EFFECTS OF FINANCIAL RISK MANAGEMENT ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

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

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

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DEDICATION

I dedicate this project to future researchers in the field of financial risk management and my family who have been very supportive during my study.

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ACRONYMS AND ABBREVIATIONS

CBK - Central Bank of Kenya

CROs-Chief Risk Officers

ERM - Enterprise Risk Management

IPPF - International Professional Practices Framework (for Internal Auditing)

ISO - International Organization for Standardization

ABSTRACT

The study sought to determine the effects of financial risk management on financial performance of commercial banks in Kenya. This study adopted a descriptive research design to test the hypothesis over the five year period (2011 to 2015). The population for this study was the 43 commercial banks in Kenya, as at 31st December 2015 including the one that was put under receivership during that financial year. The banks had an aggregate total asset base of Kshs 3.6 trillion and recorded a profit before tax of Kshs 76.7billion as at June 2015. Secondary data from audited financial statements of the 43 commercial banks was collected for the five years period. The central bank requires all banks to publish their audited financial statements publicly on an annual basis. This research employed descriptive statistics to analyze the data collected. The findings of the study indicated that all banks were performing well. There were however big variations in their performance with some posting very high ROA compared to others. The study also found that on predictors of financial performance the variables that had significant influence on each other were bank deposits and liquidity risk (P=0.00), Bank deposit and capital management risk (P=0.031), bank deposit and interest rate risk (P=0.000), liquidity risk and capital management risk (P=0.013), Liquidity risk and bank size (P=0.001), capital management risk and Bank size (P=0.000), capital management Risk and interest rate risk (P=0.046). The study however concluded that the credit risk and foreign exchange risk did not have any significant correlation with any of the variable with (P>0.05). The study concluded that the predictor variables that had an influence on the ROA of the banks were bank deposit with a (P=0.000) and liquidity risk with (P=0.030) while the other predicator variables did not have a significant interest with all having a P>0.05. These include the Credit Risk, capital management risk, bank size and foreign exchange risk. The study found out that as the bank deposits increase the performance of the bank increase, the relationship of the two is infinite, the more it increases the better the bank performs, however banks have an optimal liquidity and when the firm exceeds that point, the performance drops. The banks should ensure that they keep the liquidity at the optimal level. The study recommends that a research should be done on relationship between financial risk management and financial performance of Micro Finance Institution in Kenya and the study recommends that a study should be done on the challenge facing commercial banks in Kenya in management of financial risk management.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The International Professional Practice Framework for internal auditors indicates that immature risk management systems yield little return on investment and mainly operate as compliance cost or a commitment that is more concerned with the recording of risks instead of their effective treatment (Practice Guide, 2010). It is, therefore, necessary for commercial banks to regularly evaluate the effectiveness of their financial risk management frameworks. Effectiveness is the capability of producing the desired result. One of the bottom line objectives of commercial banks is to make profits and have a sustainable financial performance that adds to the wealth of its shareholders. Formalized financial risk management has been adopted recently by Kenyan commercial banks under the guidance of the central bank. Iqbal and Mirakhor (2011) notes that a robust risk management framework can enhance financial performance of organizations by helping them reduce their exposure to risks.

Globally, banking activities are routinely performed via provision of debts to clientele (Gande, 2008). Risk management is an integral part of commercial banks business activities as they are exposed to different risks in pursuit of their objectives. Fundamentally, the existence of commercial banks is based on how well they manage the financial risks facing their operations. Banks, therefore, aim at achieving an acceptable equilibrium between risk and return whilst minimizing possible unacceptable outcomes on their performance. Pyle (1997) noted that risk management by commercial banks was

inadequate. Pyle emphasized the importance of uniform monitoring and regulating risks in banks.

The financial crunch of 2007-2008 posed the danger of collapse on the large financial institutions leading to downturn in economic activities and resulting to the great recession of 2008-2012.The recession further contributed to the European sovereign debt crisis (Brookings, 2009). According to Brookings (2009), the crisis resulted from factors such as easier provision of loans to subprime borrowers and overvaluation of subprime mortgages. The active phase of the crisis was evident through a liquidity crisis. Banks had established risk management frameworks, but the tools did not prevent the financial crisis. It is, therefore, important for banks to holistically and regularly evaluate the effectiveness of financial risk management in achieving their financial performance objectives.

Quality governance systems require independent appraisal on the effectiveness of risk management (IPPF, 2010). The reviews aim at improving the risk management framework and providing assurance whether risk management is promoting realization of the desired organizational goals.

In Kenya, Dubai Bank and Chase Bank were put under receivership in August 2015 and April 2016 respectively (CBK, 2015 and 2016) due to various malpractices which could have been mitigated if the risk management framework was useful. It was attributed to tighter regulatory stance which saw National bank's credit loss provisions revised from Kshs 525.3million to Kshs 3.72 billion (Business Daily, April 7th, 2016). The

restatement reduced the lenders' reported profits of Kshs 2.2 billion for third quarter ending September 2015 to a loss of Kshs 1.15 billion for the full period.

Therefore, it is important to measure the effectiveness of risk management in the banking sector as what gets measured gets managed. Commercial banks need to effectively identify and manage their financial risks to promote sustainable and healthy financial performance. Whereas other studies have focused on the correlation between risk controlling and financial performance, this study will determine the effectiveness or success of financial risk management practices in promoting achievement of the financial performance objectives of commercial banks in Kenya following the revision of risk management guidelines by CBK in January 2013.

1.1.1 Financial Risk Management

Financial risk management is the practice of utilizing financial instruments to control exposure to various uncertainties facing a commercial bank. The exposures facing commercial banks are categorized as risks. Risk is defined as uncertainty surrounding future objectives or happening (Banks, 2004). Financial risk management is a process that pursues to eradicate, decrease and control uncertainties facing banks (Anderson and Terp (2006).Risk management follows a prioritization process by putting more focus on risk with the greatest impact on objectives and high likelihood of occurrence whereas risks with lower likelihood of occurrence and low impact on objectives are handled later (Kiochos, 1997, and Stulz, 2003). Commercial banks practice financial risk management to promote profitability and create wealth to their shareholders. Effective financial risk management increases the chances of banks to achieve desired levels of financial performance, create wealth and comply with legal and regulatory requirements.

According to ISO 31000 (2009), the process of financial risk management involves setting objectives, risk identification, risk assessment, control activities, monitoring and communicating risk exposures on time to reduce or eliminate the exposures to loss by the banks. The process, if well engaged, can assist banks to realize their ultimate objective of improved financial performance.

According to Greuning & Bratanovic (2009), financial risks comprises of two types of risks; Traditional banking risks which include credit and solvency risks and treasury risks which are categorized into liquidity, interest rate, currency and market risks. This study will evaluate the effectiveness of five broad types of financial risk management practices, according to Greuning & Bratanovic (2009), on financial performance of commercial banks in Kenya.

Credit risk is the possibility that a debtor or borrower will not meet his repayment commitments to a lender. It is the likelihood that a borrower will not honor the credit agreement with a lender (Greuning & Bratanovic, 2009). It is measured by the proportion of nonperforming advances to total loan book (Julie and Rebert, 2001).The ability of the bank to effectively measure credit risk is dependent on the quality of management information systems. Larger banks tend to adopt more detailed and refined internal risk rating systems. The risk rating system should categorize loans advanced into similar classes depending on their risk ranking. Common rating systems are based on five groups of normal, watch, substandard, doubtful and loss.

Interest rate risk is the uncertainty on interest rates as a result of unpredictable movements in interest rates which may expose the bank to unfavorable interest rates.

When interest rates change, the current value and timing of expected future cash flows change (Basel Committee, 2015). An organization with more corporate debt is therefore highly exposed to changes in interest rates (Fitzpatrick, 2004).Movements in interest rates influences financial performance of commercial banks by changing the expected net interest income and expenses.

Foreign exchange risk is the uncertainty associated with business transactions denominated in foreign currencies. Foreign exchange rates change on a daily basis and cannot be determined with certainty. Possible changes in foreign exchange rates result in a variations in the amount of expected cash outflows and inflows. Foreign currency risk is measured transaction exposure to an organization (Glaum, 2000). The prospect for loss arises from revaluation of foreign currency positions (CBK, 2013)

Capital management risk is the probability of changes in the value of a company's investment. The cost of capital directly or indirectly influences banking activities and is a crucial determinant of a bank's lending capacity (Greuning and Bratanovic, 2009). Financial institutions should essentially have funds to cover the variance between anticipated losses in a given duration and worst case scenarios over the same time period. Basel accord sets the minimum risk based standard for capital adequacy at 8 percent of the risk-weighted assets.

Liquidity risk represents a bank's ability to manage funding changes on credit financing and investment portfolio (Greuning & Bratanovic, 2009). The consultative paper (Basel, 2008) further affirms that practically all financial transactions have implications on liquidity of banks. Liquidity management is a daily activity in the banking business and is

accomplished through administration of a bank's assets. Organizations should be capable of establishing their optimal cash management requirement levels within the short term and long term and under various stress scenarios.

1.1.2 Financial Performance

Financial performance consists of many different methods of assessing how well an organization is using its assets to generate income (Richard, 2009). Toutou (2011) defined financial performance as a broad measure of how well a bank generates revenues from its capital. It can be measured by evaluating a firm's profitability, solvency, and liquidity. Profitability is the definitive indicator of the net outcomes of policies and activities undertaken by commercial banks and portends its stability and growth in the preceding and future years (Greuning & Bratanovic 2009).

To effectively analyze the financial performance of banks, there are various indicators which are adopted. The widely used measures of financial performance include the Return on Assets (ROA), which measures return per each invested unit, and Return on Equity (ROE), which measures accounting earnings for a period per unit of shareholders' equity. Return on equity is the widespread measure of financial performance and suggests a straight valuation of the financial return of a shareholder's investment in a company.

1.1.3 Financial Risk Management and Financial Performance

Risk management has recently focused on developing control activities and ensuring regulatory compliance rather than improving financial outcomes (Banks, 2004). Banks (2004) noted that controlling and managing risks leads to increased value of the firm. Therefore, their primary motive is to reduce financial risk exposure that may reduce

profits (Fitzpatrick, 2004). Mitigating uncertainties enables the company to perform better forecasts on income or cash flows (Drogt & Goldberg, 2008).

Another reason for the management of financial uncertainties is to inhibit monetary difficulties and related costs (Drogt & Goldberg, 2008). The attention of risk management should, therefore, be in line with the real monetary situation of the company. According to Stulz (1996), risk management can be utilized to gain a competitive advantage by a firm and ultimately improve profitability. Dynamic business practices characterize the financial industry as well as a demanding regulatory environment. Banks therefore require an unprecedented perspective on financial risk management.

