary, or events of uncertain or unpredictable root-cause. Several risk management standards have been developed including the Project Management Institute, the National Institute of Science and Technology, actuarial societies, and ISO standards. Methods, definitions and goals vary widely according to whether the risk management method is in the context of project management, security, engineering, industrial processes, financial portfolios, actuarial assessments, or public health

and safety (Simkins and Fraser, 2010). The strategies to manage risk typically include transferring the risk to another party, avoiding the risk, reducing the negative effect or probability of the risk, or even accepting some or all of the potential or actual consequences of a particular risk.

Effective risk management can bring far reaching benefits to all organizations, whether large or small, public or private sector (Ranong and Phuenngam, 2009). These benefits include, superior financial performance, better basis for strategy setting, improved service delivery, greater competitive advantage, less time spent firefighting and fewer unwelcome surprises, increased likelihood of change initiative being achieved, closer internal focus on doing the right things properly, more efficient use of resources, reduced waste and fraud, and better value for money, improved innovation and better management of contingent and maintenance activities (Wenk, 2005). Effective risk management structure supports better decision making through a good understanding of the risks and their likely impact. In practicing Risk Management (RM), if risks are left unmanaged, they can cause a negative impact on stake holder's value. It therefore means that good risk management enhances shareholders value. By creating a good discipline in risk management it helps improve governance process and therefore improves effectiveness (Moore; 1983).

According to Dorfman (2007), ensuring that an organization makes cost effective use of risk management first involves creating an approach built up of well-defined risk management and then embedding them. These risk management include financial risks management, operational risk management, governance risk management, and strategic risk management.

The theory of Risk Management Theory is applied in the study to determine the effects of risk management on financial performance of commercial banks in Kenya.

2.2.2 Enterprise Risk Management Theory

According to Tseng (2007), Enterprise Risk Management (ERM) is a framework that focuses on adopting a systematic and consistent approach to managing all of the risks confronting an organization. Gordon *et al.*, (2009) on the other hand define ERM as the overall process of managing an organization's exposure to uncertainty with particular emphasis on identifying and managing the events that could potentially prevent the organization from achieving its objective. ERM is an organizational concept that applies to all levels of the organization". According to Committee of Sponsoring Organizations (COSO) (2004), "Enterprise risk management is a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives".

In conducting ERM, the following are listed as some of the areas or aspects of the organization that a risk manager need to look into namely: the people, intellectual assets, brand values, business expertise and skills, principle source of profit stream and the regulatory environment (Searle, 2008). This will help organization to balance the two most significant business pressures; the responsibility to deliver succeed to stakeholders and the risks associated with and generated by the business itself in a commercially achievable way. By doing so, the risk manager is constantly aware of the risks it faces and therefore

constantly monitors its exposure and be positioned to change strategy or direction to ensure the level of risks it takes is acceptable.

2.2.3 Contingency Planning Theory

According to Hisnson and Kowalski (2008), contingency planning (CP) also known as business continuity planning is a crucial element of risk management. The fundamental basis of Contingency Planning (CP) is that, since all risks cannot be totally eliminated in practice, residual risks always remain. Despite the organization's very best efforts to avoid, prevent or mitigate them, incidents will still occur. Particular situations, combinations of adverse events or unanticipated threats and vulnerabilities may conspire to bypass or overwhelm even the best information security controls designed to ensure confidentiality, integrity and availability of information assets (Hisnson and Kowalski, 2008).

Riley (2012), defines contingency planning as a forward planning process, in a state of uncertainty, in which scenarios and objectives are agreed, managerial and technical actions defined, and potential response systems put in place in order to prevent, or better respond to, an emergency or critical situation. A contingency plan is meant to help network and coordinate individuals, agencies and organizations to effect a rapid and effective response. Contingency planning ensures the availability of stand-by resources and provides mechanism for rapid decision-making that can shorten disaster response and ultimately save lives.

In the context of this study, CP is defined as the totality of activities, controls, processes, plans *etc.* relating to major incidents and disasters. It is the act of preparing for major

incidents and disasters, formulating flexible plans and marshaling suitable resources that will come into play in the event, whatever actually eventuates. The very word ‘contingency’ implies that the activities and resources that will be required following major incidents or disasters are contingent (depend) on the exact nature of the incidents and disasters that actually unfold. In this sense, CP involves preparing for the unexpected and planning for the unknown. The basic purpose of CP is to minimize the adverse consequences or impacts of incidents and disasters.

It is important to appreciate that planning and preparation are key to all CP-related activities. While many of us anticipate being able to deal with and get through crisis situations to some extent on-the-fly, CP aims to prepare suitable plans and stockpile essential resources in advance of any crisis to make the situation more manageable and less disruptive on the day. Furthermore, while it is sensible to prepare thoroughly for commonplace incidents (such as interruptions to power or telecommunications services), true CP includes an element of preparing for totally unanticipated events, for example pre-determining the crisis management structure and processes to assess and react appropriately to any incident more efficiently than if no such preparations had been made (Hisnson and Kowalski, 2008).

