

**RELATIONSHIP BETWEEN FINANCIAL RISK MANAGEMENT AND  
FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA**

**BY**

**SAMMY RAYMOND MUTETI**

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## DECLARATION

I, the undersigned, declare that this project is my original work and that it has not been presented in any other university or institution for academic credit.

Signature.....

Date.....

Raymond Muteti Sammy

Reg. No. D63/79121/2012

This research project has been submitted for examination with my approval as the university

Supervisor:-

Signature .....

Date .....

Mr. Herick Ondigo

Lecturer

Department of Finance and Accounting

School of Business

University of Nairobi

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## **DEDICATION**

This project is dedicated to my family; for their unwavering support and continuous encouragement throughout the course. To the younger ones may this be may an inspiration to strive for greater achievements.

To my lecturers, fellow students and colleagues; for their support and academic backing.

## TABLE OF CONTENT

<b>DECLARATION</b> .....	<b>ii</b>
<b>ACKNOWLEDGEMENTS</b> .....	<b>iii</b>
<b>DEDICATION</b> .....	<b>iv</b>
<b>LIST OF TABLES</b> .....	<b>vii</b>
<b>LIST OF ABBREVIATIONS</b> .....	<b>viii</b>
<b>ABSTRACT</b> .....	<b>ix</b>
<b>CHAPTER ONE</b> .....	<b>1</b>
<b>INTRODUCTION</b> .....	<b>1</b>
1.1 Background of the Study .....	1
1.1.1 Financial Risk Management .....	1
1.1.2 Financial Performance .....	4
1.1.3 Relationship between Financial Risk Management and Financial Performance of Commercial Banks .....	5
1.1.4 Commercial Banks in Kenya .....	6
1.2 Research Problem .....	7
1.3 Research Objective .....	10
1.4 Value of the Study .....	10
<b>CHAPTER TWO</b> .....	<b>12</b>
<b>LITERATURE REVIEW</b> .....	<b>12</b>
2.1 Introduction.....	12
2.2 Theoretical Review .....	12
2.2.1 Stakeholder Theory .....	12
2.2.2 Financial Economic Theory .....	13
2.2.3 New Institutional Economics Theory .....	13
2.3 Determinants of Financial Performance .....	14
2.3.1 Financial Risk Management .....	14
2.3.2 Deposits.....	15
2.3.3 Capital Ratio .....	15
2.3.4 Liquidity Ratio .....	16
2.3.5 Bank Size .....	16

2.4 Empirical Review .....	17
2.5 Summary of Literature Review.....	23
<b>CHAPTER THREE .....</b>	<b>25</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>25</b>
3.1 Introduction.....	25
3.2 Research Design .....	25
3.3 Target Population.....	26
3.4 Data Collection .....	26
3.5 Data Analysis .....	26
3.5.1 Analytical Model .....	27
3.5.2 Test of Significance .....	28
<b>CHAPTER FOUR: .....</b>	<b>29</b>
<b>DATA ANALYSIS, RESULTS AND DISCUSSION.....</b>	<b>29</b>
4.1 Introduction.....	29
4.2 Research Findings.....	29
4.3 Interpretation of the Findings .....	32
<b>CHAPTER FIVE: .....</b>	<b>34</b>
<b>SUMMARY, CONCLUSION AND RECOMMENDATIONS .....</b>	<b>34</b>
5.1 Introduction.....	34
5.2 Summary .....	34
5.3 Conclusion .....	35
5.4 Recommendations for Policy.....	36
5.5 Limitations of the Study .....	37
5.6 Areas for Further Research .....	38
<b>REFERENCES.....</b>	<b>39</b>
<b>APPENDICES.....</b>	<b>43</b>
Appendix I: Introductory letter .....	43
Appendix II: Data .....	44
Appendix III: List of Licensed Commercial Banks in Kenya as at 31.12.2013 .....	46

## LIST OF TABLES

Table 4.1: Model Summary .....	29
Table 4.2: ANOVA <sup>a</sup> .....	30
Table 4.3: Coefficients <sup>a</sup> .....	31

## **LIST OF ABBREVIATIONS**

AKI	Association of Kenya Insurers
CBK	Central Bank of Kenya
ICT	Information Communication technology
NPLs	Non-Performing Loans
ROA	Return on Assets
ROE	Return on Equity
SPSS	Statistical package for Social Science
USA	United States of America

## **ABSTRACT**

Financial risk is inherent in every commercial bank, but commercial banks that embed the right financial risk management strategies into business planning and financial performance management are more likely to achieve their strategic and operational objectives. This study sought to fill the existing research gap by answering the following research question, does there exist a relationship between financial risk management and financial performance of commercial banks in Kenya? The study adopted descriptive research design. Secondary Data was collected from the Central Bank of Kenya and Commercial Banks in Kenya and multiple regression analysis used in the data analysis. The study had sought to establish the relationship between financial risk management and financial performance of commercial banks in Kenya. The study revealed that there was there was a negative relationship between credit risk, interest rate risk, foreign exchange risk, liquidity risk and financial performance of commercial banks in Kenya. The study also revealed that there was a positive relationship between capital management risk, bank deposits, bank size and financial performance of commercial banks in Kenya. The study recommends there is need for the management of commercial bank to control their credit risk, through non-performing loan level as it was revealed that credit risk negatively affects the financial performance of commercial banks in Kenya. There is need for the management of commercial banks in Kenya to maintain the liquidity level at safe level as it was found that liquidity risk negatively affect the financial performance of commercial banks in Kenya. The management of commercial banks in Kenya should hedge against foreign exchange risk and interest rate risk as it was found that interest rate risk and foreign exchange negatively affects the financial performance of commercial bank in Kenya. The study recommends that there is need for commercial banks in Kenya to increase their size, capital risk management and also their bank deposits.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Risk is inherent in every business, but organizations that embed the right risk management strategies into business planning and performance management are more likely to achieve their strategic and operational objectives. Taking risk is core to the Bank's business, and risks are an inevitable consequence of being in business. The bank's aim is therefore to achieve an appropriate balance between risk and return and minimize potential adverse effects on its performance. Pyle (1997) mentioned that risk management among banks has been inadequate and stressed the importance for a uniform procedure to monitor and regulate risks. 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. Dynamic business practices and demanding regulatory requirements mean that organizations require a broader and clearer perspective on enterprise-wide risk than ever before.