Financial risk results from uncertainties associated with defaults on loans advanced, volatility of interest rates, liquidity management and changes in foreign exchange rates. Decisions involving banking activities therefore have an element of risk which has effects on the overall financial performance of the banks as measured through various parameters which includes net income, return on assets and return on equity Athanasoglou et al (2005). Babakovia (2003) noted that the ability of a bank to identify, assess, control and monitor risks impacts on the profitability of the entity. Bikker & Metzmakers (2005) concluded that the main goal of financial risk management framework is to promote financial performance in banks as risk management promotes timely cautionary system of checking relevant indicators that may derail the company from attaining its desired financial performance goals.

It is, therefore, imperative that banks manage financial risks to ensure stable and improved financial performance. Independent assurance to stakeholders on the efficiency of risk management framework is of high importance to provide useful information in achieving organizational objectives. IPPF (2010) outlines three approaches that may be used in determining the effectiveness of a risk management process; process elements approach, fundamental principles approach and maturity model approach. A complete risk management framework offers a clear link between the set objectives, established controls, achievement of the objectives and assurance across all levels of the organization.

1.1.4 Commercial Banks in Kenya

The Central Bank of Kenya defines a commercial bank as a business which carries on, or proposes to conduct banking business in Kenya. Commercial banks in Kenya are governed by the Banking Act Chapter 488 (current edition issued in September 2015), the Central Bank of Kenya Act (Cap, 491) and frequent circulars and guidelines issued from time to time. The regulator has the duty to ensure commercial banks maintain the required liquidity limits, remains solvent and operate efficiently and effectively for the benefit of all stakeholders.

The banking sector registered improved performance in 2015 by recording a 20 percent growth in total net assets from Kshs. 3 trillion in June 2014 to Kshs. 3.6 trillion in June 2015 (CBK, 2015).The sectors profits before tax increased by 5.6billion from the previous year and stood at Kshs 76.7 billion. The industry further recorded an improved loan book of Kshs 2.1 trillion. The gross non-performing loans increased by 21.9 percent in June 2015 with 10 out of 11 sectors of the economy registering increases in

nonperforming loans. The increase in nonperforming loans was attributed to insecurity in the country, challenging business environment and unfavorable weather conditions experienced during the 2015 financial year. The sector suffered a setback when three commercial banks were put under receivership within a span of nine months in the 2015/16 fiscal year.

Financial risk management of commercial banks in Kenya is guided by the prudential guidelines. The banks are required to submit audited annual reports and disclose various identified financial risks in the reports by 31st March of the following year. The banking sector has played a pivotal role in employment creation and income generation with a total of 36,923 employed staff as at December 2014(CBK, 2014).

1.2 Research Problem

The daily operations of commercial banks involve taking risks and effectively managing them to achieve their desired objectives. They manage internal as well as external risks that present opportunities and threats to their businesses. This requires them to fully integrate risk management practices into their daily operations and throughout the organization. The central bank as well as other stakeholders pressures the banks to effectively manage their risks and to transparently report their financial performance across the various risk management parameters. Banks (2004) noted that the organization cannot eliminate all the risks and the residual risks should be actively controlled to create value to stakeholders.

According to Greuning and Bratanovic (2009), the objective of commercial banks is to increase the value of a bank which is largely determined by its profitability and risk

levels. This is achieved through robust financial management comprising of financial forecasting, risk management, management information systems and established internal controls. Banks that effectively manage their financial risks increase the chances of achieving their financial performance objectives. The responsibility for various risk management processes must be allocated and success of risk management process ascertained. According to the IPPF (2010), internal auditors are required to assess and give assurance on the effectiveness of risk management frameworks to determine whether it's successful in helping the organization achieve its objectives. Financial risk management enables banks to withstand competition, survive in the highly competitive market, promote regulatory compliance and achieve desired financial performance goals.

Stulz (2008) noted five major ways in which financial risk management systems can breakdown. This comprises of mis-measurement of known risks, failure to account for known risks, failure to communicate risks, failure to effectively monitor and control risks and failure to apply the appropriate risk measurement metrics. The Central bank supervision report (2005) indicated that many banks that collapsed in Kenya in the late 1990's resulted from poor management of credit risks. The regulator revised and re issued risk management prudential guidelines in January 2013. Despite the efforts, three commercial banks were put under receivership in financial year 2015/16. For instance, despite having healthy balance sheets, Chase Bank and Imperial Bank were placed under receivership by the regulator. This is an indicator of breakdown in the financial risk management system. The breakdown can be manifested in various ways which include; severe exposures in form of liquidity risk, increasing non-performing loans, fraudulent activities and mismanagement of the entities. This can be greatly minimized through

regular evaluation of the effectiveness and efficiency of financial risk management system and ensuring continuous improvement to the system.

Muteti (2013) carried out a study on the relationship between financial risk management and financial performance and concluded that there was a negative relationship between credit risks, interest rate risk, foreign exchange risk, liquidity risk and financial performance. He further revealed a positive relationship between capital management risk, bank deposits, bank size and financial performance of commercial banks in Kenya. The study was limited to the period between 2009 and 2013 before the Central bank of Kenya revised and reissued the financial risk management prudential guidelines. Additionally, the study was not clear on whether financial risk management, when employed holistically, was effective in promoting financial performance of commercial banks when employed holistically.

This study sought to investigate the effects of financial risk management on the financial performance of commercial banks in Kenya. This was to give an indicator of whether financial risk management while employed holistically plays the desired role in helping banks achieve their financial performance objectives. The study further confirmed the effects on the implementation of the revised risk management guidelines by the central bank on the financial performance of banks. A comprehensive risk management framework should provide a clear end to end link between the financial risk strategies and achievement of financial performance objectives.

1.3 Research Objective

Determine the effects of financial risk management on the financial performance of commercial banks in Kenya.

1.4 Value of the Study

The study provides an understanding on the effectiveness of financial risk management on the financial performance of commercial banks in Kenya. Risk management concept is still at a nascent stage in Kenyan banking industry, with revised prudential guidelines having been issued in 2013.Banks have made efforts to comply, but there is a need to embed the risk management culture in the operations of commercial banks to prevent cases where risk management is handled as a compliance and reporting activity (Timothy and Tse, 2016). The study provides useful contribution for commercial banks to understand better how financial risk management can be used to improve financial performance. It provides valuable information to regulators to design targeted risk management policies and programs that support commercial banks in managing financial risks.

The study adds value to Researchers and Scholars by contributing to the literature on the effectiveness of financial risk management on financial performance of commercial banks in Kenya. The findings benefit the academicians, who find useful research gaps for further research in future. The research is useful in enabling banks to manage financial risks with an objective of achieving robust financial management, comply with relevant legal and regulatory requirements, and improve identification of opportunities and threats in their lending business.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter critically presents the models and other available literature relating to the study topic. The chapter is organized in three sections. The first section covers the theoretical framework on financial risk management. The second section includes the determinants of financial performance including financial risk management, bank deposits, and bank size. The third section covers the empirical studies on the effects of financial risk management on the financial performance of commercial banks in Kenya.

2.2 Theoretical Review

This study will be based on the agency theory, theory of optimal capital structure, new institutional economics theory, and maturity model approach theory as it strives to determine the success of financial risk management in promoting acceptable financial performance by commercial banks in Kenya.

2.2.1 Agency Theory

According to Shapiro (2005), the agency theory was proposed and created individually but approximately simultaneously by Ross (1973) and Mitnick (1973). Mitnick (1973) applied the theory in political science while Ross (1973) applied the theory in economics without the knowledge of Mitnick (1973) study. The theory outlines the interactions and relationships between principals and agents in organizations and business setups. The theory aims at resolving problems that may exist between principals and agents who are hired to act in the best interest of the principals (Livia & Sardar, 2007). It further analyzes

the division of ownership and control and managerial motivation factors in firms. The primary agency relationship influences the attitude of management attitudes towards risk taking and risk management options (Smith & Stulz, 1985). The Theory notes that there are possible differences of importance between the owners of businesses, the management they have employed to run their businesses and creditors. The differences are caused by variances in earning distribution on the various classes of stakeholders. This may influence whether a firm will engage in high-risk activities or will not engage in some projects with positive net value (Mayers & Smith, 1987).

Stulz (1984) affirmed that company management are employed to work for the interest of the owners. Stulz, therefore, concludes that managers should concentrate with both projected profitability of the company and eventual distribution of returns to the owners. According to Livia & Sardar (2007), managers have a preference to avoid risky projects with an aim of minimizing the inconsistency of returns. On the other hand, risk management saves on agency cost for the business owners through reduction of uncertainty on expected returns of their companies. Owners employ risk management to ensure congruent of their goals and the goals of the managers (Livia & Sardar, 2007)

Agency theory provides solid sustenance why firms should engage in risk management to address the divergent interests of the owners and management (Livia & Sardar, 2007).It is common for managers to prefer activities with low uncertainties and low returns whereas owners may want the firm to engage in high risk projects that result in high returns and reduces the payback period on their investment. Risk management is therefore an important tool in aligning the interests and objectives of owners and management (Stulz, 1984)

2.2.2 Optimal Capital Structure Theory

The theory was developed and intensely studied by Modigliani and Miller (1958). They revealed that the fair worth of a company is resolute by its earning power and the fundamental risks on its assets. Modigliani and Miller (1958) asserted that the value of the company depends on its profitability rather than its capital structure. The theory affirms that there exists an ideal ratio of debt to equity for the firms. The optimal ration results from a balance between costs of insolvency and savings on tax on interest payments (Kim, 1978). Bankruptcy ensues when the fixed commitments to creditors cannot be met. Insolvency is associated with direct and indirect costs. Direct costs are the straight forward costs which include legal fees to incurred and accounting fees during the process. Indirect costs are the opportunity costs as a result of operational disruptions and firm-supplier relationships that are associated with the transfer of ownership or control (Barker, 1976). Warner (1977) and Weiss (1990) emphasized the importance of insolvency costs to a business which prevents financial distress by ensuring the right mix of debt equity financing.

Allen and Santomero (1997) suggested that bankruptcy cost is more essential in regulated industries where significant financial difficulties may lead to revocation of the operational license. The theory therefore offers a significant justification for companies to engage in risk management. Stulz (1996) suggested that the estimated current value of bankruptcy costs is revealed in a firm's up-to-date market value especially where shareholders view bankruptcy as a real possibility. Stulz further states the importance of a risk management program that eliminates the possibility of bankruptcy with minimal cost resulting to increase in the value of the firm.

2.2.3 New Institutional Economics Theory

The theory was first developed by Coase (1937), in his study on the nature of the firm and later used it in the study on the problem of social cost (1960). The theory envisages that risk management practices should be established by organizations or set by the organizations within a market or industry (Williamson, 1998). Further, the theory denotes that risk management is an important element in binding contracts among two sides. Williamson (1998) affirms that companies operating in controlled or regulated sectors like the banking industry have guideline which ties the top management to avoid discretion in decision making. Smith & Watts (1992) exhibited the significance of regulation in determining the financial strategy of a company. Smith and Watts (1992) therefore assert that controlled companies have higher probability of hedging substantial risk due to tighter scrutiny and lower contracting costs. Companies can hedge cash flows to avoid a shortfall in resources that may be detrimental to the operations of the company. Financial risk management is positively related to measurement of the success of a firm's investment strategies.