2.3 Determinants of Financial Performance

Soin (2005), Williamson (2004) and Collier *et al.*, (2004), found that risk management in an organization influence the organization performance by mitigating various business risk. Rasid *et al.*, (2011) found that risk analysis of financial statement was allegedly the largest

contributor towards risk management while budgeting and strategic planning are indispensable players in managing risk and enhancing profitability of Commercial Banks.

2.3.1 Risk Management

Risk management is a key factor which determines the level of progress of organizations. Thus proper mechanism and system of risk control should be put in place to establish, prevent and mitigate the risks encountered in operations of the organizations, (Beckmann, 2007). An efficient risk management in risks could greatly reduce the costs of maintaining operations in organizations. In a world that is constantly changing and with every change bringing about new ways of doing business with different outcomes, risk and how to manage it has become a critical issue. The recent global financial crisis served as a reminder that risk management and how the same is practiced is fundamental if performance objectives are to be consistently achieved, (Gitman, 2008).

It has emerged that as business owners and managers strive to improve and sustain performance they are now also required to consider what risk management practices their organizations have adopted to avoid falling short of their strategic objectives, (Sabato, 2009). This is even more so in the financial services sector which was the most affected during the recent financial crisis. The risks facing financial institutions are mainly classified into; strategic, operational, credit and market risks. In managing these risks, the risk management approach adopted by the owners and/or management was influenced by the organizational culture and support, whether or not risk management is integrated in the setting of organizational objectives, whether there is a documented risk management policy or framework, how the risk identification process is conducted, the risk analysis process,

evaluation and treatment of risk; risk monitoring and review; and last but not least ensuring that there is effective risk management, (Holland, 2010).

2.3.2 Capital Adequacy

Capital adequacy refers to the sufficiency of the amount of equity to absorb any shocks that the bank may experience Nwankwo (1991). The capital structure of banks is highly regulated. This is because capital plays a crucial role in reducing the number of bank failures and losses to the stakeholders. According to Hardy and Bonaccorsi di Patti (2001) Nwankwo, (1991), capital adequacy is a widely acknowledged key factor in bank performance measurement and evaluation. It is the first of the five CAMEL factors recognized and adopted by the Basel system of bank performance assessment of the Bank for International Settlement (BIS). The capital adequacy measurement using capital adequacy ratio was adopted in the Nigeria banking system in 1990. It is the ratio of the capital of a bank (i. e. Tier 1 and Tier 2 capital) in relation to its weighted assets. The banks must meet the minimum requirements stipulated by the bank monitoring and supervising authority which is the Central Bank of Nigeria (CBN) in the case of Nigeria. Although there is general agreement that statutory capital requirements are necessary to reduce moral hazards, Beckmann (2007) argue that high capital lead to low profits since banks with a high capital ratio are risk-averse, they ignore potential (risky) investment opportunities and as a result, investors demand a lower return on their capital in exchange for lower risk.

2.3.3 Asset Quality

The quality of assets held by a bank depends on the exposure to specific risks, trends in non-performing loans, and the health and profitability of bank borrowers. Poor asset quality and

low levels of liquidity are the two major causes of bank failures. Many financial institutions that collapse are due to high rate of non-performing loans (NPLs) and extensive insider lending. Credit risk is one of the factors that affect the health of banks. The extent of the credit risk depends on the quality of assets held by bank. The quality of assets held by a bank depends on exposure to specific risks, trends in non-performing loans, and the health profitability of bank borrowers.

2.3.4 Management Efficiency

Management quality or efficiency plays a big role in determining the future of the bank. The management has an overview of a bank's operations, manages the quality of loans and has to ensure that the bank is profitable. The performance of management capacity is usually qualitative and can be understood through the subjective evaluation of management systems, organization culture, and control mechanisms and so on. However, the capacity of the management of a bank can also be gauged with the help of certain ratios of off-site evaluation of a bank in the capacity of the management to deploy its resources aggressively to maximize the income, utilize the facilities in the bank productively and reduce costs, etc. According to Sangmi and Nazir (2010), management efficiency can be evaluated with reference to expenditure to income ratio, credit to deposit ratio, Asset utilization ratio, diversification ratio, earnings per employee ratio and expenditure per employee ratio.

2.3.5 Earnings Quality

The earnings quality of a bank refers to the quality of profit made by it. For earnings to be of high quality they need to be reliable and relevant. Profit is the difference between revenue and expenditure. The major source of income for banks are interest earned on loans and other

incomes derived from general banking activities while expenditure of banks may relate among other things, to salaries, wages, rents, administrative overheads, taxes, etc. It is the surplus that remains after taking care of all expenses that is known as net profit. A wealthy bank should be able to generate decent profits regulatory and keep itself as well as its investors, in good health because the ability of a bank to support her present and future operations depends on the quality of its earnings and profitability.