##### **1.1.1 Financial Risk Management**

Financial risk management is the quality control of finance. It is a broad term used for different senses for different businesses or things but basically it involves identification, analyzing, and taking measures to reduce or eliminate the exposures to loss by an organization or individual. Various authors including Stulz (1984), Smith et al (1990) and Froot et al (1993) have offered reasons why managers should concern themselves with the active management of risks in their organizations. The main aim of management of banks is to maximise expected profits taking into account its variability/volatility (financial risk). Financial risk management is pursued because banks want to avoid low profits which force

them to seek external investment opportunities. When this happens, it results in suboptimal investments and hence lower shareholders' value since the cost of such external finance is higher than the internal funds due to capital market imperfections. There are five main types of financial risks classified in the following categories:

**Credit Risk;** the analysis of the financial soundness of borrowers has been at the core of banking activity since its inception. This analysis refers to what nowadays is known as *credit risk*, that is, the risk that counterparty fails to perform an obligation owed to its creditor. It is still a major concern for banks, but the scope of credit risk has been immensely enlarged with the growth of derivatives markets. Another definition considers credit risk as the cost of replacing cash flow when the counterpart defaults. Greuning and Bratanovic (2009) define credit risk as the chance that a debtor or issuer of a financial instrument whether an individual, a company, or a country will not repay principal and other investment-related cash flows according to the terms specified in a credit agreement. Inherent to banking, credit risk means that payments may be delayed or not made at all, which can cause cash flow problems and affect a bank's liquidity.

**Interest Rate Risk;** Interest rate risk is founded on variations on interest rates and can be perceived in different forms. The first methods refer to variation in interest rates in joining with variable loans and short-term financing. An increase in the interest rate leads to higher interest payments for the variable rate loan and more expensive follow-up funding. This decreases the company's earnings and can in worst case lead to financial distress. Second, the vice versa case refers to cash positions of the company with a variable interest rate. A fall in

this rate leads to a loss in earnings. Thirdly, also fixed rate debt contracts can be a risk for the company. In times of decrease interest rates those contracts because higher payments than a variable loan wanted do and are disadvantageous for the company. It can be summarized that the more corporate debt and especially short-term and variable rate debt a company has, the more vulnerable it is to changes in the interest rate (Dhanini, 2007).

Foreign Exchange Risk; Exchange risk occurs when a company is involved in international business and the cash in or outflows are in a foreign exchange rate. As this rate is not fixed and cannot be fully anticipated a possible change in a foreign exchange rate leads to the risk of changes in the amount of a payable / receivable and by that a change in the amount of money the company has to pay / will receive. This risk is measured by the concept of transaction exposure (Glaum, 2000).

Capital Management Risk; Capital requirement is of great importance under the Basel Accords and these set the guide lines for the financial institutions. It is internationally accepted that a financial institutions should have capital that could cover the difference between expected losses over some time horizon and worst case losses over the same time horizon. Here the worst case loss is the loss that should not be expected to exceed with the some high degree of confidence. This higher degree of confidence might be 99% or 99.9%.The reason behind this idea is that expected losses are normally covered by the way a financial institution prices its products. For instance, the interest charged by a bank is designed to recover expected loan losses. The firm wants to be flexible and at the same time lower the costs for financing .The period of loans is significant in joining with the assets,

which are funded with the loan. Here, often a disparity between the durations can be detected. Long-term assets are then funded with short-term and regulating rate loans, leading to a shortfall in cash flows in times of rising interest rates. This element again can lead to an inferior ranking of the company and inferior conditions to get future problems regarding follow-up financing over the rest of the lifetime of the asset can occur. Vice versa long-term financing of short-term assets might lead to access financing when the asset is no longer existing. This causes of needless interest payments for the company (Vickery, 2006).

**Liquidity Risk;** According to Greuning and Bratanovic (2009), a bank faces liquidity risk when it does not have the ability to efficiently accommodate the redemption of deposits and other liabilities and to cover funding increases in the loan and investment portfolio. These authors go further to propose that a bank has adequate liquidity potential when it can obtain needed funds (by increasing liabilities, securitising, or selling assets) promptly and at a reasonable cost. The Basel Committee on Bank Supervision consultative paper (June 2008) asserts that the fundamental role of banks in the maturity transformation of short-term deposits into long-term loans makes banks inherently vulnerable to liquidity risk, both of an institution-specific nature and that which affects markets as a whole, (Greuning and Bratanovic, 2009).

### **1.1.2 Financial Performance**

Financial performance consists of many different methods to assess how well an organization is using its assets to generate income (Richard, 2009). Common examples of financial performance comprise of operating income, earnings before interest and taxes, and net asset value. It is of great importance to note that no single measure of financial performance

should be considered on its own. Rather, a thorough evaluation of a company's performance should take into account many different measures of its performance. Companies must evaluate and monitor their profitability levels periodically so as to measure their financial performance through use of the profitability measures computed from the measures explained above. The two most popular measures of profitability are ROE and ROA. ROE measures accounting earnings for a period per dollar of shareholders' equity while ROA measures return of each dollar invested in assets.

### **1.1.3 Relationship between Financial Risk Management and Financial Performance of Commercial Banks**

Company motives for managing financial risks are the same as those for employing a risk management, as financial risks are a subgroup of the company's risks. One of the main motives is to reduce the instability of earnings or cashflow due to financial risk exposure (Dhanini, 2007). The reduction enables the firm to perform better forecasts (Drogt & Goldberg, 2008). This will help to guarantee that sufficient funds are available for the company for investment and dividends (Ammon, 1998).

Another reason for management of financial risks is to avoid financial distress and the costs connected with it (Triantis, 2000; Drogt & Goldberg, 2008). Lastly also management own-interest of stabilizing earnings or the objective to keep a constant tax level can be motives for financial risk management (Dhanini, 2007). Depending on which of the arguments is in the focus of the company, the risk management can be structured. The focus is either on minimizing volatility or avoiding large losses (Ammon, 1998).

Reduced instability in cash flows or earnings and prevention of losses allow better planning of liquidity needs. This can avoid shortcuts of available funds and consumption of equity (Eichhorn, 2004). In order to maintain financial liquidity and avoid end of period losses, it needs to be analysed which the maximum tolerated loss is. The attention of the risk management should therefore be in correspondence with the actual financial situation of the company. This study seeks to determine the relationship between financial risk management and financial performance of commercial banks in Kenya.