2.2.4 Maturity Model Approach Theory

The theory was developed from the field of software development and was originally developed to describe how well the behaviors, practices and processes of an organization can reliably and sustainably produce the required results (Nolan, 1973). The aim of maturity models is to give a guideline on the stages of progress paths. This includes the features of each level and the reasonable relationship between the phases (Kuznets, 1965). The model is based on premise that the success and quality of an organization's risk management process should progress and improve over time.IPPF (2010) notes that

undeveloped risk management structures operates as an imposition that only succeeds in promoting reporting of risks rather than with their actual treatment. Effective risk management systems are developed over time, with an additional value being provided at each step in the maturation process (Becker et. al, 2009). The model provides an analysis of the level of advancement of an organizations risk management process on the progress curve (Rosemann and de Bruin, 2005).

A fundamental aspect of the model is the associating of risk management performance and progress to a performance measurement. It provides information on improvement of risk management. The model notes that there are five levels of improvement of processes as the organization moves up these five levels. The theory categorizes the maturity levels of organizational processes as follows; i) initial stage - which is the first stage in use of a new or undocumented repeat process, ii) Repeatable level- where the process is at least documented and repeating the same step is attempted, iii) Define stage- where the process is confirmed as a standard, iv) Managed stage-The process quantitatively managed in accordance with agreed upon measurements, and v) Optimizing stage-where process control involves deliberate process improvement to achieve desired results. However, maturity models have been subject to a lot of criticism. They are regularly considered as level by level procedures that overgeneralize actuality and lack empirical foundation (Benbasat et al., 1984).

2.3 Determinants of Financial Performance

Profitability is one of the crucial measurements of financial performance. It mainly categorizes factors affecting commercial banks performance into two; internal and external factors, (Sehrish et al., 2011). The bank's policy objectives and management

actions largely influence internal factors (Staikouras & Wood, 2004). External factors are related to the sector the firm operates in and they may be universal or reflected in the wider economic, governmental and legal environments (Athanasoglou et al., 2006). Risk management is one of the major internal factors that commercial banks use to achieve their desired financial performance objectives.

Peng (2006) concluded that performance of commercial banks is mainly influenced by firm level factors like cost controlling ability and risk management proficiency. Guru et al (2001) revealed that efficient management of banks was an important factor that influences high profitability of banks. Further studies by Smirlock (1985) revealed that there was a substantial correlation between bank size and its profitability.Ognore (2012) concluded that financial performance of banks in Kenya was mainly driven by decisions made by the Board and Management while macroeconomics variables had insignificant contribution.

2.3.1 Financial Risk Management

According to Greuning & Bratanovic (2009), financial risks are categorized into traditional risks and banking risks. Traditional risks include traditionally accepted threats emanating from balance sheet and income statement structure which include credit and solvency risks. Treasury risks are related to the capital of the business and include liquidity, interest rate, currency and market risks. The banking sector has emphasized the significance of financial risk management in the recent past (Glaum, 2000). This is because they influence business activities to a great degree (Triantis, 2000). Financial risks can be of different forms.

There are outward financial risks which depend on changes in financial markets and also in-house financial risks resulting from within the organization itself (Eichhorn, 2004). External financial risks may be attributed to uncertain factors of transaction exchange, product prices and interest rates (Schönborn, 2010). This study will assess five types of financial risks categorized as follows; interest rate risk, credit risk, capital management risks, liquidity risks and foreign exchange risks. These represent the major categories of financial risks according to Greuning & Bratanovic (2009).

Financial risk management activities in commercial banks are carried out at various organizational levels including the strategic level. This encompasses various activities which includes risk identification, risk assessment, risk measurement, risk monitoring and controlling. The overall responsibility of financial risk management in commercial banks rests with the Board of Directors. The Board should therefore outline the financial risk management strategies and formulate clear policies and procedures towards effective management of risks.

2.3.1.1 Interest Rate

This is the cost of advancing or borrowing funds (Hoyt, 1994).Banks are required to have clearly defined policies and procedures for controlling interest rate risk (Greuning and Bratanovic 2009). In the 1980s and 1990s, ‘Gap Model’ was commonly used by financial organizations to evaluate exposures to interest rate risk. Profitability rises as interest rates rise due to a greater margin between the central bank's rate and the rates that are charged by a bank to its customers.

Financial performance of commercial banks is exposed to interest rates movements. Some banks issue interest bearing deposits so that their profits decrease when rates go up resulting from increase in the compensation to depositors. The interest rate exposure affects banks cash flow and consequently affects their ability to lend if external funding if expensive. It is therefore imperative for commercial banks to manage the interest rate risks facing them to enable them achieve the desired profitability levels.

2.3.1.2 Liquidity

Liquidity risk originates from the likelihood of an organization being unable to tackle uncertainties resulting from changes in its cash inflows and outflows. Banks face the risk of loan defaults which may become difficult for them to raise funds to meet possible increase on demand for loans. Black, Wright and Bachman (1998) defined liquidity ratios as the sum of funds that a company may have at its disposal to meet their maturing obligations. Higher liquidity ratios are termed healthy to the business and firms with high debt levels and low liquidity are more likely to fail.

Commercial banks measure liquidity adequacy by their ability to obtain funds promptly and at a reasonable cost according to Greuning & Bratanovic (2009).Greuning & Bratanovic further asserts that the price of liquidity is a function of market conditions and the markets perception of the inherent riskiness of the borrowing institution. Basel Committee (2008)observed that liquidity risk management is of high importance because a liquidity shortfall at a single institution can have systemic repercussions to other financial institutions.

Liquidity compensates banks for anticipated and unforeseen balance sheet oscillations and makes available funds for growth (Greuning & Bratanovic, 2009). Devinaga (2010) notes that banks are under regulation to and must adhere to determined thresholds of liquidity asset. They further argued that regulation ensures banks always hold sufficient liquidity to deal with possible bank runs.

Devinaga (2010) further reiterated that a bank assumes the status of highly liquid if it has been able to amass enough cash and is in possession of other liquid assets that can quickly be converted to cash. To capture liquidity ratio in profitability model, Devinaga Rasiah (2010) employed the loan to deposit ratio.

2.3.1.3 Capital Adequacy

It refers to the sufficient amount of banks capital that can absorb the shock that may arise in the course of the business. Havrylchyk et al., (2006) in his studies indicated that there is a positive influence of capital on profitability. However, studies of Hoffmann, (2011), showed a substantial negative impact of money on the profitability of the bank. The fact that there is contradicting empirical evidence shows that when a company has a higher capital ratio, it is likely to suffer lower profitability. This implies that setting up high regulatory capital may have adverse effects on profitability and ultimately bank performance.

Greuning & Bratanovic observed that availability of capital to a financial institution should never be a substitute for bad management, poor risk management, weak internal controls and poor governance. The amount of available capital to a commercial bank as well as the cost of obtaining the capital is a crucial element in determining a banks competitive position. Banks facing capital shortage or with high cost of obtaining the

capital risks losing business to their competitors and hence capital is a fundamental element in banks soundness.

Basel 1 Accord outlined the required capital to a bank, parameters of measuring risk exposure and guidelines stipulating the level of capital to be maintained. It set the lowest risk-based standard for capital adequacy at 8 percent of risk-weighted assets. In their study, Devinaga Rasiah (2010) and Vong et al. (2009) argued that capital also serves as a source of funds to the banks along with deposits and borrowings.

They maintained that capital structure, which includes shareholders' funds, reserves and retained profit, influences profitability because of its effect on leverage and risk. Molyneux (1992) further suggested that those banks with the high level of equity are able to reduce their cost of capital which impacts positively on their profitability. Karkrah and Ameyaw (2010) presented evidence which revealed that the equity ratio which is the measure of the capital strength of the banks displayed a positive relation with the banks ROA

2.3.1.4 Bank Size

The ability of the bank to grow through profitability can be continued up to a given limit beyond which there is negative profitability. Diversification through noninterest income enhances banks profitability. Other studies indicate that broadening of the bank transactions does not automatically translate into increased bank profitability (Acharya et al., (2006), De-Long (2001) and Katherine, (2003).They therefore suggest that optimum level of non-interest income activities must be set.

All commercial banks are not the same and size appears to be a key determinant of various behaviours of banks. Firstly, big banks are able to attract more deposits and lend

more money as compared to their smaller compatriots. Additionally, big banks tend to be more leveraged than the smaller ones. Finally, big banks tend to rely more on short term liquidity markets than the smaller banks. The size of commercial banks is therefore a crucial factor in determining their overall financial performance.

Devinaga Rasiah (2010) included market share in the profitability model as an external determinant. He reasoned that if commercial banks could be able to expand their market share they may as well be able to increase their income through increased market share. Karkrah and Ameyaw (2010) revealed that market share can be used to realize prospective economies or diseconomies of scale in the banking sector. Devinaga Rasiah (2010) stressed that one has to make a choice between deposits and assets as a proxy of banks market share as both deposits and loans represent commercial banks output.

2.3.1.5 Deposits

Deposits consist of the largest proportion of a bank's total liabilities (Greuning and Bratanovic, 2009). The composition and stability of the deposit base is a critical factor to the financial success of any commercial bank. Greuning (2009) further suggests that some items within the deposit structure are intrinsically more risky as compared to others. In most cases, deposits are the most inexpensive sources of funds for banks and there contribute positively towards profitability.

The more deposits a commercial bank can collect, the superior is its aptitude to advance more loans and consequently make profits (Devinaga Rasiah, 2010). There exists a significant positive relationship between ROA and total liability to total assets as determined by Husni (2011). To capture deposits in the model, Vong et al. (2009) presented the effect of deposits (DETA) on profitability as deposits to total assets ratio.

2.4 Empirical Review

Studies on financial risk management and financial performance have been conducted previously. According to the studies reviewed, there is evidence of risk management practices aimed at achieving a set of particular goals. Some firms focus on a constricted set of quantifiable happenings that impends premeditated objectives (Tufano, 1996). Other researchers studied financial risk management from the perspective of addressing adverse uncertainties on given objectives (Woods, 2009; Jordan, Jorgensen, and Mitterhofer, 2013). Risk management programs calls for participation of all personnel and commitment from top management.

Pagach and Warr (2010) studied the outcome of adopting risk management on the performance of the company by reviewing how financial, asset and market characteristics change around the time of ERM adoption. A sample of 106 businesses was used. They concluded that companies that had implemented ERM experienced a decrease in stock price instability. Further, companies hiring chief risk officers exhibited increased asset capacity, improved market-to-book ratio and a decline in earnings volatility. These researchers established a negative relationship between the change in firms' market-to-book ratio and earnings volatility. Pagach & Warr (2010) overall results did not find satisfying evidence that risk management is value adding.