2.3.6 Liquidity

Another important decision that the managers of commercial banks take refers to the liquidity management. Liquidity is simply the ease with which assets of banks can be uncashed in times of need or its fair value. It is that quality of an asset that enables a bank to respond to any financial situation requiring urgent infusion of money. Liquidity is required to meet regular financial obligations of the bank especially without dipping into its reserves. When banks hold high liquidity, they do so at the opportunity cost of some investment which could generate high returns. The trade-offs that generally exist between return and liquidity risk are demonstrated by observing that a shift from short-term securities to long-term securities or loans raises a bank's return but also increases its liquidity risks and the inverse is true. Thus a high liquidity ratio indicates a less risky and less profitable bank.

2.3.7 Sensitivity to Market Risk

Financial institutions deal in a greater variety of financial products making them susceptible to, among others, interest rate, foreign exchange risks and commodity price risk (Hilbers *et al.*, 2000). The focus assessment is on how management would be able check and organize financial problems arising from these phenomena (SBP, 2001).

2.4 Empirical Review

In this section the study reviewed existing studies both local and international studies on the effect of risk management on financial performance of commercial banks in Kenya

2.4.1 International Evidence

In a study of the sensitivity to risk of large domestic banks in the USA, Linbo (2004) found that profit efficiency is sensitive to credit risk but not to insolvency risk or to the mix of loan products. Hahm (2004) argues that it is necessary to improve banking supervision and banks' risk management to ensure successful financial liberalization. This is based on a study of interest rate and exchange rate exposure of Korean banks before the 1997 Asia Pacific economic crisis, which found that the performance of commercial banks was significantly associated with their pre-crisis risk exposure.

Fatemi and Fooladi (2006), after investigating the current practices of credit risk management in the largest US-based financial institutions, report that identifying counterparty default risk is the single most important purpose served by the credit risk models utilized. However, it should be noted that these results are based on a very low response rate, i.e. 21 responses to questionnaires sent to 100 banks.

Al-Tamimi and Al-Mazrooei (2007) provide a comparative study of banks' risk management in locally incorporated banks and foreign banks in the United Arab of Emirates (UAE). The results show that the three most important types of risks facing UAE commercial banks are foreign exchange risk, followed by credit risk and operating risk. However, an earlier study by Al-Tamimi (2002) reports that the main risk facing UAE commercial banks is credit risk.

For risk identification (RI), he reports that inspection by branch managers and financial statement analysis were the main methods used; while Al-Tamimi and Al-Mazrooei (2007) report that inspection by the bank risk manager, audits or physical inspections, financial statement analysis and risk survey are the main methods used. These results indicate that banks are becoming more sophisticated in managing their risk. The authors also report that the locally incorporated banks are fairly efficient in managing risk; however, the variables such as RI, assessment and analysis have proved to be more influential in the risk management process.

Finally, their results indicate that there was a significant difference between the UAE national and foreign banks in understanding risk and risk management (URRM), practicing risk assessment and analysis (RAA), and in risk monitoring (RMON) and controlling, but not in RI, credit risk analysis (CRA) and RMPs. On average, they report that foreign banks are better than locally incorporated banks in dealing with risk exposure. A difference in the quality of the staff is the primary reason offered by the authors to account for such significant differences. Additionally, one could add differences in regulatory requirements that banks are subject to as a possible reason for such results. Branches of foreign banks, such as Citibank, HSBC and Standard Chartered Bank, are required to comply with the regulatory requirements that their parent companies are subject to, which might be more rigorous than those applied by the Central Bank of the UAE.

Al-Tamimi (2008) studied the relationship between the readiness to implement the Basel II Accord and the resources needed to implement it in UAE banks. The results revealed that these banks are aware of the benefits, impact and challenges associated with the

implementation of the Basel II Accord. However, the research did not find any positive relationship between the UAE banks' readiness to implement Basel II and the impact of that implementation. Nor was the relationship between readiness and anticipated cost of implementation confirmed. No significant difference was found in the level of preparation for the Basel II Accord between the UAE national and foreign banks. It was concluded that there was a significant difference in the level of the UAE banks in relation to Basel II, based on employees' educational levels. The results supported the importance of education for the implementation of the Basel II Accord.

A global survey of 346 financial service executives conducted in March 2009 by the Economist Intelligence Unit (2010) on behalf of SAS Inc., aimed to examine how the financial institutions worldwide are strengthening their risk management capabilities in response to the global crisis. Approximately half of the survey respondents reported that they had conducted, or planned to conduct, a thorough overhaul of their risk management, including improvements to data quality and availability, strengthening risk governance, moving towards a firm-wide approach to risk and deeper integration of risk within lines of business. However, only 40 percent of respondents stated that the importance of risk management is widely understood throughout their company, suggesting that more needs to be done to embed a strong culture of risk management in financial institutions.

Hassan (2009) reports that, like the conventional banks, Islamic banks are also subject to a variety of risks due to the unique range of products offered. He also shows that there was a remarkable understanding of risk and risk management among the staff working in the Islamic banks of Brunei Darussalam, which proved their ability to manage risk successfully.

The major risks that were faced by these banks were foreign exchange risk, credit risk and operating risk. A regression model was used to develop the results, which showed that RI, and RAA were the most influential variables, and the Islamic banks in Brunei needed to give more attention to those variables to make their RMPs more effective. Understanding the true application of the Basel II Accord can improve the efficiency of Islamic banks' risk management systems.