#### **1.1.4 Commercial Banks in Kenya**

Commercial banks in Kenya are governed by the Companies Act (Cap, 486) the Banking Act,(Cap, 488) the Central Bank of Kenya Act (Cap, 491) and the various prudential regulations issued by the Central Bank of Kenya (CBK). The Kenyan banking sector was liberalized in 1995 and exchange controls lifted. The Central Banks of Kenya, which falls under the Treasury docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper operations of the commercial banks in Kenya. This policy formulation and implementation also includes financial risk management and the financial performance of commercial banks in Kenya. The financial performance and financial risk management is also monitored by the CBK.

As at 31 December, 2013, the banking sector comprised 43 commercial banks, 1 mortgage finance company, 9 microfinance banks, 7 representative offices of foreign banks, 102 foreign exchange bureaus, 3 money remittance providers and 2 credit reference bureaus. According to the Central bank of Kenya report on banking sector performance for the quarter ended 31 December, 2013, there are a total of 43 licensed commercial banks in the country

and one mortgage finance company. Out of the 43 commercial banks, 29 are locally owned and 14 are foreign owned.

The locally owned commercial banks comprise 3 banks with significant shareholding by government and state corporations and 26 local commercial banks being privately owned. However out of all the banks only 10 of them are listed in the Nairobi Securities Exchange having met the conditions of listing and applied for the same. As at 31 December 2013 the financial performance aspects of commercial banks as well as financial risks management was guided by the CBK prudential guidelines issued in January 2013. Commercial banks in Kenya are required by CBK to submit audited annual reports which include their financial performance and in addition disclose various financial risks in the reports including credit risk, interest rate risk, foreign exchange risk, liquidity risk as well as capital management risk on a yearly basis by 31 March of every year. The Kenyan banking sector registered improved performance in 2013 by registering a 15.9 percent growth in total net assets from Ksh. 2.33 trillion in December 2012 to Ksh. 2.70 trillion in December 2013. (Source: Central Bank of Kenya).

## **1.2 Research Problem**

Financial risk is inherent in every commercial bank, but commercial banks that embed the right financial risk management strategies into business planning and financial performance management are more likely to achieve their strategic and operational objectives. Taking financial risk management is core to the Bank's financial performance. The bank's aim is

therefore to achieve an appropriate balance between risk and return and minimize potential adverse effects on its financial performance.

This requires more dynamic and sound Financial Risk Management methods to perform well in an ever dynamic and highly competitive banking industry, which will translate into having a competitive advantage and thus generate growth in profits. Some aspects of risks present opportunities through which firms can have a competitive edge over others and contribute to improvement of financial performance (Stulz, 1996). Literature on financial risk management suggests that firms with better financial risk management strategies tend to have better financial performance. By relating financial risk management to financial performance, commercial banks can have an insight into the value of financial risk management.

The recent financial crisis and the failure of banking system even in the developed countries like the USA have forced the policy makers and researchers to look into the details of these failures and in doing so, financial risk has come out as one factor that need to be addressed by banks to guarantee their sustenance. Therefore a bank must determine what its level of financial risk is and then implement a financial risk management requirement that would cover that risk (Ferguson, 2008).

A study by consultancy firm Ernst & Young and the Institute of International Finance (2013) asserts that banks, having moved to enhance the structure of risk management post-crisis, are still working to fully operationalize those policies with most banks still finding it difficult to embed risk appetite. Banks are reviewing their cultures across legal entities and business

units following several high-profiles conduct scandals. There is a much greater focus beyond financial risk to operational risk and reputational risk, including the issue of risk appetite. Risk transparency in banks is driving further enhancement of stress testing and sizable further investment in IT and data. The study further notes that banking business models are being rethought in light of the regulatory changes, leading to exiting from activities, businesses, markets and geographies. Almost universally, risk governance is more central to the management of banks and has much more senior management and board attention placed on it than was the case pre-crisis.

The Kenyan Financial Sector is considered as one of the key segments of the economy. According to the CBK, the banking sector employs more than 60,000 employees and the volume of transactions in terms of monetary value has been growing at an average of 10.5% pa since 2005. The Kenyan vision 2030 blue print identifies financial sector stability as of the attainment of the objectives of the strategy and point out that the sector should grow by 8% over the next 20 years to help the country achieve its objective. This can only be achieved if there is growth in and stability in the financial sector and cases of the institutions insolvency or financial crisis happening should be prevented at all cost. Financial risk management helps lessen the chances that a bank may become insolvent if sudden shocks occur.

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 had issued in 2005. 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”.

Empirical studies done in Kenya have focused in credit risk management and among them are credit risk management by coffee coops in Embu district (Njiru, 2003), survey of credit risk management practices by pharmaceutical manufacturing firms in Kenya (Nduku, 2007) and assessment of credit risk management techniques adopted by microfinance institutions in Kenya (Mwirigi, 2006). To the researchers best knowledge there is limited empirical evidence on the relationship between financial risk management and performance of commercial banks in Kenya. This study seek to fill the existing research gap by answering the following research question, does there exist a relationship between financial risk management and financial performance of commercial banks in Kenya?

### **1.3 Research Objective**

To determine the relationship between financial risk management and financial performance of commercial banks in Kenya

### **1.4 Value of the Study**

The study provides useful information to policy makers and regulators to design targeted policies and programs that will actively stimulate the growth and sustainability of the

commercial banks in the country. Regulatory bodies such as the Central Bank of Kenya can use the study findings to improve on the framework for risk management.

The study findings will benefit management and staff of banks who will gain insight into the importance of financial risk management adherence and its effect on risk mitigation in the operation of banks.

The study is expected to add value to Researchers and Scholars as it will contribute to the literature on the relationship between financial risk management and performance of commercial banks in Kenya. It is hoped that the findings will be of benefit to the academicians, who may find useful research gaps that will stimulate interest in further research in future. Recommendations have been made on possible areas of future studies. The study will also be of value to any investors interested in setting up commercial banks or upgrading investment banks to commercial banks in the country.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews literature relating to the relationship between financial risk management and performance of commercial banks. The literature review has been organized in the following sections. First section covers the theoretical framework on financial risk management, and its impact on the banks financial performance. The second section covers the determinants of financial performance including financial risk management, bank deposits and bank size. The third section covers the empirical studies on the relationship between financial risk management and performance of commercial banks in Kenya, then the summary of the literature review including research gaps of the chapter.

#### **2.2 Theoretical Review**

This study was based on the Stakeholder Theory, Financial Economic Theory and New Institutional Economics Theory as it seeks to determine the relationship between financial risk management and financial performance of commercial banks in Kenya.