Siba (2012) did a study with an aim of finding out the link between financial risk management practices and financial performance of commercial banks in Kenya performance. The study employed questionnaire method for the primary data collection, while secondary data was obtained from the CBK annual supervision reports. Siba concluded that all banks in Kenya had a formal risk management system in place and had

similar risk management structures established. He found out that the banks used adequate levels of risk monitoring and information management systems and had established similar internal controls. There was a disparity between various banks on the responsibilities for ascertaining, management and controlling risks as well as backup of system and data files. Siba concluded that banks had highly effective risk management practices, and there was a strong correlation between commercial banks performance and efficiency of their risk management practices. The study did not identify the effects of the various correlation variables in promoting financial performance of commercial banks and was done before the issuance of the uniform risk management guidelines for the banking industry.

Wanjohi (2012), in his study, demonstrated that Kenyan banks were practicing sound financial risk management which had a positive correlation to their financial performance. The objective of the study was to analyze the effects of financial risk management on financial performance of commercial banks in Kenya. A self-administered questionnaire was used in all the banks and multiple regression analysis applied in data analysis. The findings were presented in the form of tables and regression equations. The study recommended that banks should devise present risk measurement techniques. The study was done before the introduction of the revised risk management guidelines which were issued in 2013 and did not clearly outline the effects of correlation of various variables on financial performance.

Ongore and Kusa (2013) found out that the financial performance of commercial banks in Kenya was being determined by the management and the board of a company whereas the macroeconomic factors have an insignificant contribution. The study adopted a linear

multiple regression model and generalized least square on panel data to estimate the parameters. The study found out a weak relationship between financial performance and risk management. The empirical review was not clear on the relationship of risk management and financial performance.

Kamau (2010) conducted a study on the implementation of risk management by commercial banks in Kenya. A census survey was conducted for all the licensed banks operating in Kenya. The study objective was to identify the risks that commercial banks face. The study also looked into the practices that the banks take to reduce the likelihood of risk. It was followed by examining the challenges that commercial banks face while trying to adopt the risk management strategies. It was found that many banks apply the qualitative and quantitative methods to determine the level of risk. The most applied technique in measuring risk was found to be scenario analysis. Kamau further identified the main challenges facing implementation of risk management in Kenya which consisted of budget constraint which means that companies are not always in a position to get the required funds to mitigate risk. Kamau noted that risk management is a complicated process which requires a high level of training which is costly. It was shown in a study done by most banks that have risk management structures. The study was done when risk management was unstructured in the Kenyan banking sector.

Njeri (2010) conducted a survey on strategic risk management practices by large commercial banks in Kenya. The research was a census survey of 13 large banks in Kenya. The study found out that banks have taken 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.

Mwangi (2012) did a study on the effect of risk management practices on the financial performance of commercial banks in Kenya. The objectives the study was 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 obtained on the financial performance of the banks from their annual audited reports. The research concluded that there was evidence that risk management and the related practices are considered highly significant towards the operations and financial performance of banks. This was attributed to the guidelines issued by the Central Bank of Kenya as well as the nature of the banking sector. Commercial banks were also found to have documented risk management policies and procedures which had been communicated throughout the organization. The study also concluded that some risk management practices do have a significant effect on financial. The study was not clear on the effectiveness of financial risk management on the financial performance of commercial banks in Kenya.

In his study on the relationship between financial risk management and financial performance of banks in Kenya, Muteti (2013) concluded that there was a negative relationship between credit risk, interest rate risk, foreign exchange, liquidity risk and financial performance of commercial banks in Kenya. Muteti (2013) further found that there was a positive relationship between capital management risk, bank deposits and bank size and financial performance of commercial banks in Kenya. Secondary data was collected and multiple regression analysis adopted in data analysis. The study was not

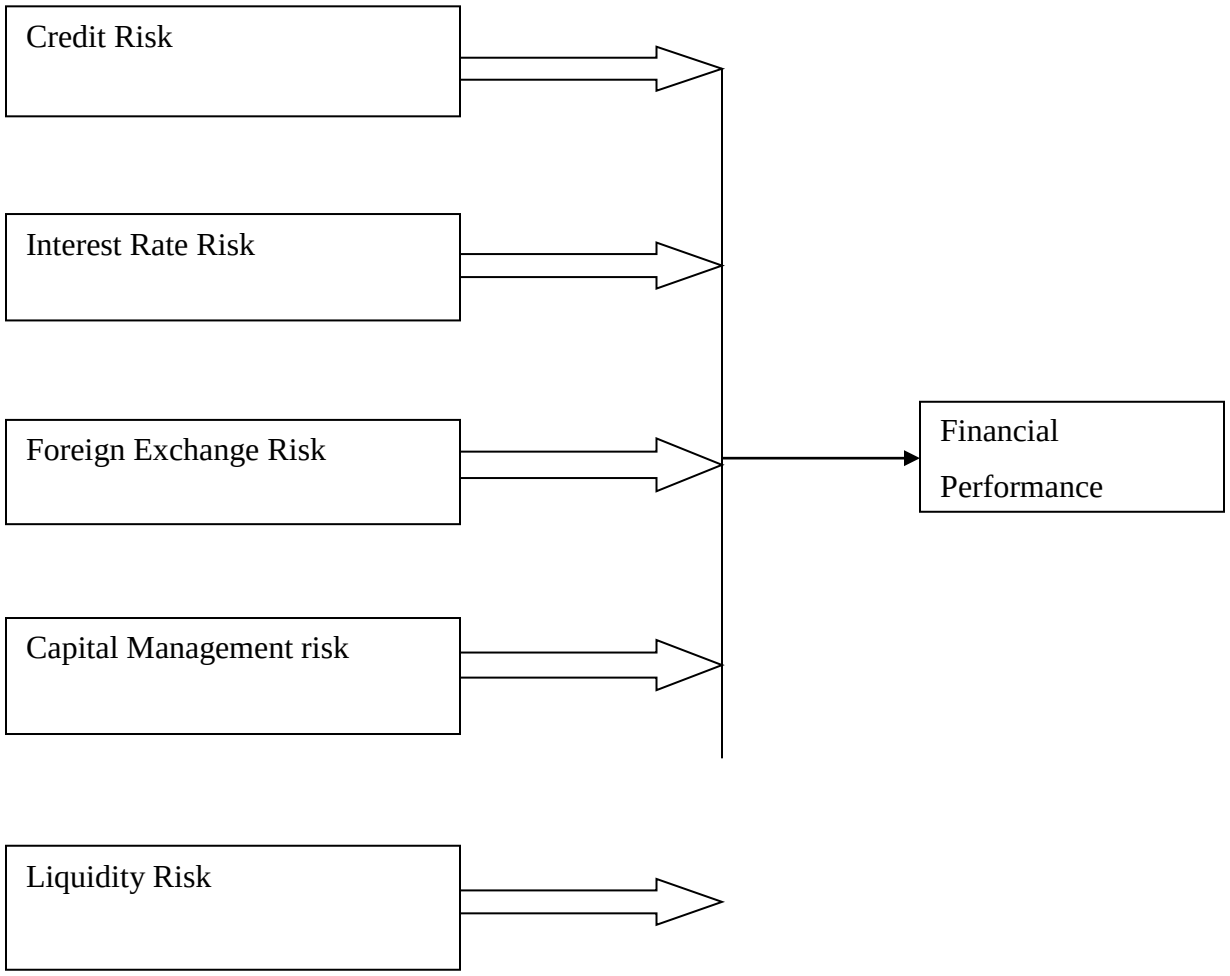
clear on the effectiveness of financial risk management on the financial performance of commercial banks in Kenya.

2.5 Conceptual Framework

A conceptual framework is made up of variables. Mugenda (2008) defined a variable as a quantifiable characteristic that adopts diverse values among units of specific population. According to Kombo & Tromp (2006), conceptual framework is an instrument that is utilized to develop awareness and understanding of the condition under examination and to clearly communicate. Mugenda (2008) defines a conceptual framework as a summarizing explanation of an occurrence complemented by a graphical or pictorial depiction of key variables of the study. The framework underscores how variables relate with each other or could be made to interact under conditions that can be influenced. The key variables in this study will be categorized as independent and dependent variables. Independent variables are predictor variables because they predict the amount of changes that occurs in a different variable (Mugenda, 2008).Dependent variable is a variable that is changed by another variable.

Financial performance of commercial banks is mostly influenced by effectiveness of the bank to control its risk management variables. The empirical study reveals that effective financial risk management can lead to improved financial performance. The diagrammatic relationship of financial risk management on financial performance can be presented as follows;

Figure 2.1: Conceptual Framework of Financial Risk Management and Financial Performance



Independent variables **Dependent variable**

2.6 Summary of Literature Review

Research gaps exist since none of the studies address in detail the effectiveness of financial risk management and the impact that it has on the financial performance of commercial banks in Kenya. Also, majority of the studies were either done to establish the connection between financial risk management and financial performance. Research

gaps also exist as this research will provide more literature for examining the theories reviewed. This study will look to fill the existing research gap by answering the following research question, is financial risk management effective in promoting the financial performance of commercial banks in Kenya? The above chapter reviews the various theories that inform financial risk management and financial performance. Also, an empirical investigation has been conducted where past studies, both global and local were reviewed. It is from these critiques that the research gap has been identified.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methods and procedures to be followed while conducting the study. It specifies the research design, study population, data collection and data analysis tools that will be used to conduct the study.

3.2 Research Design

This study adopted a descriptive research design to test the hypothesis over the five year period (2011 to 2015). Mugenda & Mugenda (2003) describes a research design as the plan of investigation envisaged to obtain answers to research questions in a form understandable by all. Kothari (2004) further includes surveys and facts finding inquiries under descriptive research. The aim of descriptive research was the description of affairs as it existed at a given time. Descriptive analysis determines and reports the way things are and attempts to describe such things as attitudes, values, characteristics and likely behavior (Mugenda & Mugenda, 2003). A causal study approach was employed to determine connections between variables by scrutinizing existing occurrence and then searching back through available data to try to identify reasonable contributory relationships.

The study determined cause and effect relationship and understood which variable was dependent and which is independent. This research design was the best in explaining if two variables were related and if they varied together with the help of enough information or data for testing cause and effect relationship. It explored the effects of

financial risk management on the financial performance of commercial banks in Kenya and the empirical evidence that helped answer the research objective.

3.3 Target Population

The population is the total number of components that conform to some general set of specifications (Paton, 2002). The population for this study was the 43 commercial banks in Kenya, as at 31st December 2015 (See Appendix II). Mugenda and Mugenda, (2003), stated that the target population should have some observable characteristics which the researcher aims at generalizing the results of the study. Data was collected for all the 43 commercial banks in Kenya.

3.4 Sample Design

A census research design was used for the study where all the 43 elements of the population under study will be analyzed.

3.5 Data Collection

Secondary data from audited financial statements of the 43 commercial banks was collected for five years, 2011 to 2015.Central bank of Kenya requires all banks to publish their audited financial statements publicly on an annual basis.