2.4.2 Local Evidence

Weru (2008) conducted a study on an assessment of information systems risk management practices: A case of practical action (international). The purpose of the study was to establish the importance of information systems in regard to business continuity. This was a descriptive case study that aimed at assessing information systems risk management practices in Practical Action. This study reviewed literature on general risk management and information systems risk management in order incorporate other views in the study. The research targeted seven (7) countries in four different continents of the world. The study population included all the 14 information technology staff in the seven countries. Data was collected by use of standard structured questionnaires which were emailed to the respondents and online communication from the respondents. The study findings revealed that IT risk management is on ad hoc basis. The senior management teams in each country has left the role of managing information systems risk to IT experts instead of integrating it within the general organisational risk management. There is great need for organisations to develop a comprehensive and all inclusive policy on the use of information systems to reduce the risks arising from insiders (employees).

Njeri (2010) did a survey on strategic risk management practices by large commercial banks in Kenya. The research was a census survey on 13 large commercial banks in Kenya. The objectives of the study were to determine the strategic risk management practices adopted by large commercial banks and the challenges faced by these banks in their strategic risk management practices. The researcher established that there is an appreciable level of strategic risk management practice among the large commercial banks as exhibited by the findings. The study found out that banks have adopted strategic risk management practices and though there was a slight variance in approach between the banks, the most commonly adopted practice centered on strategic risk assessment, evaluation, monitoring, control and reporting. These strategic risk management practices are discussed in the ensuing sections in detail. The researcher recommends that banks invest more in automated strategic risk management tools which would enhance analysis and profiling of their strategic risk. It would also be appropriate to appoint senior managers as the strategic risk champions.

Thuku (2011) did a study on the relationship between risk management practices and organizational performance of Universities in Kenya, the study adopted a descriptive research design. The data was collected using a semi-structured questionnaire from the staff members of various universities working in the departments of finance, administration and security. The data was coded and entered into a computer for analysis. The data was analysed using descriptive and inferential statistics. The data was analysed using both descriptive statistics such as mean and standard deviation and inferential statistics particularly multiple regression. The findings were presented using pie charts, tables and figures. The study found that use of highly qualified staff, competent personnel, training and holding of seminars on risks management and advancement of management systems greatly contributed to increased

performance on student enrolment. The study recommended that Universities and other institutions invest on risk management practices to counter the effects of operational risks.

Korir (2012) conducted a study on the effects of credit risk management practices on financial Performance of deposit taking microfinance institutions in Kenya. The purpose of this study was to investigate the impact of credit risk management practices on the financial performance of Deposit Taking Microfinance institutions in Kenya. The study used a descriptive survey approach in collecting data from the respondents. The number of the respondents was 36 staff working in all licensed Deposit taking microfinance institutions in Kenya. From the findings the study concludes that Deposit taking microfinance institutions in Kenya adopted credit risk management practices to counter credit risks they are exposed to and it also concluded that Deposit taking microfinance institutions adopt various approaches in screening and analysing risk before awarding credit to clients to minimize on loan loss. This included establishing capacity/competition and conditions and use of collateral/security and character of borrower were used in screening and risk analysis in attempt to reduce manages credit risks. The study further concludes that there was a positive relationship between credit risk management practices and the financial performance of Deposit taking microfinance institutions.

Muasya (2013) did a study on the relationship between credit risk management practices and loans losses. Descriptive research design was utilized in this study as it aimed to see if there is a relationship between credit risk management practices and loan portfolio losses in commercial banks in Kenya. The study utilized a standard questionnaire to collect primary data from the credit managers/officers through the drop and pick method from forty two (42)

commercial banks in Kenya. However, only thirty six (36) of the respondent commercial banks completed the questionnaire. The data was then analysed and the findings presented using tables giving descriptive statistics including frequencies, mean and percentages. Research findings indicated that a significant number of commercial banks in Kenya had not put in place credit risk management information systems to effectively measure, monitor, and control and identify risk, and that majority of management of commercial banks in Kenya recognized the need for information sharing among players within the industry in order to mitigate the risk. It was concluded that credit risk management practices are common among most of the commercial banks in Kenya and that management of these commercial banks appreciated government legislation relating to credit risk management through the introduction of the credit sharing information Act, and that there is a significant negative relationship between credit risk management practices and loans losses in commercial banks in Kenya.

2.5 Summary of the Literature Review

Soin (2005), Williamson (2004) and Collier *et al.*, (2004), theoretical argues that management accounting is significant for management and supports risk management, which influence banks financial performance. Rasid *et al.*, (2011), empirical found that analysis of financial statement was allegedly the largest contributor towards risk management while budgeting and strategic planning are indispensable players in managing risk. Chazi and Syed (2010), in their study, claim that capital adequacy and risk for the banks can be effortlessly recognized using leverage and gross revenue ratios while also claiming that Islamic banks demonstrate better leverage and gross revenue ratios.