##### **2.2.1 Stakeholder Theory**

Stakeholder theory focuses explicitly on equilibrium of stakeholder interests as the main determinant of corporate policy. In certain industries, particularly high-tech and services, consumer trust in the company being able to continue offering its services in the future can substantially contribute to company value. However, the value of these implicit claims is highly sensitive to expected costs of financial distress and bankruptcy. Since corporate risk management practices lead to a decrease in these expected costs, a company values raise

(Klimczak, 2005). Therefore stakeholder theory provides a new insight into possible rationale for risk management. However, it has not yet been tested directly. Firms can reduce the likelihood of financial distress by hedging variability in earnings by managing financial risk.

### **2.2.2 Financial Economic Theory**

The theory of financial economic theory states that corporate risk management is appropriate to increase firm value in the presence of capital market imperfections such as bankruptcy costs, a convex tax schedule, or underinvestment problems. According to Carter et al. (2006) risk management can increase shareholder value by harmonizing financing and investment policies. A credible risk management can mitigate underinvestment costs by reducing the volatility of firm value. As the underinvestment problem which includes financial risk management is likely to be more severe for firms with significant growth and investment opportunities, various measures such as the market-to-book ratio, research and development to sales ratio, capital expenditure to sales, net assets from acquisitions to size which are indicators of financial performance are used for testing the underinvestment hypothesis.

### **2.2.3 New Institutional Economics Theory**

According to Williamson (1998), this theory predicts that risk management practices may be determined by institutions or accepted practice within a market or industry. Further, the theory links security with specific assets purchase, which implies that risk management can be important in contracts which bind two sides without allowing diversification, such as large financing contract or close cooperation within a supply chain. Firms in regulated industries provide top management with few opportunities for discretion in corporate investment and financing decisions. Smith and Watts (1992) showed that regulation is a key determinant of a

firm's corporate financial policy. Therefore, if regulated firms face tighter scrutiny and face lower contracting costs, then they are less likely to hedge firm risk. In particular, firms can hedge cash flows to avoid a shortfall in funds that may require a costly visit to the capital markets and at the same time financial risk management is positively related to measures of the firm's investment opportunity set proxies.

### **2.3 Determinants of Financial Performance**

According to Husni (2011) the determinants of banks financial performance are normally consisting of factors that are within the control of commercial banks. They are the factors which affect the revenue and the cost of the banks. Some studies classified them into two categories namely the financial statement variables and non-financial variables. External factors are said to be the factors that are beyond the control of the management of commercial banks.

The external determinants of commercial banks profitability are indirect factors, which are uncontrollable, but have an enormous impact on bank's profitability. According to Karkrah and Ameyaw (2010) macroeconomic variables has been a major components of the external profit determinants in most studies. The most external factors that have been presented in most studies include competition/market share/firm size, inflation, GDP growth, and interest rate; (Haron, Sudin, 2004).

#### **2.3.1 Financial Risk Management**

Financial risk management has received increased attention over the past years (Glaum, 2000). The reasons for this is that financial risks, though they are not a core competency of non-financial firms, also influence their business operations to a large extend (Triantis,

2000). Financial risks can be of different forms. On one hand there are external financial risks depending on changes on financial markets. On the other hand there are internal financial risks, where the company itself is the source of the risks (Eichhorn, 2004). External financial risks are based on the risk factors of exchange and interest rates as well as commodity prices (Schönborn, 2010). The five types of financial risks that will be assessed include credit risk; interest rate risk; foreign exchange rate risk; capital management risk and liquidity risk.

### **2.3.2 Deposits**

Banks are said to be heavily dependent on the funds mainly provided by the public as deposits to finance the loans being offered to the customers. There is a general notion that deposits are the cheapest sources of funds for banks and so to this extent deposits have positive impact on banks profitability if the demand for bank loans is very high. That is, the more deposits commercial bank is able accumulate the greater is its capacity to offer more loans and make profits; Devinaga Rasiyah (2010). Investigation done by Husni (2011) on the determinants commercial banks performance in Jordan disclosed that there is significant positive relationship between ROA and Total liability to total Assets. To capture deposits in the model Vong et al (2009) presented the effect of deposits (DETA) on profitability as deposits to total assets ratio.

### **2.3.3 Capital Ratio**

Devinaga Rasiyah (2010) and Vong et al (2009) included capital ratio (EQTA or CTRA) as a variable in their study of determinants of banks profitability and performance because capital also serve as a source of funds along with deposits and borrowings. They argue that capital

structure which includes shareholders' funds, reserves and retained profit affect the profitability of commercial banks because of its effect on leverage and risk. They documented that, commercial banks assets could be also financed by either capital or debt. According to Molyneux (1992) banks with high level of equity can reduce their cost of capital and that could impact positively on profitability. Empirical evidence presented by Karkrah and Ameyaw (2010) on profitability determinants of commercial banks in Ghana revealed that the equity ratio which is the measure of the capital strength of the banks posted a positive relation with the banks ROA.

#### **2.3.4 Liquidity Ratio**

According to Devinaga Rasiah (2010) commercial banks are required by regulators to hold a certain level of liquidity assets. And the reason behind this regulation is to make sure that the commercial banks always possess enough liquidity in order to be able to deal with bank runs. He further argue that a bank assume the status of highly liquid only if it has been able to accumulate enough cash and have in possession other liquid assets as well as having the ability to raise funds quickly from other sources to be able to meet its payment obligation and other financial commitments on time. In order to capture liquidity ratio in profitability model Devinaga Rasiah (2010) used loan to deposit ratio (LIQ) as a proxy for liquidity. He did this with the view that data on loans to deposits of commercial banks are normally disclosed in their annual reports and also because the loans to deposit ratio can be calculated.

#### **2.3.5 Bank Size**

Both Vong et al (2009) and Devinaga Rasiah (2010) included market share in their studies. According to Devinaga Rasiah (2010) market share could be included in the profitability

model as an external determinant because if commercial banks could be able to expand their market share then they may be able to increase their income as well hence profit. According to Karkrah and Ameyaw (2010) market share or size of banks is normally used to capture potential economies or diseconomies of scale in the banking sector. To capture the effect of market share or bank size on profitability, Devinaga Rasiah (2010) stressed that as both deposits and loans represent commercial banks output, one has to make a choice between deposits and assets to be used as proxy of banks market share.