3.6 Validity and Reliability

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

3.7 Data Analysis

This research employed descriptive statistics to analyze the data collected. (Mugenda & Mugenda, 2003) argues that, descriptive statistics enables the researcher to get the meaningful description of scores and measurements for the study through the use of few indices or statistics. This study used Statistical Package for Social Sciences (SPSS) to analyze the independent and dependent variables, whereby inferential statistics were applied and multiple regression models employed.

To test the relationship between financial risk management and financial performance of commercial banks in Kenya, a regression model was used:

$Y = \alpha + \beta 1X1 + \beta 2X2 \text{ ---------- } \beta 7X7 + \varepsilon$ (1)

Representing; $Y = f(X1, X2, X3, X4, X5, X6, X7)$

Y = Dependent variable as measured by the financial performance of commercial banks (Measured using Return on assets, ROA).

X1……X7 =Represents the independent variables representing the tools of financial risk management as a determinant of financial performance of commercial banks.

α = is the intercept.

β = is a coefficient and ε represent the error term.

ε = error term

3.7.1 Analytical Model

The empirical model that was used in the study to test the relationship between financial risk management and the performance of banks in Kenya is shown as:

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \beta 7X7 + \varepsilon \quad (2)$$

Where:

Y = Financial performance of commercial bank (Measured by return on assets (ROA).

X1=Credit risk for the bank (Measured using the ratio of non-performing loans to total loans and advances)

X2=Interest rate risk for the bank (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)

X3= Foreign exchange risk for the banks (Measured using the ratio of net foreign currency exposure between assets and liabilities to total assets)

X4= Liquidity risk (Measured using the ratio of total loans to total deposit)

X5= Capital management risk of the bank (Measured using the ratio of capital and reserve to total assets)

X6= Bank's deposit (Measured using the ratio of deposits to total assets)

X7=Banks size (Measured using the natural log of total deposits)

CHAPTER FOUR

DATA ANALYSIS, RESULTS & DISCUSSION

4.1 Introduction

This chapter will analyze the data collected during the study, present results and discuss the findings on the effects of financial risk management on financial performance of commercial banks in Kenya. Secondary data for a period of five years was used, 2011 to 2015, and a regression model adopted to analyze the data.

4.2 Response Rate

The study targeted the 43 commercial banks in Kenya. Secondary data from all the 43 banks were obtained from their annually published financial statements. This population and response rate is excellent according to Mugenda (1999), who observed that a response rate of 50 percent is adequate for analysis and reporting, a response rate of 60 percent is good while a response rate of 70% and above is excellent.

4.3 Data Validity

The study sought to determine the quality of the data gathered for the study. The findings are presented in table 4.1;

Table 4.1 Test of Normality for Financial Risk Management Data, between 2011-2015

Statistics								
		Credit Risk	**Bank Deposits**	**Liquidity Risk**	**Capital Management Risk**	**Bank size**	**Interest Rate Risk**	**Foreign Exchange**	**ROA**
N	Valid	42	42	42	42	42	42	42	42
	Missing	1	1	1	1	1	1	1	1
Mean		0.1857	0.4331	0.3613	0.112	0.7388	0.2624	0.5505	0.4621
Std.		0.13962	0.31294	0.22695	0.0966	0.26894	0.15482	2.28747	0.42047

Deviation								
Skewness	3.297	0.815	0.133	1.048	0.215	1.757	6.45	1.356
Std. Error of Skewness	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
Kurtosis	14.053	-1.034	-0.384	0.183	0.367	3.583	41.725	0.81
Std. Error of Kurtosis	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717

4.4 Descriptive Statistics

The findings indicate that data on credit risk had a mean of 0.1857 and a standard deviation of 0.13962, the data had a skewness of 3.297 which was outside the acceptable range of -3 and 3 for a normal distribution and a kurtosis value of 14.053 which was outside the acceptable range of double the std. error of kurtosis (1.434).The findings indicated that data on bank deposits had a mean of 0.4331 with a standard deviation of 0.31294, the data had a skewness of 0.815 which was within the acceptable range of -3 and 3 for a normal distribution and a kurtosis value of -1.034 which was within the acceptable range of double the std. error of kurtosis (1.434)

The findings indicate that the data on liquidity risk had a mean of 0.3613 with a standard deviation of 0.22695, the data had a skewness of 0.133 which was within the acceptable range of -3 and 3 for a normal distribution and a kurtosis value of -0.384 which was within the acceptable range of double the std. error of kurtosis (1.434).The findings indicate that the data on capital management risk had a mean of 0.112 with a standard deviation of 0.0966, the data had a skewness of 1.048 which was within the acceptable range of -3 and 3 for a normal distribution and a kurtosis value of 0.183 which was within the acceptable range of double the std. error of kurtosis (1.434).The findings indicate that

the data on bank size had a mean of 0.7388 with a standard deviation of 0.26894, the data had a skewness of 0.215 which was within the acceptable range of -3 and 3 for a normal distribution and a kurtosis value of 0.367 which was within the acceptable range of double the std. error of kurtosis (1.434)

The findings indicate that the data on interest rate risk had a mean of 0.2624 with a standard deviation of 0.15482, the data had a skewness of 1.757, which was within the acceptable range of -3 and 3 for a normal distribution and a kurtosis value of 3.583 which was outside the acceptable range of double the std. error of kurtosis (1.434).The findings indicate that the data on Foreign Exchange had a mean of 0.5505 with a standard deviation of 2.28747, the data had a skewness of 6.45, which was outside the acceptable range of -3 and 3 for a normal distribution and a kurtosis value of 41.725 which was outside the acceptable range of double the std. error of kurtosis (1.434)

4.4.1 Financial performance of banks

The study sought to determine the financial performance of banks by assessing their ROA over the last five years. This was done by evaluating the deviation (ANOVA, One Sample T-Test) of the banks from an 11% ROA which is the acceptable minimal ROA for banks (Basel, 2013).Test of normality of the data gathered was done to determine the mean, standard deviation and skewness.

The study findings indicated that the mean ROA of the banks was 0.4621 (46.21%) with a standard deviation of 0.42047, a skewness of 1.356 which was within the acceptable range of between -3 and 3. The data used in the study had a kurtosis value of 0.81which was no more than double the standard error. This meant that the data was normally distributed as illustrated in figure 4.1

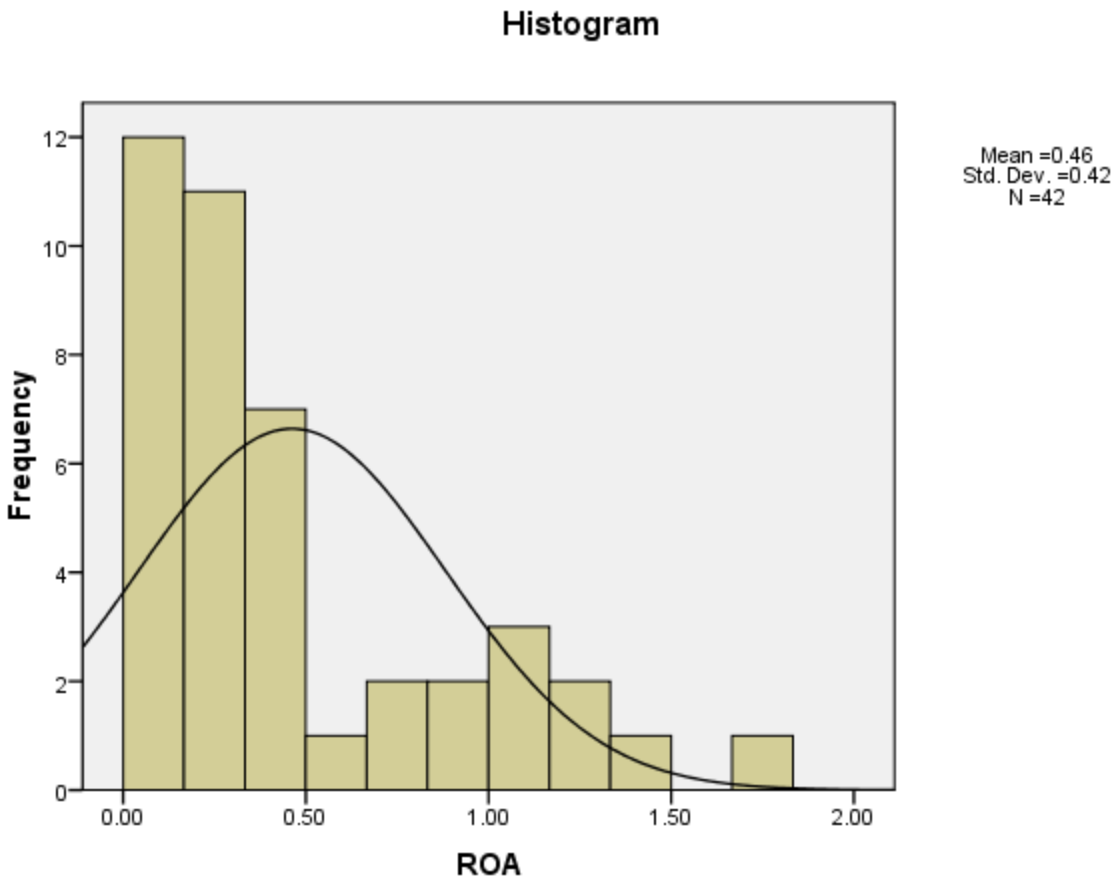


Fig 4.1 Test of normality for ROA of Banks 2011-2015

Despite the data being slightly positively skewed the distribution was within the normal distribution range. The one sample T-test was computed to determine variations from a theoretical mean of 5%. The findings are illustrated in table 4.3;

Table 4.3 One-Sample Test on ROA of Banks 2011-2015

One-Sample Test						
	Test Value = 0.05					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
ROA	6.352	41	0.000	0.4121	0.2811	0.5431

The study findings indicated that there was significant variations (P=0.000) in terms of positive performance by banks on ROA. All banks were above the 5% theoretical value. There however were variations in the ROA reported by the various banks with some banks posting excessively high ROAs and some posting lower ROA as illustrated in table 4.4;

Table 4.4 Variations in ROA

		Frequency	Percent
Valid	Less than 0.2	16	37.2
	between 0.21-0.4	12	27.9
	between 0.41-0.6	3	7
	above 0.61	11	25.6
	Total	42	97.7
Missing	System	1	2.3
Total		43	100

The findings indicated that of the 43 banks, 37.2% posted an ROA of less than 0.2 (20%), 27.9% posted an ROA of between 0.21-0.4, 25.6% posted ROA of above 0.61 while 7% posted and ROA of between 0.41-0.6. Due to the variations in ROA between the banks the study sought to determine what the possible causes could be.

4.5 Correlation Analysis

The study sought to determine the relationships between the predictors of Financial Performance.