Unlike studies that deal with risk management in general, published empirical studies on the RMPs of financial institutions are relatively rare (Fatemi and Fooladi, 2006; Al-Tamimi and Al-Mazrooei, 2007). Richard *et al.*, (2008) found that banks' credit risk management is affected by the environment in which banks operate. This section offers a brief review of recently published studies that are directly relevant to this endeavor. Risk Management Practices (RMPs) have been widely investigated over the years. However, little attention has been paid to banks operating in emerging markets like Kenya (Al-Tamimi, 2002; Al-Tamimi and Al-Mazrooei, 2007; Hassan, 2009). Since risk management failure has been identified as one of the main causes of the financial crisis, additional study of the subject is warranted on the effects of risk management on financial performance of commercial banks in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section presents the methods in data collection and analysis and forms the blue print for conducting the research. It covered the research methodology, research design, population of study, data collection and processing methods and data analysis.

3.2 Research Design

This was a descriptive survey of the commercial banks licensed in Kenya. According to Mugenda and Mugenda (2006), a descriptive research is a process of collecting data in order to answer questions concerning the status of the subjects in the study. The choice of the survey was due to the need for accuracy and statistically reliable data. This method was chosen owing to the fact that all the head offices of all the commercial banks are located in Nairobi hence it would be convenient to undertake a census of all the 43 commercial banks.

3.3 Population

The population of study consisted of all the licensed commercial banks in Kenya. According to CBK (2013) there are 43 licensed commercial banks in Kenya (Appendix 1). Census survey methodology of all the licensed commercial banks was used in order to increase accuracy and reliability of data collected in this research.

3.4 Data Collection

Secondary data was obtained from documents that include financial reports of commercial banks operating in Kenya and annual CBK supervision reports it include data on Return on

Assets, credit risk, Insolvency risk, Interest sensitivity, Capital adequacy, size of the bank and Operating efficiency. This data was collected through a data collection form. Data was obtained for the last five years from 2009 to 2013.

3.5 Data Analysis

The data to be collected is largely quantitative and hence quantitative analysis techniques were used in data analysis. The descriptive and inferential statistics was used in analysis of relationships, differences, trends and comparisons. Key to the research was establishing the linkage between credit information sharing, loan book size and non-performing loans. Data was presented using tables in order to elaborate and establish the effect of risk management on financial performance of commercial banks in Kenya.

3.5.1 Analytical Model

The following regression analysis was used to determine the effect of risk management on financial performance of commercial banks in Kenya. The relationship equation was as shown below-

$$ROA_{it} = \alpha + \beta_1 CR_{it} + \beta_2 LQR_{it} + \beta_3 ISR_{it} + \beta_4 CAR_{it} + \beta_5 SIZE_{it} + \beta_6 OPR_{it} + \pi_{it}$$

Where

ROA is the Return on Bank's total assets; it was measured by the ratio of Net income to Total assets

CRisk is the credit risk which is a measure of banks' exposure to counterparty risk; it was measured by ratio of gross Loans to Total asset

LQR is the Insolvency risk forced by liquidity, in the case of bankruptcy where short term obligations cannot be met and the bank is forced to liquidate part of its fixed assets below their market value, it was measured using the liquidity ratio: liquid assets divided by current liabilities

ISR is the Interest sensitivity ratio measures the sensitivity of banks to interest rate fluctuations based on its repriceable assets and repriceable liabilities; it was measured by the ratio of Interest sensitive assets to interest sensitive liabilities

CAR is the Capital adequacy as a measure of solvency level forced by Capital depletion; it will be measured using the Regulatory Capital divided by Total Risk Weighted Assets

SIZE is the size of the bank which represents the total assets of the bank; it was measured using the Natural logarithm of total assets

OPR is the Operating efficiency as a measure of management quality; it was measured by the ratio of Operating expenses to net operating income

π = Error term

3.5.2 Test of Significance

Analysis of Variance (ANOVA) was used to test the significance of the model, The significance of the regression model was determined at 95% confidence interval and 5% level of significance. Adjusted R squared was used to determine the variation in the dependent variable due to changes in the independent variables.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings to the effect of risk management on financial performance of commercial banks in Kenya. The study was conducted on 5 years period where secondary data from the period of 2009 to 2013 was used in the analysis. Regression analysis was used in analysis the data.

4.2 Regression Analysis

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 22) to code, enter and compute the measurements of the multiple regressions

Table 4.1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	1	.969 ^a	.939	.921	.939	3.869	.015 ^b

Source : Research Findings

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable, from the findings in table above the value of adjusted R squared was 0.939 an indication that there was variation of 93.9% on the financial performance of commercial banks due to changes in credit risk, insolvency risk, interest rate sensitivity, capital adequacy, size of the banks and operational efficiency at 95% confidence interval. This shows that 93.9% changes in financial performance of commercial banks could be accounted for by credit risk, insolvency risk,

interest rate sensitivity, capital adequacy, size of the banks and operational efficiency. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in table above there was a strong positive relationship between the study variables as shown by 0.969.