## **2.4 Empirical Review**

Chapelle, Crama, Hübner and Peters (2004) estimated the effects of operational risk management actions on bank profitability, through a measure of RAROC adapted to operational risk. The results suggested that substantial savings can be achieved through active management techniques, although the estimated effect of a reduction of the number, frequency or severity of operational losses crucially depends on the calibration of the aggregate loss distributions. The study differed significantly from the present study in that it covered operational risks as opposed to financial risk management.

Jobst (2007) wrote a working paper titled ‘Operational Risk—The Sting is still in the Tail but the Poison Depends on the Dose’. This paper investigated the generalized parametric measurement methods of aggregate operational risk in compliance with the regulatory capital standards for operational risk in the New Basel Capital Accord (“Basel II”). Operational risk is commonly defined as the risk of loss resulting from inadequate or failed internal processes and information systems, from misconduct by people or from unforeseen external events.

Jobst (2007) analysis informed an integrated assessment of the quantification of operational risk exposure and the consistency of current capital rules on operational risk based on generalized parametric estimation. However, the study by Jobst (2007) had is different from this study as it did not focus on financial risks but rather on operational risk.

Bostander (2007) conducted a study on operational risk events in banks and practices for collecting internal loss data. This research study had two distinct objectives. The first objective was to determine in which areas in South African banks the most severe operational risk losses are likely to occur (based on the Basel II seven loss event types and eight business lines). Severity was assessed based on single operational risk events that might have significant monetary values attached to them. The likely frequency of single operational risk events was also assessed.

Hansen (2009) conducted a study on the strategic foreign exchange risk management practice by Danish medium-sized non-financial, not-listed companies that are involved in international activities. The study showed that interaction between financial and operational hedges exists in the management of operating exposure and that operational and financial strategies are seen as complements to each other. The size of the company exhibited significance in explaining the importance and application of the financial hedging means. The study differs from the current study since it did not cover other aspects of financial risks other than foreign exchange risk which is a component of market risk.

Dam (2010) investigated the credit risk management framework and the effectiveness of the credit risk management practices at both the bank's and a transaction office's level. The research used both qualitative and quantitative research methods. Dam concluded that the bank tried to adopt a close-to-standard credit risk management framework with numerous published documents governing the day-to-day credit activities. The study had a research gap since it did not address the relationship between financial risk management and financial performance of commercial banks.

Kithinji (2010) conducted a study on credit risk management and profitability of commercial banks in Kenya using the non-performing loan portfolio (the independent variable) as an indicator of the effectiveness of credit management practices. The intervening variable was the amount of credit as indicated by loans and advances normalized by the total assets. The dependent variable was the profitability measured by the return on total assets. The author concluded that there was no significant relationship between credit risk management (non-performing loan portfolio), amount of credit and profitability. The study by Kithinji (2010) differs from this study in that the study also concentrated on credit risk only and failed to recognize the role of other financial risk such as market risk, capital management and liquidity risk.

Kombo, *et al* (2010) conducted a study on to assess the impact of risk management strategies on micro-finance institutions' financial sustainability, a case of selected micro finance institutions in Kisii Municipality, Kenya. A survey design was adopted for the study. The study covered only MFIs within Kisii Municipality selected using purposive sampling.

Analysis of data was done using descriptive statistics such as percentages. Some of the findings were donor funding, revolving fund and government subsidies are the most preferred sources of funding by the sampled MFIs. Strategic risk, credit risk and liquidity risk are the most frequent risks; whereas reputation and subsidy dependence occur at a very low incidence.

Kamau (2010), conducted a study on the adoption of risk management by commercial banks in Kenya. This study sought to identify the risks encountered by commercial banks and the risk management practices adopted by commercial banks to mitigate against these risks. Further the study wanted to establish the challenges faced by commercial banks in successful implementation of risk management. A census survey was conducted for all the licensed banks operating in Kenya. Majority of the banks were found to use both qualitative and quantitative methods to measure risk. Scenario analysis was found to be the most common used technique to measure risk. Budget constraint, complexity of risk management process and high training costs were identified as the main challenges facing implementation of risk management. Progress has been made in risk management by commercial banks in Kenya as revealed by the study as most of the banks have risk management structures in place.

Njeri (2010), conducted 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 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.

Kargi (2011) conducted a study on credit risk and the performance of Nigerian banks. Kargi used non-performing loan portfolios and these significantly contributed to financial distress in the banking sector. Financial ratios as measures of bank performance and credit risk were the data collected from secondary sources mainly the annual reports and accounts of sampled banks from 2004 - 2008. The author concluded that credit risk management has a significant impact on the profitability of Nigeria banks. The study differs from this study since this study recognizes the role of other financial risk such as market risk, capital management and liquidity risk.

Ahmed, Akhtar & Usman (2011), conducted a study on risk management practices and Islamic Banks. The authors' aim was to determine the firm's level factors which have significantly influenced the risk management practices of Islamic banks in Pakistan. The study concluded that size of Islamic banks have a positive and statistically significant relationship with financial risks (credit and liquidity risk), whereas its relation with operational risk is found to be negative and insignificant. The asset management establishes a positive and significant relationship with liquidity and operational risk. The debt equity ratio and non-performing loans (NPLs) ratio have a negative and significant relationship with liquidity and operational risk. In addition, capital adequacy has negative and significant relationship with credit and operational risk, whereas it is found to be positive and with

liquidity risk. The study differs from this study since this study focuses on all the banks and not Islamic banks.

Ojiako (2012) conducted a study that examined thematic elements in strategic business risk. The author sought to put forward propositions on how firms may best conceive business risks in an environment characterized by constant change and uncertainty. The paper brought out a propositional foundation for the empirical development of an appropriate framework for strategic risk management. The major contribution of the study was that it focused readers on not only strategic risk and competition, but on how lessons can be drawn from the military's experience of dealing with irregular forms of competition (Aumann and Dreze, 2004). However, the study differs from our study as it did not address the link between strategic risk management practices and financial performance.

Siba (2012) carried out a study on the relationship between financial risk management practices and financial performance of commercial banks in Kenya. The study involved the 40 commercial banks in Kenya. The study employed questionnaire method for primary data collection, whereas secondary data was obtained from CBK annual supervision reports. The conclusion was that banks had highly effective risk management practices and there was a strong relationship between the bank's performance and the efficiency of the banks risk management practices. The study differs from the current study in that the current study seeks to focus on the relationship between financial risks which include credit, market, capital management, and liquidity risks as opposed to focusing on the risk management practices of identifying, managing and controlling the financial risks.