Table 4.5 Correlation of Predictors of Financial Management and Financial management

Correlations									
		ROA	**Credit Risk**	**Bank Deposits**	**Liquidity Risk**	**Capital Management Risk**	**Bank Size**	**Interest Rate Risk**	**Foreign Exchange**
ROA	Pearson Correlation	1	0.268	.927**	-.612**	.364*	0.28	.431**	0.001
	Sig. (2-tailed)		0.086	0.000	0.000	0.018	0.073	0.004	0.996
	N	42	42	42	42	42	42	42	42
Credit Risk	Pearson Correlation	0.268	1	0.198	0.091	0.3	0.208	0.022	-0.034
	Sig. (2-tailed)	0.086		0.209	0.567	0.054	0.186	0.888	0.829
	N	42	42	42	42	42	42	42	42
Bank Deposits	Pearson Correlation	.927**	0.198	1	-.643**	.333*	0.262	.515**	0.011
	Sig. (2-tailed)	0.000	0.209		0.000	0.031	0.093	0.000	0.943
	N	42	42	42	42	42	42	42	42
Liquidity Risk	Pearson Correlation	-.612**	0.091	-.643**	1	-.380*	-.494**	-0.152	0.28
	Sig. (2-tailed)	0.000	0.567	.0000		0.013	0.001	0.336	0.073
	N	42	42	42	42	42	42	42	42
Capital Management Risk	Pearson Correlation	.364*	0.3	.333*	-.380*	1	.574**	.309*	-0.102
	Sig. (2-tailed)	0.018	0.054	0.031	0.013		0.000	0.046	0.522
	N	42	42	42	42	42	42	42	42
Bank Size	Pearson Correlation	0.28	0.208	0.262	-.494**	.574**	1	-0.089	-0.128
	Sig. (2-tailed)	0.073	0.186	0.093	0.001	0.000		0.575	0.419
	N	42	42	42	42	42	42	42	42
Interest Rate Risk	Pearson Correlation	.431**	0.022	.515**	-0.152	.309*	-0.089	1	0.189
	Sig. (2-tailed)	0.004	0.888	0.000	0.336	0.046	0.575		0.231
	N	42	42	42	42	42	42	42	42
Foreign Exchange	Pearson Correlation	0.001	-0.034	0.011	0.28	-0.102	-0.128	0.189	1
	Sig. (2-tailed)	0.996	0.829	0.943	0.073	0.522	0.419	0.231	
	N	42	42	42	42	42	42	42	42

****. Correlation is significant at the 0.01 level (2-tailed).**

***. Correlation is significant at the 0.05 level (2-tailed).**

The findings on predictors of financial performance indicate that there was a significant correlation between bank deposits and liquidity risk (P=0.00), Bank deposit and capital management risk (P=0.031), bank deposit and interest rate risk (P=0.000), liquidity risk and capital management risk (P=0.013), Liquidity risk and bank size (P=0.001), capital management risk and Bank size (P=0.000), capital management Risk and interest rate risk (P=0.046).). The results also indicate that there was a significant relationship between ROA and bank deposits (0.000) ROA and liquidity risk (0.000) ROA and interest rate risk (0.004), ROA and foreign exchange risk (0.004)

The findings however indicate that credit risk did not have a significant correlation with any of the predictors with a (P>0.05). The findings also indicated that there was significant relationship between foreign exchange risk and any of the variable with (P>0.05). These findings indicate that these variables would be less likely to influence ROA as an indicator of financial performance. The results also indicated that there was no significant relationship between ROA and credit risk 0.086) and ROA and bank size (0.073).

4.6 Regression Analysis and Hypothesis Testing

The study sought to determine the effects of financial risk management and financial performance of commercial banks in Kenya. This was done by running a regression model. . The findings are presented in table 4.6

Table 4.6 Regression Model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.980[a]	0.96	0.952	0.26785

a. Predictors: (Constant), Foreign Exchange, Bank Deposits, Credit Risk, Bank size, Interest rate Risk, Capital Management Risk, Liquidity Risk

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	58.632	7	8.376	116.748	.000[a]
	Residual	2.439	34	0.072		
	Total	61.071	41			

a. Predictors: (Constant), Foreign exchange, Bank deposits, Credit Risk, Bank size, Interest rate risk, Capital management risk, Liquidity risk
b. Dependent Variable: ROA

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.205	0.26		0.79	0.435
	Credit risk	0.404	0.363	0.046	1.113	0.274
	Bank Deposits	4.026	0.235	1.032	17.125	0.000
	Liquidity risk	0.743	0.328	0.138	2.267	0.03
	Capital Management Risk	0.131	0.62	0.01	0.211	0.834
	Bank Size	-0.239	0.225	-0.053	-1.065	0.294
	Interest Rate Risk	0.392	0.377	0.05	1.042	0.305
	Foreign Exchange	-0.035	0.02	-0.065	-1.718	0.095

a. Dependent Variable: ROA

Multiple regression analysis was conducted to determine the relationship between financial performance of commercial banks in Kenya and the seven independent variables representing financial risk management. As per the SPSS generated table above, the regression equation is presented below;

$$\mathbf{Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \beta 7X7 + \varepsilon \ (3)}$$

Which becomes?

$$\mathbf{Y = 0.205 + 0.404X1 + 4.026X2 + 0.743X3 + 0.131X4 - 0.239X5 + 0.392X6 - 0.035X7 + 2.439}$$

The model summary indicated that about 96% of the regression model could be accounted for in the study. This indicated an acceptable confidence level since it was above the stipulated 95%.

As shown from the table 4.6, F= 116.748, p<0.000

The F test provides an overall test of significance of the fitted regression model. The F value of 116.748m indicates that all the variables in the equation are important hence the overall regression is significant.

The ANOVA table for the regression indicated that the results computed using the regression model were significant meaning that the regression model had been computed well and not by chance.

These results indicate that of all the predictors of financial risk management there were only two that had a significant influence on the financial performance of the bank and these were bank deposit with a (P=0.000) and liquidity risk with (P=0.030). The results

indicate that the other predicator variables did not have a significant interest with all having a P>0.05. These include the credit risk, capital management risk, bank size and foreign exchange risk.

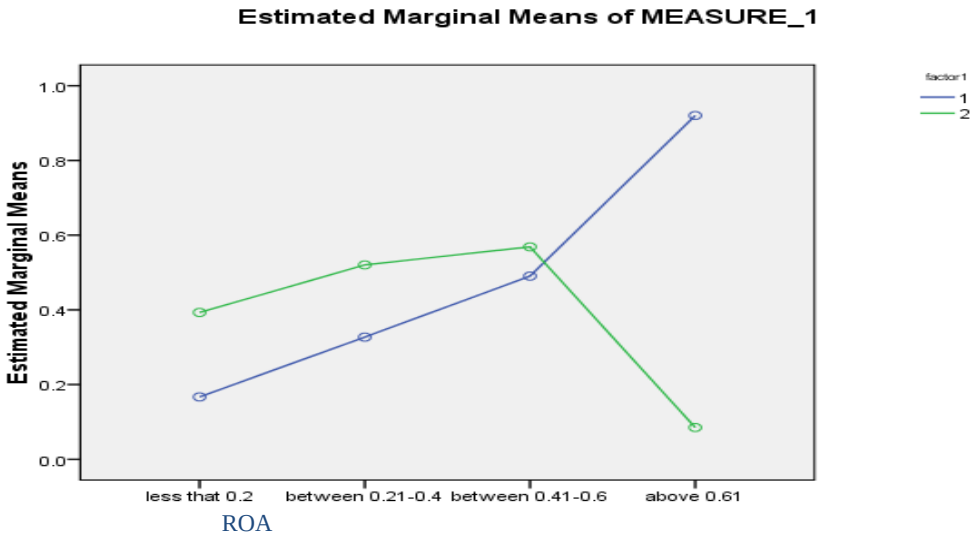
Having determined that only two of the predictors of financial risk management had a significant effect on the firm's financial performance, the study sought to carry out further tests. This was done by carrying out an ANOVA. The results are presented as follows;

Table 4.7 ANOVA Analysis

Tests of Within-Subjects Contrasts						
Measure:MEASURE_1						
Source	**factor 1**	**Type III Sum of Squares**	**df.**	**Mean Square**	**F**	**Sig.**
factor1	Linear	0.1	1	0.1	6.699	0.014
factor1 *ROA	Linear	4.369	3	1.456	97.724	0.000
Error(factor 1)	Linear	0.566	38	0.015		

The findings indicate that there was a significant relationship between the two predictors that is bank deposits and liquidity risk. It also indicates that there was a significant relationship between the two factors and ROA. The study further sought to determine the effect of bank deposits and liquidity risk and the financial performance of the banks. This is illustrated in figure 4.2;

Fig 4.2 Relationship between Bank Deposit and Liquidity Risk on ROA



These results show that as the bank deposits increase the performance of the bank increase, the relationship of the two is infinite, the more it increases the better the firm performs. The results however indicate that banks have an optimal liquidity and when the firm exceeds that point, the performance drops.

4.7 Discussion of Research Findings

The findings of the study indicate that the financial performance of commercial banks is significantly influenced by the bank deposits. This findings indicate that bank deposit had a significant relationship with ROA (P=0.000). Further test indicate that as the bank deposits increase the financial performance of the bank increase, the relationship of the two is infinite, the more it increases the better the firm performs.

These concur with Greuning and Bratanovic, (2009) who said that deposits consist of the largest proportion of a bank's total liabilities and that the composition and stability of the deposit base is a critical factor to the financial success of any commercial bank. Deposits are the most inexpensive sources of funds for banks and therefore contribute positively towards profitability. The more deposits a commercial bank can collect, the superior is its aptitude to advance more loans and consequently make profits. The study also concur with Husni (2011) whose study indicated that there exists a significant positive relationship between ROA and total liability to total assets as determined of a bank.

The findings of the study also indicate that there was a significant relationship between ROA and liquidity risk with (P=0.030). The results however indicate that banks have an optimal liquidity and when the firm exceeds that point, the performance drops. According to the results, the optimal performance level of the banks is around 0.6 (60%). For the firms to attain maximum profitability they are therefore supposed to ensure that they keep their liquidity ratio at the optimal level.

These findings concur with Greuning and Bratanovic, (2009) who holds that liquidity compensates banks for anticipated and unforeseen balance sheet oscillations and makes available funds for growth, he notes that banks are under regulation and must adhere to determined thresholds of liquidity asset in order for them to able to attain profitability. These findings concur with Drogt & Goldberg, (2008) whose study indicated that liquidity risk represents a bank's ability to manage funding changes on credit financing and investment portfolio affirming that practically all financial transactions have implications on liquidity of banks. Proper management of liquidity inhibit monetary difficulties and related costs

The findings of the study also indicated that the other predicator variables did not have a significant relationship with all having a P>0.05. These include the credit risk, capital management risk, bank size and foreign exchange risk.