From the ANOVA statistics, the processed data, which is the population parameters, had a significance level of 0.015 which shows that the data is ideal for making a conclusions on the population's parameter as the value of significance (p-value) is less than 5%. The calculated was greater than the critical value (2.262 <3.869) an indication that credit risk , insolvency risk , interest rate sensitivity , capital adequacy, size of the banks and operational efficiency significantly affected the financial performance of commercial bank . The significance value was less than 0.05, an indication that the model was statistically significant.

Table 4.2: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	.298	.453		2.165	.006
	Credit Risk	-.231	.126	-.245	-3.834	.001
	Insolvency risk	-.281	.114	-.031	-2.246	.016
	Interest sensitivity	-.237	.160	-.198	-2.479	.012
	Capital adequacy	.239	.145	.008	2.065	.023
	Size of the bank	.231	.104	.181	2.246	.011
	Operating efficiency	.204	.240	.230	1.850	.028

Source : Research Findings

From the data in shown in table above, the established regression equation was:

$$Y = 0.298 - 0.231 X_1 - 0.281 X_2 - 0.237 X_3 + 0.239 X_4 + 0.231 X_5 + 0.204 X_6.$$

From this regression equation it was revealed that holding credit risk , insolvency risk , interest rate sensitivity , capital adequacy, size of the banks and operational efficiency to a constant zero, financial performance of commercial banks would be at 0.298, a unit increase in credit risk would lead to an decrease in financial performance of commercial banks by a factor of 0.231, unit increase in insolvency risk would lead decrease in financial performance of commercial banks by a factor of 0.281, a unit increase in interest rate sensitivity would lead to an decrease in financial performance of commercial banks by a factor of 0.237, unit increase in capital adequacy of the banks would lead to an increase in financial performance of commercial banks by a factor of 0.239 , a unit increase in size of the bank would lead to an increase in the financial performance of commercial banks by a factor of 0.231, further unit increase in operation efficiency of the banks would lead to increase in financial performance of commercial banks by a factor of 0.204.

At 5% level of significance and 95% confidence level, operation efficiency had a 0.028 level of significance; capital adequacy showed a 0.023 level of significance, insolvency risk showed a 0.016 level of significance, interest rate sensitivity had a 0.012 level of significance, size of the bank had 0.011 level of significance while credit risk showed 0.001 level of significance, hence the most significant factor is credit risk. Overall credit risk had the greatest effect on the financial performance of commercial banks. All the variables were significant ($p < 0.05$).

4.3 Interpretation of the Findings

From the finding in the adjusted R squared the study found that 93.9% variation on financial performance of commercial banks could be accounted for by credit risk, insolvency risk,

interest rate sensitivity, capital adequacy, size of the banks and operational efficiency. From the correlation coefficient , the study found that there was a strong positive relationship between the study variables. From the ANOVA finding, the study found that the model had a significance level of 0.015 which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) is less than 5%. The study further revealed that credit risk, insolvency risk, interest rate sensitivity, capital adequacy, size of the banks and operational efficiency significantly affected the financial performance of commercial banks. The finding of this study concur with the finding of Bodie *et al.*, (2008) , who explained that earning and pay-out policy of a firm, where financial managers try to ensure a smooth dividend payment over time. When returns are excessively high, managers usually decide to plough back part of it as capital. With these two cases, it is expected that a positive association exists between capital position and profitability of a bank as indicated in the study as ROA.

The study established the following regression analysis to determine the effect of risk management on financial performance of commercial banks in Kenya: $Y = 0.298 - 0.231 X_1 - 0.281 X_2 - 0.237 X_3 + 0.239 X_4 + 0.231 X_5 + 0.204 X_6$.

From this regression equation it was revealed that credit risk, insolvency risk and interest rate sensitivity had a negative relationship with financial performance of commercial banks. The study also found that there was a positive relationship between capital adequacy, size of the banks, operational efficiency and financial performance of commercial banks. The finding of this study concur with the finding of Saunders and Wilson (2001) prove a nexus between bank capital and bank charter value using bank profitability as a measure of future prospect

of the banking firm. This points out that a better performing bank with good returns on asset and consistent management policies can be well capitalized for future operations.

The finding of the study are inconsistent with the finding of Cebenoyan *et al.*, (1999), and Saunders and Wilson (2001), who found that there was a negative impact of ROA on CAR, going against the theoretical expectation and contradicting the research findings. Juxtaposing the essence of risk management in banks, and the effectiveness of the Basel framework for risk management, there is a substantial argument against the efficiency of the framework itself. Empirical findings from several studies such as Francis and Osborne (2009), Borio and Drehmann (2009) and Clement (2010), including this has shown that risk management efficiency in banks is co-determined by macroeconomic factors which vary with cycles. These macroeconomic factors have not been well integrated into the Basel guide. Although credit ratings have been suggested to qualify sovereign risk, the core macro-determinant of performance such as economic growth has been omitted.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

From the analysis and data collected, the following discussions, conclusion and recommendations were made. The responses were based on the objectives of the study. The study had intended to determine the effect of risk management on financial performance of commercial banks in Kenya.