Mwangi (2012) did a study on the effect of risk management practices on the financial performance of commercial banks in Kenya. The objectives of this study were to analyze the risk management practices undertaken by Commercial Banks in Kenya and to determine and assess the effect of these risk management practices on their financial performance. Secondary data was also obtained on the financial performance of the banks from the annual reports and audited financial statements. From the research conducted it is evident that risk management and the related practices are considered significantly important to the operations and financial performance of these commercial banking institutions.

This has been influenced to a large extent by guidelines put forward by the Central Bank of Kenya and also the nature of the banking industry. 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. The study also found 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.

## **2.5 Summary of Literature Review**

Research gaps exist since none of the studies address in detail the relationship between financial risk management and financial performance of commercial banks in Kenya. In

addition, majority of the studies were either done on credit risk management or on operational risk. Research gaps also exist as this research will provide more literature for examining the theories reviewed. In addition, the majority of the studies were done in developed economies hence leaving scarce literature in developing economies. This study sought to fill the existing research gap by answering the following research question, does there exist a relationship between financial risk management and financial performance of commercial banks in Kenya? The above chapter reviews the various theories that inform financial risk management and financial performance. In addition, an empirical review is conducted where past studies both global and local is reviewed in line with the following criteria, title, scope, methodology resulting into a critique. It is from these critiques that the research gap is identified.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The chapter presents the research design, population of the study, sample size, data sources and data analysis procedure together with the model specification.

#### **3.2 Research Design**

This study adopted a descriptive research design, Kothari, (2004) describes descriptive research as including survey and facts finding enquiries adding that the major purpose of descriptive research is description of affairs as it exists at present. A descriptive research determines and reports the way things are and attempts to describe such things as possible behavior, attitudes, values and characteristics, (Mugenda & Mugenda, 2003). A causal study approach was employed in this research. Causal approach suggests causal linkages between variables by observing existing phenomena and then searching back through available data in order to try to identify plausible causal relationships.

It was concerned with determining cause and effect relationship and to understand which variable is dependent and which is independent. This research design was the best in explaining if two variables are related and if they vary together with the help of enough information or data for testing cause and effect relationship. It aimed to explore the relationship between financial risk management and financial performance of commercial banks in Kenya and the empirical evidences that help answer the research objective.

### 3.3 Target Population

The population for this study was Commercial banks in Kenya. There were a total of 43 Commercial Banks in Kenya as at 31 December 2013 which formed the target population for this study. Mugenda and Mugenda, (2003), explains that the target population should have some observable characteristics, to which the researcher intends to generalize the results of the study. Data was collected for all the 43 Commercial Banks in Kenya (Appendix 1).

### 3.4 Data Collection

Secondary data from financial statements of Commercial banks in Kenya was collected. The study collected secondary data for the last five years starting year 2009 to 2013 from financial statements of the commercial banks during the same period disclosed as per the CBK prudential guidelines, on the relationship between financial risk management and financial performance of commercial banks in Kenya.

### 3.5 Data Analysis

Data analysis was done using SPSS Version 20 whereby inferential statistics was applied whereby a multiple regression model was employed. To test the relationship between financial risk management and financial performance of commercial banks in Kenya, a logit regression model was used:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \dots + \varepsilon \quad (1)$$

The Y is a dependent variable and refers to the return on assets (ROA) of a commercial bank in a particular year; the  $\alpha$  is the intercept;  $X_1$  represents the independent variable which is

financial risk management, whereas  $X_2$  represents the other determinants of a financial performance;  $\beta$  is a co-efficient and  $\varepsilon$  represent the error term.

### 3.5.1 Analytical Model

The empirical model used in the study to test the relationship between financial risk management and financial performance of commercial banks in Kenya is presented as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \varepsilon \quad (2)$$

Where:

Y: financial performance as measured by return on assets (ROA).

$X_1$ : is the credit risk for the bank, credit risk for the bank was measured using the level of non-performing loans which was the ratio of non-performing loans to total loans and advances.

$X_2$ : is the interest rate risk for the bank, interest rate risk for the bank was measured using the ratio of the interest rate sensitivity gap between assets and liabilities maturing within a period less or equal to one year to total assets.

$X_3$ : is the foreign exchange risk for the banks, foreign exchange risk was measured using the ratio of net foreign currency exposure between assets and liabilities to total assets.

X<sub>4</sub>: is the liquidity risk, liquidity of the bank was measured using the banks liquidity ratio, which will be the ratio of total loans to total deposit.

X<sub>5</sub>: is the capital management risk of the bank, capital management risk was measured using the ration of capital and reserve to total assets.

X<sub>6</sub>: is the bank's deposits which was measured using the ratio of deposits to total assets.

X<sub>7</sub>: is the banks size which was measured using the natural log of total deposits.

### **3.5.2 Test of Significance**

F-test was used to test the joint significance of all coefficients and t-test for the test significance of individual coefficients. The significance of the regression model was determined at 95% confidence interval and 5% level of significance.

## CHAPTER FOUR:

### DATA ANALYSIS, RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter presents the research findings on determine the relationship between financial risk management and 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 of the data.

#### 4.2 Research Findings

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 20) 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
1	.952 <sup>a</sup>	.906	.879	.16099

**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 the above table the value of adjusted R squared was 0.879 an indication that there was variation of 87.9 percent on financial performance of commercial banks in Kenya due to changes in credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size at 95 percent confidence interval . This shows that 87.9 percent changes in financial performance of commercial banks in Kenya could be accounted to

changes in credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by 0.952.

**Table 4.2: ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.764	7	2.252	6.235	.000 <sup>b</sup>
	Residual	12.635	35	.361		
	Total	15.764	42			

**Source : Research Findings**

From the ANOVA statics shown in table the processed data, which is the population parameters, had a significance level of 0% which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance (p-value ) is less than 5%. The F critical at 5% level of significance was 6.235 since F calculated is greater than the F critical (value = 2.021), this shows that the overall model was significant and 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 commercial banks in Kenya.