These findings concur with Muteti (2013), who carried out a study on the relationship between financial risk management and financial performance and concluded that there was a negative relationship between credit risks, interest rate risk, foreign exchange risk and financial performance. He further revealed a positive relationship between bank deposits, financial performance of commercial banks in Kenya. This study however slightly differed with Muteti (2013) since it indicated a significant relationship between the liquidity risk and the financial performance of the banks. This findings is supported by the recent occurrence in the banking sector where despite the efforts, three commercial banks were put under receivership in financial year 2015/16. For instance, despite having healthy balance sheets, Chase Bank and Imperial Bank were placed under receivership by the regulator. This is an indicator of breakdown in the financial risk management system. The breakdown can be manifested in various ways which include; severe exposures in form of liquidity risk, increasing non-performing loans, fraudulent activities and mismanagement of the entities. This can be greatly minimized through regular evaluation of the effectiveness and efficiency of financial risk management system and ensuring continuous improvement to the system. Therefore the liquidity of the firm is a great influence on the performance of the banks.

CHAPTER FIVE

SUMMARY CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, conclusions and recommendations of the study.

5.2 Summary of Findings

The study sought to determine the effects of financial risk management on financial performance of commercial banks in Kenya. The key variables in this study were categorized as independent and dependent variables. Independent variables were predictor variables because they predict the amount of changes that occurs in a different which include; Credit risk, interest rate risk, foreign exchange risk, capital management risk, liquidity risk, bank size and bank deposit while the dependent variable was the variable that was changed by the independent variable which was the financial performance which was indicated by ROA.

The study findings indicated that there was significant variations (P=0.000) in terms of positive performance by banks on ROA. All banks were above the 5% theoretical value however with variations. The findings indicated that of the 43 banks, 37.2% posted an ROA of less than 0.2(20%), 27.9% posted an ROA of between 0.21-0.4, 25.6% posted ROA of above 0.61 while 7% posted and ROA of between 0.41-0.6.

The findings on predictors of financial management indicate that there was a significant correlation between bank deposits and liquidity risk (P=0.00), Bank deposit and capital management risk (P=0.031), bank deposit and interest rate risk (P=0.000), liquidity risk

and capital management risk (P=0.013), Liquidity risk and bank size (P=0.001), capital management risk and Bank size (P=0.000), capital management Risk and interest rate risk (P=0.046).

The findings however indicate that credit risk did not have a significant correlation with any of the predictors with a (P>0.05). The findings also indicated that there was significant relationship between foreign exchange risk and any of the variable with (P>0.05). These findings indicate that these variables would be less likely to influence ROA as an indicator of financial performance. The results of the regression analysis indicated that of all the predictors of financial management there were only two that had a significant influence on the financial performance of the bank and these were bank deposit with a (P=0.000) and liquidity risk with (P=0.030). The results indicate that the other predicator variables did not have a significant interest with all having a P>0.05). These include the Credit Risk, capital management risk, bank size and foreign exchange risk.

Further testing indicated that there was a significant relationship between the two predictors that is bank deposits and liquidity risk. It also indicated that there was a significant relationship between the two factors and ROA. The bank deposits increase the performance of the bank increase, the relationship of the two is infinite, the more it increases the better the firm performs. The results however indicate that banks have an optimal liquidity and when the firm exceeds that point, the performance drops. According to the results, the optimal performance level of the banks is around 0.6 (60%).There is therefore varying effects of financial risk management on performance of commercial banks in Kenya.

5.3 Conclusion

The study concluded that all banks in Kenya were engaging in financial risk management and the tools used had varying relationship towards the financial performance objective of commercial banks in Kenya. There were big variations in the bank's performance with some posting very high ROA compared to others. The study also concluded that on predictors of financial performance, the variables that were influential had significant influence on each other were bank deposits and liquidity risk (P=0.00), bank deposit and capital management risk (P=0.031), bank deposit and interest rate risk (P=0.000), liquidity risk and capital management risk (P=0.013), Liquidity risk and bank size (P=0.001), capital management risk and Bank size (P=0.000), capital management Risk and interest rate risk (P=0.046). The study however concluded that the credit risk and foreign exchange risk did not have any significant correlation with any of the variable with (P>0.05).

The study concluded that the predictor variables that had an influence on the ROA of the banks were bank deposit with a (P=0.000) and liquidity risk with (P=0.030), while the other predicator variables did not have a significant interest with all having a P>0.05. These include the Credit Risk, capital management risk, bank size and foreign exchange risk. The study also concluded that as the bank deposits increase the performance of the bank increase, the relationship of the two is infinite, the more it increases the better the bank performs, however banks have an optimal liquidity and when the firm exceeds that point, the performance drops. Banks should therefore have healthy deposits if they intend to have healthy financial performance. The risks of inadequate deposits should be keenly managed if banks are to sustain good financial performance.

5.4 Recommendations

The study recommends that banks should carefully watch to ensure that bank deposits are adequate because the more the bank deposits the more the bank performance improves. The two were said to have an infinite relationship and therefore banks should work on ensuring that they have more deposits flowing into their banks since they provide them with an inexpensive source of funds and there contribute positively towards profitability.

The banks should ensure that they keep the liquidity of the bank at the optimal level since it's at this level that bank is able to draw maximum performance. When the liquidity risk of the bank is observed it is able to ensure that they have optimal performance.

Banks should manage financial risks holistically as each of the financial risk management variables reviewed in the study had a correlation with financial performance of commercial banks. Banks that manage all their financial risk are more likely to have improved financial performance as compared to the ones that do not look into their financial risks from one angle. It is therefore imperative that commercial banks improve on their ability to identify financial risks facing them and document the control measures to mitigate the risks or enhance the opportunities they present.

5.5 Limitations of the Study

The study used secondary data which is provided by commercial banks in their annually published financial statements and the researcher had no means of independently verifying the validity. The data was assumed to be correct and accurate for the purpose of the study. Most commercial banks had posted their annual financial statements in their website from where the research derived the data. No further verification of the data was done beyond the data presented in the published accounts.

The study assumed that the 7 independent variables were the major financial risk management variables that influence financial performance. Other variables were omitted and the study assumed failure to include other financial risk management variables like market risk will not influence the validity and accuracy of the results. The variables used for the study are believed to be the ones with the most impact to the financial performance of commercial banks in Kenya. The central bank should however look into the financial risk reporting of commercial banks and evaluate whether there is need to improve or increase the reporting requirements as there has been cases of banks collapsing despite the regular reporting on their financial risks.

5.6 Suggestion for Further Research

The study recommends further study to establish the causes of significant variation in financial performance of commercial banks in Kenya. Further study on why credit risk did not have a significant correlation with any of the predictors is also suggested. 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 to ascertain whether micro finance institutions are employing the financial risk management tools effectively.

The study used return on assets as the measure of financial performance of commercial banks. However, future study can use other measures of financial performance, for example return on equity. The study recommends that a study should be done on the challenge facing commercial banks in Kenya in management of financial risk management.

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APPENDICES

APPENDIX: I DATA COLLLECTION FORMS

	Name Of The Bank	ROA				
#		2011	2012	2013	2014	2015
1.	African Banking Corporation Ltd.	**0.23**	**0.21**	**0.27**	**0.22**	**0.20**
2.	Bank of Africa Kenya Ltd.	**0.13**	**0.12**	**0.15**	**0.12**	**0.11**
3.	Bank of Baroda (K) Ltd.	**0.27**	**0.24**	**0.32**	**0.25**	**0.23**
4.	Bank of India	**0.51**	**0.46**	**0.59**	**0.48**	**0.43**
5.	Barclays Bank of Kenya Ltd.	**0.31**	**0.28**	**0.37**	**0.29**	**0.26**
6.	CFC Stanbic Bank Ltd.	**0.12**	**0.11**	**0.15**	**0.12**	**0.11**
7.	Charterhouse Bank Ltd	**0.16**	**0.15**	**0.19**	**0.15**	**0.14**
8.	Chase Bank (K) Ltd.	**0.42**	**0.38**	**0.49**	**0.39**	**0.35**
9.	Citibank N.A Kenya	**0.42**	**0.38**	**0.49**	**0.39**	**0.35**
10.	Commercial Bank of Africa Ltd.	**0.19**	**0.17**	**0.23**	**0.18**	**0.16**
11.	Consolidated Bank of Kenya Ltd	**0.17**	**0.15**	**0.19**	**0.16**	**0.14**
12.	Co-operative Bank of Kenya Ltd.	**0.13**	**0.12**	**0.15**	**0.12**	**0.11**
13.	Credit Bank Ltd.	**0.44**	**0.40**	**0.52**	**0.41**	**0.37**
14.	Development Bank of Kenya Ltd	**0.30**	**0.27**	**0.35**	**0.28**	**0.25**
15.	Diamond Trust Bank Kenya Ltd	**0.18**	**0.17**	**0.21**	**0.17**	**0.15**
16.	Dubai Bank Kenya Ltd.	**0.42**	**0.38**	**0.49**	**0.39**	**0.35**
17.	Ecobank Kenya Ltd	**0.23**	**0.21**	**0.27**	**0.21**	**0.19**
18.	Equatorial Commercial Bank Ltd.	**0.16**	**0.14**	**0.19**	**0.15**	**0.13**
19.	Equity Bank Ltd.	**0.26**	**0.24**	**0.31**	**0.25**	**0.22**
20.	Family Bank Limited	**0.28**	**0.25**	**0.33**	**0.26**	**0.24**
21.	Fidelity Commercial Bank Ltd	**0.20**	**0.18**	**0.23**	**0.18**	**0.17**
22.	Fina Bank Ltd	**0.17**	**0.15**	**0.20**	**0.16**	**0.14**
23.	First community Bank Limited	**0.17**	**0.15**	**0.20**	**0.16**	**0.14**
24.	Giro Commercial Bank Ltd.	**0.28**	**0.26**	**0.33**	**0.27**	**0.24**
25.	Guardian Bank Ltd	**0.23**	**0.21**	**0.27**	**0.22**	**0.20**
26.	Gulf African Bank Limited	**0.18**	**0.17**	**0.21**	**0.17**	**0.15**
27.	Habib Bank A.G Zurich	**0.48**	**0.44**	**0.57**	**0.45**	**0.41**
28.	Habib Bank Ltd.	**0.49**	**0.44**	**0.58**	**0.46**	**0.42**
29.	Housing Finance Bank Ltd	**0.18**	**0.17**	**0.22**	**0.25**	**0.26**
30.	I & M Bank Ltd	**0.29**	**0.26**	**0.34**	**0.27**	**0.25**
31.	Imperial Bank Ltd	**0.24**	**0.21**	**0.28**	**0.22**	**0.20**
32.	Kenya Commercial Bank Ltd	**0.16**	**0.14**	**0.35**	**0.08**	**0.97**
33.	K-Rep Bank Ltd	**0.91**	**0.82**	**0.07**	**0.85**	**0.77**
34.	Middle East Bank (K) Ltd	**0.23**	**0.11**	**0.44**	**0.15**	**0.04**