5.2 Summary

The objective of the study was to determine the effect of risk management on financial performance of commercial banks in Kenya. Secondary Data was collected from Central Bank and banks financial reports and multiple regression analysis used in the data analysis. From the finding in the adjusted R squared the study found that 93.9% variation on financial performance of commercial banks could be accounted for by credit risk, insolvency risk, interest rate sensitivity, capital adequacy, size of the banks and operational efficiency. From the correlation coefficient , the study found that there was a strong positive relationship between the study variables.

From the ANOVA finding, the study found that the model had a significance level of 0.015 which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) is less than 5%. The study further revealed that credit risk, insolvency risk, interest rate sensitivity, capital adequacy, size of the banks and operational efficiency significantly affected the financial performance of commercial banks. The study established the following regression analysis to determine the effect of risk management on financial performance of commercial banks in Kenya:

$$Y = 0.298 - 0.231 X_1 - 0.281 X_2 - 0.237 X_3 + 0.239 X_4 + 0.231 X_5 + 0.204 X_6.$$

From this regression equation it was revealed that credit risk, insolvency risk and interest rate sensitivity had a negative relationship with financial performance of commercial banks. The study also found that there was a positive relationship between capital adequacy, size of the banks, operational efficiency and financial performance of commercial banks.

5.3 Conclusion

From the findings the study concludes that risk management positively influenced the financial performance of commercial banks in Kenya, as it was found that there was a strong positive relationship between risk management and financial performance of commercial banks in Kenya.

The study also found that there was a negative relationship between credit risk, insolvency risk, interest rate sensitivity and financial performance of commercial banks. Thus the study concludes that credit risk, insolvency risk, interest rate sensitivity negatively affect the financial performance of commercial banks.

The study also revealed that there was a positive relationship between capital adequacy, size of the banks, operational efficiency and financial performance of commercial banks. Thus the study concludes that capital adequacy, size of the banks, operational efficiency positively influences the financial performance of commercial banks.

5.4 Recommendations for Policy

From the findings and conclusion, the study recommends that there is need for the commercial banks to effectively manage their risk as it was found that risk management positively influences financial performance of commercial banks.

The study further recommends that there is need for the management of commercial banks to constantly check their banks' exposure to credit risk, insolvency risk, interest rate sensitivity, as it was revealed that credit risk, insolvency risk, interest rate sensitivity negatively affect the financial performance of commercial banks.

There is need for the for the commercial banks to enhance their capital adequacy, size of the banks and operational efficiency, as it was revealed that capital adequacy, size of the banks and operational efficiency positively influence the performance of commercial banks.

5.5 Limitations of the Study

This study was not without limitations. In attaining its objective the study was limited to 5 years period starting from year 2009 to year 2013.

The study was limited to secondary data collected from the Banks Financial reports and Central banks of Kenya. While the data was verifiable since it came from the CBK and Banks publications, it nonetheless could still be prone to shortcomings such as earnings management.

The study was limited to determining the effect of risk management on financial performance of commercial banks in Kenya. The study was based on a five year study period from the year 2009 to 2013. A longer duration of the study will have captured periods of various

economic significances such as booms and recessions. This may have probably given a longer time focus hence given a broader dimension to the problem.

5.6 Areas For Further Research

The study recommends a study to be done on the relationship between capital adequacy and financial performance of commercial banks. There is need to conduct a study on the relationship operational efficiency and financial performance of commercial banks in Kenya

The study recommends that a study should be done on the effects of insolvency risk on financial performance of commercial banks in Kenya. The study recommends that there is need for a study on the relationship between financial risk management and deficit and financial performance of commercial banks in Kenya.

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APPENDICES

Appendix I : Authorization Letter

APPENDICES

Appendix I : Authorization Letter



UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS

MSC.FINANCE PROGRAMME

Telephone: 020-2059162
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, Kenya

DATE 19-08-14

TO WHOM IT MAY CONCERN

The bearer of this letter VONNE KIRIGO MWANGI

Registration No. DEB./00232/2013

is a bona fide continuing student in the Master of Science (Finance) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.




PATRICK NYABUTO
FOR: MSC FINANCE CO-ORDINATOR
SCHOOL OF BUSINESS

Appendix II: Introductory Letter

From: **Yvonne Kirigo Mwangi**

To: Respondent

Dear, Respondent

RE: Questionnaire

I am a student at University of Nairobi pursuing Masters of Science in Finance. I am carrying out a study on **THE EFFECT OF RISK MANAGEMENT ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA.**

You are kindly requested you to assist in the collection of secondary data, from your organization so as to enable me accomplish the study. Please, note that all the information given shall be treated purely and used for academic purposes and shall be treated as confidential. Thank you for taking your time to complete the questionnaire and for your time and cooperation.