**Table 4.3: Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.853	.733		3.890	.000
	Credit Risk	-.238	.108	-.044	-2.204	.004
	Interest rate risk	-.378	.283	-.207	-2.066	.001
	Foreign exchange risk	-.217	.112	-.030	-2.127	.003
	Liquidity risk	-.295	.116	-.271	-2.543	.014
	Capital management risk	.247	.109	.051	2.266	.004
	Bank's deposits	.218	.101	.202	2.158	.015
	Bank size	.472	.131	.505	3.603	.001

**Source : Research Findings**

From the data in the above table the established regression equation was

$$Y = 2.853 - 0.238 X_1 - 0.378X_2 - 0.217 X_3 - 0.295X_4 + 0.247 X_5 + 0.218X_6 + 0.295X_7$$

From the above regression equation it was revealed that holding credit risk , interest rate risk, foreign exchange risk , liquidity risk , capital management risk , bank deposits and bank size to a constant zero , financial performance of commercial banks in Kenya would be at 2.853, a unit increase in credit risk would lead decrease to financial performance of commercial banks in Kenya by a factors of 0.238, a unit increase in interest rate risk would lead to decrease in financial performance of commercial banks in Kenya by factors of 0.378, a unit increase in foreign exchange would lead to decrease in financial performance of commercial banks in Kenya by a factor of 0.217 , a unit increase in liquidity risk would lead to decrease in financial performance of commercial banks in Kenya by a factor 0.295, a unit increase capital risk management would lead an increase in financial performance of commercial

banks in Kenya by a factor of 0.247, a unit increase bank deposits would lead to increase in financial performance of commercial banks in Kenya by a factors of 0.218 and further unit increase in banks size would lead to increase in financial performance of commercial banks in Kenya by a factor of 0.472. All the variables were significant ( $p < 0.05$ ).

### **4.3 Interpretation of the Findings**

From the finding on the Adjusted R squared , the study revealed that that there was variation of 87.9 percent on financial performance of commercial banks in Kenya due to changes in credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size , this clearly shows that 87.9 percent changes in financial performance of commercial banks in Kenya could be attributed to changes in credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size. From the finding of correlation coefficient the study revealed that there was strong relationship between financial performance of commercial banks in Kenya, credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size.

From the finding on the ANOVA statistics, the study found that there was a significance level of 0% which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance value 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 commercial banks in Kenya. The study revealed that the established regression equation was

$$Y = 2.853 - 0.238 X_1 - 0.378X_2 - 0.217 X_3 - 0.295X_4 + 0.247 X_5 + 0.218X_6 + 0.295X_7$$

From the above regression equation it was revealed that holding credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size to a constant zero, financial performance of commercial banks in Kenya would be at 2.853. The study revealed that there was a negative relationship between credit risk, interest rate risk, foreign exchange, liquidity risk and financial performance of commercial banks in Kenya. The study found that there was a positive relationship between capital management risk, bank deposits, bank size and financial performance of commercial banks in Kenya.

## **CHAPTER FIVE:**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

From the analysis and data collected, the following discussions, conclusion and recommendations were made. The researcher had intended to establish the relationship between financial risk management and financial performance of commercial banks in Kenya.

#### **5.2 Summary**

The objective of the study was to establish the relationship between financial risk management and financial performance of commercial banks in Kenya. Secondary Data was collected from Central Bank and Commercial Banks in Kenya and multiple regression analysis used in the data analysis. The study had sought to to establish the relationship between financial risk management and financial performance of commercial banks in Kenya.

From the finding on the Adjusted R squared , the study revealed that that there was variation of 87.9 percent on financial performance of commercial banks in Kenya due to changes in credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size , this clearly shows that 87.9 percent changes in financial performance of commercial banks in Kenya could be accounted to changes in credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size. From the finding of correlation coefficient the study revealed that there was

strong relationship between financial performance of commercial banks in Kenya, credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size.

From the finding on the ANOVA statics, the study found that there was a significance level of 0% which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance value 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 commercial banks in Kenya. The study revealed that the established regression equation was

$$Y = 2.853 - 0.238 X_1 - 0.378X_2 - 0.217 X_3 - 0.295X_4 + 0.247 X_5 + 0.218X_6 + 0.295X_7$$

From the above regression equation it was revealed that holding credit risk, interest rate risk, foreign exchange risk, liquidity risk, capital management risk, bank deposits and bank size to a constant zero, financial performance of commercial banks in Kenya would be at 2.853. The study revealed that there was a negative relationship between credit risk, interest rate risk, foreign exchange, liquidity risk and financial performance of commercial banks in Kenya. The study found that there was a positive relationship between capital management risk, bank deposits, bank size and financial performance of commercial banks in Kenya.

### **5.3 Conclusion**

From the findings it was revealed that there was there was a negative relationship between credit risk, interest rate risk, foreign exchange, liquidity risk and financial performance of

commercial banks in Kenya, thus the study concludes that credit risk, interest rate risk, foreign exchange, liquidity risk negatively affects financial performance of commercial banks in Kenya.

The study also revealed that there was a positive relationship between capital management risk, bank deposits, bank size and financial performance of commercial banks in Kenya, thus the study concludes there was a positive relationship between capital management risk, bank deposits, bank size and financial performance of commercial banks in Kenya.

#### **5.4 Recommendations for Policy**

The study recommends there is need for the management of commercial bank to control their credit risk, through non-performing loan level as it was revealed that credit risk negatively affect the financial performance of commercial banks in Kenya.

There is need for the management of commercial banks in Kenya to maintain the liquidity level at safe level as it was found that liquidity risk negatively affect the financial performance of commercial banks in Kenya .

The management of commercial banks in Kenya should hedge against foreign exchange risk and interest rate risk as it was found that interest rate risk and foreign exchange risk negatively affect the financial performance of commercial bank in Kenya.

The study recommends that there is need for commercial banks in Kenya to increase their size, capital and also their bank deposits as it were found that there was a positive relationship between capital management risk, bank deposits, bank size and financial performance of commercial banks in Kenya.

### **5.5 Limitations of the Study**

The study was limited to establishing the relationship between financial risk management and financial performance of commercial banks in Kenya. The study was limited to 43 commercial in Kenya.

The study was limited to secondary data, which was collected from central banks and bank financial reports. This data was used as obtained and the researcher had no means of independently verifying the validity of the data which was assumed to be accurate for the purpose of the study. The study findings are, therefore, partly subject to the validity of the secondary data used.

The study was able to collected data from 42 commercial banks that were in operation for the last five years; in this study Jamii Bora was not included in the study.

The study was limited to a five years period starting from 2009 to 2013; however 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.

The study was limited to establishing the relationship between financial risk management and financial performance of commercial banks in Kenya. For this reason the other financial institution like insurance companies and microfinance institution were not be incorporated in the study.

### **5.6 Areas for Further Research**

The study recommends that a study should be done on the challenge facing commercial banks in Kenya in management of financial risk management.

The study also recommends that a study should be done on the determinants of financial risk management among commercial banks in Kenya.

The study also recommends that a similar study should be done on relationship between financial risk management and financial performance of Insurance Companies in Kenya.

The study further recommends that a study should be done on relationship between financial risk management and financial performance of Micro Finance Institution in Kenya.

The study also recommends a study should be done on factors influencing financial risk management among commercial banks in Kenya.

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## APPENDICES

### Appendix I: Introductory letter

From: Raymond Muteti Sammy

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 **RELATIONSHIP BETWEEN FINANCIAL RISK MANAGEMENT AND 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 provide the information and for your time and cooperation.

Yours sincerely

**Raymond Muteti Sammy**

Student UoN Kenya

## Appendix II: Data

<b>Name Of The Bank</b>	<b>ROA</b>	<b>CR</b>	<b>DETA</b>	<b>LR</b>	<b>CM</b>	<b>BS</b>	<b>IRR</b>	<b>FER</b>
1. African Banking Corporation Ltd.	0.193	0.160	0.201	0.410	0.045	0.421	0.19	0.16
2. Bank of Africa Kenya Ltd.	0.107	0.086	0.152	0.420	0.017	0.676	0.11	0.09
3. Bank of Baroda (K) Ltd.	0.226	0.130	0.236	0.651	0.034	0.250	0.23	0.13
4. Bank of India	0.423	0.168	0.432	0.806	0.022	0.153	0.42	0.17
5. Barclays Bank of Kenya Ltd.	0.260	0.230	0.312	0.541	0.075	0.586	0.26	0.23
6. CFC Stanbic Bank Ltd.	0.104	0.097	0.162	0.368	0.026	0.754	0.10	0.10
7. Charterhouse Bank Ltd	0.135	0.083	0.145	0.424	0.024	0.692	0.14	0.08
8. Chase Bank (K) Ltd.	0.350	0.270	0.360	0.690	0.012	0.392	0.35	0.27
9. Citibank N.A Kenya	0.350	0.430	0.360	0.278	0.356	1.458	0.35	0.43
10. Commercial Bank of Africa Ltd.	0.162	0.144	0.165	0.394	0.044	0.639	0.16	0.14
11. Consolidated Bank of Kenya Ltd	0.138	0.107	0.145	0.447	0.062	0.551	0.14	0.11
12. Co-operative Bank of Kenya Ltd.	0.110	0.110	0.130	0.330	0.121	0.794	0.11	0.11
13. Credit Bank Ltd.	0.368	0.261	0.376	0.556	0.194	0.929	0.37	0.26
14. Development Bank of Kenya Ltd	0.250	0.210	0.270	0.400	0.131	0.551	0.25	0.21
15. Diamond Trust Bank Kenya Ltd	0.153	0.147	0.184	0.358	0.016	0.484	0.15	0.15
16. Dubai Bank Kenya Ltd.	0.351	0.486	0.357	0.495	0.328	0.987	0.35	0.49
17. Ecobank Kenya Ltd	0.190	0.170	0.190	0.580	0.223	0.900	0.19	0.17
18. Equatorial Commercial Bank Ltd.	0.132	0.101	0.145	0.337	0.216	1.053	0.13	0.10
19. Equity Bank Ltd.	0.220	0.210	0.280	0.400	0.041	0.539	0.22	0.21
20. Family Bank Limited	0.234	0.190	0.235	0.450	0.087	0.839	0.23	0.19
21. Fidelity Commercial Bank Ltd	0.164	0.105	0.175	0.372	0.093	0.462	0.16	0.10
22. Fina Bank Ltd	0.140	0.100	0.140	0.400	0.073	1.328	0.14	0.10
23. First community Bank Limited	0.140	0.100	0.170	0.480	0.140	0.878	0.14	0.10
24. Giro Commercial Bank Ltd.	0.237	0.154	0.249	0.438	0.041	0.392	0.24	0.15
25. Guardian Bank Ltd	0.193	0.136	0.193	0.391	0.107	0.771	0.19	0.14
26. Gulf African Bank Limited	0.153	0.142	0.162	0.289	0.023	0.945	0.15	0.14
27. Habib Bank A.G Zurich	0.403	0.154	0.403	0.788	0.035	0.513	0.40	0.15
28. Habib Bank Ltd.	0.412	0.225	0.417	0.865	0.024	0.401	0.41	0.22
29. I & M Bank Ltd	0.244	0.200	0.487	0.557	0.061	0.659	0.24	0.20
30. Imperial Bank Ltd	0.199	0.141	0.212	0.288	0.055	0.542	0.20	0.14
31. Kenya Commercial Bank Ltd	0.963	0.094	0.974	0.006	0.217	0.922	0.21	0.20
32. K-Rep Bank Ltd	0.761	0.077	0.970	0.072	0.236	0.969	0.23	0.22
33. Middle East Bank (K) Ltd	1.028	0.034	0.943	0.145	0.081	0.967	0.52	0.39

34. National Bank of Kenya Ltd	1.303	0.272	0.940	0.033	0.091	0.934	0.36	0.19
35. NIC Bank Ltd	1.183	0.187	0.832	0.349	0.202	0.933	0.15	0.15
36. Oriental Commercial Bank Ltd	0.541	0.091	0.622	0.035	0.225	0.713	0.35	0.30
37. Paramount Universal Bank Ltd	0.862	0.138	0.823	0.028	0.196	0.922	0.46	0.22
38. Prime Bank Ltd	1.067	0.263	0.912	0.036	0.052	0.925	0.14	0.09
39. Standard Chartered Bank Kenya Ltd	1.701	0.221	0.892	0.115	0.222	0.934	0.14	0.11
40. Trans-National Bank Ltd	0.809	0.215	0.946	0.018	0.102	0.621	0.70	0.50
41. UBA Kenya Bank Limited	1.370	0.092	0.922	0.035	0.343	0.708	0.81	0.76
42. Victoria Commercial Bank Ltd	1.079	0.186	0.968	0.100	0.013	0.941	0.23	0.21

### **Appendix III: List of Licensed Commercial Banks in Kenya as at 31.12.2013**

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

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

**Source: Central Bank of Kenya** ([www.centralbank.go.ke](http://www.centralbank.go.ke)).