Yours sincerely

Yvonne Kirigo Mwangi

Student UoN Kenya

Appendix III: DATA

Banks	ROA	CRisk	LQR	ISR	CAR	SIZE	OPR
Kenya Commercial Bank Ltd	0.127	0.177	0.972	0.972	0.492	0.106	0.127
Barclays Bank of Kenya Ltd	0.214	0.159	0.898	0.737	0.45	0.157	0.214
Standard chartered bank	0.244	0.164	0.565	1.157	0.316	0.106	0.244
Co-operative bank	0.367	0.207	0.464	1.157	0.207	0.002	0.367
CFC Stanbic Bank Ltd	0.326	0.185	0.311	1.004	0.588	0.135	0.326
Equity Bank Ltd	0.194	0.14	0.296	1.263	0.594	0.016	0.194
Commercial Bank of Africa Ltd	0.177	0.129	0.571	1.261	1.421	0.413	0.177
National Bank of Kenya Ltd	0.134	0.241	0.263	1.128	0.56	0.135	0.134
Citibank N.A.	0.272	0.241	0.658	1.503	0.482	0.134	0.272
Diamond Trust Bank	0.207	0.166	0.553	1.483	0.799	0.355	0.207
NIC Bank Ltd	0.101	0.154	0.843	0.841	0.558	0.045	0.101
I&M Bank Ltd1	0.148	0.159	0.569	0.962	0.693	0.023	0.148
Prime bank	0.273	0.134	0.397	1.167	0.413	0.236	0.273
Bank of baronda	0.231	0.283	0.256	1.801	0.627	0.215	0.231
Bank of Africa	0.235	0.174	0.395	1.309	0.474	0.028	0.235
Bank of India	0.23	0.035	0.355	1.264	0.919	0.006	0.102
Imperial bank	0.102	0.006	0.901	1.57	0.582	0.045	0.063
Eco bank	0.063	0.072	0.518	1.298	0.836	0.21	0.156
Family bank	0.186	0.145	0.802	1.079	0.766	0.1	0.186
Chase bank	0.124	0.033	0.478	0.716	0.596	0.022	0.124
Fina bank	0.151	0.349	0.816	1.877	0.571	1.761	0.151
ABC Bank	0.071	0.035	0.086	1.034	0.922	0.21	0.035
Development bank of Africa	0.023	0.028	0.192	1.33	0.925	0.002	0.006
Gulf Africa	0.221	0.036	0.458	1.202	0.934	0.091	0.072
Habib AG Zurich	0.125	0.115	0.853	1.807	0.621	0.13	0.145
K-Rep Bank	0.096	0.018	0.604	0.814	0.708	0.017	0.144

Giro	0.085	0.035	0.397	0.809	0.651	0.13	0.018
Consolidated Bank	0.188	0.1	0.383	0.829	0.877	0.026	0.126
Guardian Bank	0.023	0.144	0.192	1.33	0.925	0.002	0.094
Fidelity Bank	0.221	0.018	0.458	1.202	0.934	0.091	0.077
Victoria Commercial Bank	0.125	0.126	0.853	1.807	0.621	0.13	0.034
Habib Bank	0.096	0.094	0.604	0.814	0.708	0.017	0.272
Southern Credit Banking Corporation	0.085	0.077	0.397	0.809	0.651	0.13	0.187
Equatorial Commercial Bank	0.188	0.034	0.383	0.829	0.877	0.026	0.091
First Community Bank Ltd	0.286	0.272	0.361	1.611	0.837	0.005	0.059
Credit Bank Ltd	0.236	0.187	0.954	0.747	0.713	0.064	0.061
Trans-National Bank Ltd	0.081	0.091	0.079	0.532	0.587	0.169	0.071
Middle East Bank Ltd	0.225	0.035	0.581	1.629	0.871	0.066	0.023
Paramount Universal Bank Ltd	0.196	0.006	0.327	0.651	0.941	0.032	0.221
Oriental Commercial Bank Ltd	0.244	0.059	0.006	0.915	0.904	0.238	0.125
Dubai Bank Ltd	0.065	0.061	0.539	0.966	0.966	0.017	0.096
UBA Kenya Bank Ltd	0.104	0.071	0.074	0.922	0.949	0.231	0.085
City Finance Bank Ltd	0.063	0.023	0.732	1.276	0.927	0.361	0.129

Appendix IV : Licensed Commercial Banks in Kenya as at 31st Dec 2013

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank
6. CFC Stanbic Bank
7. Chase Bank Kenya
8. Charterhouse Bank
9. Citibank
10. Commercial Bank of Africa
11. Consolidated Bank of Kenya
12. Cooperative Bank of Kenya
13. Credit Bank
14. Development Bank of Kenya
15. Diamond Trust Bank
16. Dubai Bank Kenya
17. Ecobank
18. Equatorial Commercial Bank
19. Equity Bank
20. Family Bank
21. Fidelity Commercial Bank Limited
22. Fina Bank
23. First Community Bank
24. Giro Commercial Bank
25. Guardian Bank
26. Gulf African Bank
27. Habib Bank
28. Habib Bank AG Zurich
29. I&M Bank

30. Imperial Bank Kenya
31. Jamii Bora Bank
32. Kenya Commercial Bank
33. K-Rep Bank
34. Middle East Bank Kenya
35. National Bank of Kenya
36. NIC Bank
37. Oriental Commercial Bank
38. Paramount Universal Bank
39. Prime Bank (Kenya)
40. Standard Chartered Kenya
41. Trans National Bank Kenya
42. United Bank for Africa
43. Victoria Commercial Bank

Source, CBK (2013)