35.	National Bank of Kenya Ltd	**0.56**	**0.41**	**0.83**	**0.46**	**0.32**
36.	NIC Bank Ltd	**0.42**	**0.28**	**0.66**	**0.33**	**0.20**
37.	Oriental Commercial Bank Ltd	**0.65**	**0.58**	**0.76**	**0.61**	**0.55**
38.	Paramount Universal Bank Ltd	**0.03**	**0.93**	**0.21**	**0.97**	**0.87**
39.	Prime Bank Ltd	**0.28**	**0.15**	**0.50**	**0.20**	**0.08**
40.	Standard Chartered Bank Kenya Ltd	**0.04**	**0.84**	**0.39**	**0.91**	**0.72**
41.	Trans-National Bank Ltd	**0.97**	**0.87**	**0.14**	**0.91**	**0.82**
42.	UBA Kenya Bank Limited	**0.64**	**0.48**	**0.92**	**0.54**	**0.38**
43.	Victoria Commercial Bank Ltd	**0.29**	**0.17**	**0.51**	**0.21**	**0.09**

Credit Risk

	Name Of The Bank	**Credit Risk**				
#		2011	2012	2013	2014	2015
1.	African Banking Corporation Ltd.	**0.14**	**0.17**	**0.19**	**0.17**	**0.14**
2.	Bank of Africa Kenya Ltd.	**0.08**	**0.09**	**0.10**	**0.09**	**0.07**
3.	Bank of Baroda (K) Ltd.	**0.12**	**0.14**	**0.15**	**0.14**	**0.11**
4.	Bank of India	**0.15**	**0.18**	**0.20**	**0.18**	**0.14**
5.	Barclays Bank of Kenya Ltd.	**0.21**	**0.25**	**0.27**	**0.25**	**0.20**
6.	CFC Stanbic Bank Ltd.	**0.09**	**0.10**	**0.12**	**0.10**	**0.08**
7.	Charterhouse Bank Ltd	**0.07**	**0.09**	**0.10**	**0.09**	**0.07**
8.	Chase Bank (K) Ltd.	**0.24**	**0.29**	**0.32**	**0.29**	**0.23**
9.	Citibank N.A Kenya	**0.39**	**0.46**	**0.51**	**0.46**	**0.37**
10.	Commercial Bank of Africa Ltd.	**0.13**	**0.16**	**0.17**	**0.15**	**0.12**
11.	Consolidated Bank of Kenya Ltd	**0.10**	**0.12**	**0.13**	**0.11**	**0.09**
12.	Co-operative Bank of Kenya Ltd.	**0.10**	**0.12**	**0.13**	**0.12**	**0.09**
13.	Credit Bank Ltd.	**0.23**	**0.28**	**0.31**	**0.28**	**0.22**
14.	Development Bank of Kenya Ltd	**0.19**	**0.23**	**0.25**	**0.22**	**0.18**
15.	Diamond Trust Bank Kenya Ltd	**0.13**	**0.16**	**0.17**	**0.16**	**0.13**
16.	Dubai Bank Kenya Ltd.	**0.44**	**0.52**	**0.58**	**0.52**	**0.42**
17.	Ecobank Kenya Ltd	**0.15**	**0.18**	**0.20**	**0.18**	**0.15**
18.	Equatorial Commercial Bank Ltd.	**0.09**	**0.11**	**0.12**	**0.11**	**0.09**
19.	Equity Bank Ltd.	**0.19**	**0.23**	**0.25**	**0.22**	**0.18**
20.	Family Bank Limited	**0.17**	**0.21**	**0.23**	**0.20**	**0.16**
21.	Fidelity Commercial Bank Ltd	**0.09**	**0.11**	**0.12**	**0.11**	**0.09**
22.	Fina Bank Ltd	**0.09**	**0.11**	**0.12**	**0.11**	**0.09**
23.	First community Bank Limited	**0.09**	**0.11**	**0.12**	**0.11**	**0.09**
24.	Giro Commercial Bank Ltd.	**0.14**	**0.17**	**0.18**	**0.16**	**0.13**

25.	Guardian Bank Ltd	**0.12**	**0.15**	**0.16**	**0.15**	**0.12**
26.	Gulf African Bank Limited	**0.13**	**0.15**	**0.17**	**0.15**	**0.12**
27.	Habib Bank A.G Zurich	**0.14**	**0.17**	**0.18**	**0.16**	**0.13**
28.	Habib Bank Ltd.	**0.20**	**0.24**	**0.27**	**0.24**	**0.19**
29.	Housing Finance Bank Ltd	**0.15**	**0.18**	**0.16**	**0.23**	**0.21**
30.	I & M Bank Ltd	**0.18**	**0.22**	**0.24**	**0.21**	**0.17**
31.	Imperial Bank Ltd	**0.13**	**0.15**	**0.17**	**0.15**	**0.12**
32.	Kenya Commercial Bank Ltd	**0.08**	**0.10**	**0.11**	**0.10**	**0.08**
33.	K-Rep Bank Ltd	**0.07**	**0.08**	**0.09**	**0.08**	**0.07**
34.	Middle East Bank (K) Ltd	**0.03**	**0.04**	**0.04**	**0.04**	**0.03**
35.	National Bank of Kenya Ltd	**0.24**	**0.29**	**0.32**	**0.29**	**0.23**
36.	NIC Bank Ltd	**0.22**	**0.06**	**0.13**	**0.07**	**0.27**
37.	Oriental Commercial Bank Ltd	**0.08**	**0.10**	**0.11**	**0.10**	**0.08**
38.	Paramount Universal Bank Ltd	**0.12**	**0.15**	**0.16**	**0.15**	**0.12**
39.	Prime Bank Ltd	**0.24**	**0.28**	**0.31**	**0.28**	**0.22**
40.	Standard Chartered Bank Kenya	**0.20**	**0.24**	**0.26**	**0.24**	**0.19**
41.	Trans-National Bank Ltd	**0.19**	**0.23**	**0.26**	**0.23**	**0.18**
42.	UBA Kenya Bank Limited	**0.08**	**0.10**	**0.11**	**0.10**	**0.08**
43.	Victoria Commercial Bank Ltd	**0.17**	**0.20**	**0.22**	**0.20**	**0.16**

Liquidity Risk

	Name Of The Bank	**Liquidity Risk**				
#		**2011**	**2012**	**2013**	**2014**	**2015**
1.	African Banking Corporation Ltd.	**0.37**	**0.44**	**0.45**	**0.37**	**0.49**
2.	Bank of Africa Kenya Ltd.	**0.38**	**0.45**	**0.46**	**0.38**	**0.50**
3.	Bank of Baroda (K) Ltd.	**0.59**	**0.70**	**0.72**	**0.59**	**0.78**
4.	Bank of India	**0.73**	**0.87**	**0.89**	**0.73**	**0.97**
5.	Barclays Bank of Kenya Ltd.	**0.49**	**0.58**	**0.60**	**0.49**	**0.65**
6.	CFC Stanbic Bank Ltd.	**0.33**	**0.40**	**0.40**	**0.33**	**0.44**
7.	Charterhouse Bank Ltd	**0.38**	**0.46**	**0.47**	**0.38**	**0.51**
8.	Chase Bank (K) Ltd.	**0.62**	**0.75**	**0.76**	**0.62**	**0.83**
9.	Citibank N.A Kenya	**0.25**	**0.30**	**0.31**	**0.25**	**0.33**
10.	Commercial Bank of Africa Ltd.	**0.35**	**0.43**	**0.43**	**0.35**	**0.47**
11.	Consolidated Bank of Kenya Ltd	**0.40**	**0.48**	**0.49**	**0.40**	**0.54**
12.	Co-operative Bank of Kenya Ltd.	**0.30**	**0.36**	**0.36**	**0.30**	**0.40**
13.	Credit Bank Ltd.	**0.50**	**0.60**	**0.61**	**0.50**	**0.67**
14.	Development Bank of Kenya Ltd	**0.36**	**0.43**	**0.44**	**0.36**	**0.48**
15.	Diamond Trust Bank Kenya Ltd	**0.32**	**0.39**	**0.39**	**0.32**	**0.43**

16.	Dubai Bank Kenya Ltd.	**0.45**	**0.53**	**0.54**	**0.45**	**0.59**
17.	Ecobank Kenya Ltd	**0.52**	**0.63**	**0.64**	**0.52**	**0.70**
18.	Equatorial Commercial Bank Ltd.	**0.30**	**0.36**	**0.37**	**0.30**	**0.40**
19.	Equity Bank Ltd.	**0.36**	**0.43**	**0.44**	**0.36**	**0.48**
20.	Family Bank Limited	**0.41**	**0.49**	**0.50**	**0.41**	**0.54**
21.	Fidelity Commercial Bank Ltd	**0.33**	**0.40**	**0.41**	**0.33**	**0.45**
22.	Fina Bank Ltd	**0.36**	**0.43**	**0.44**	**0.36**	**0.48**
23.	First community Bank Limited	**0.43**	**0.52**	**0.53**	**0.43**	**0.58**
24.	Giro Commercial Bank Ltd.	**0.39**	**0.47**	**0.48**	**0.39**	**0.53**
25.	Guardian Bank Ltd	**0.35**	**0.42**	**0.43**	**0.35**	**0.47**
26.	Gulf African Bank Limited	**0.26**	**0.31**	**0.32**	**0.26**	**0.35**
27.	Habib Bank A.G Zurich	**0.71**	**0.85**	**0.87**	**0.71**	**0.95**
28.	Habib Bank Ltd.	**0.78**	**0.93**	**0.95**	**0.78**	**1.04**
29.	Housing Finance Bank Ltd	**0.42**	**0.47**	**0.45**	**0.52**	**0.49**
30.	I & M Bank Ltd	**0.50**	**0.60**	**0.61**	**0.50**	**0.67**
31.	Imperial Bank Ltd	**0.26**	**0.31**	**0.32**	**0.26**	**0.35**
32.	Kenya Commercial Bank Ltd	**0.32**	**0.36**	**0.42**	**0.39**	**0.41**
33.	K-Rep Bank Ltd	**0.06**	**0.08**	**0.08**	**0.06**	**0.09**
34.	Middle East Bank (K) Ltd	**0.13**	**0.16**	**0.16**	**0.13**	**0.17**
35.	National Bank of Kenya Ltd	**0.32**	**0.29**	**0.38**	**0.42**	**0.40**
36.	NIC Bank Ltd	**0.31**	**0.38**	**0.38**	**0.31**	**0.42**
37.	Oriental Commercial Bank Ltd	**0.26**	**0.19**	**0.31**	**0.37**	**0.27**
38.	Paramount Universal Bank Ltd	**0.39**	**0.44**	**0.46**	**0.36**	**0.34**
39.	Prime Bank Ltd	**0.30**	**0.27**	**0.35**	**0.39**	**0.41**
40.	Standard Chartered Bank Kenya	**0.21**	**0.26**	**0.35**	**0.19**	**0.23**
41.	Trans-National Bank Ltd	**0.41**	**0.47**	**0.38**	**0.45**	**0.42**
42.	UBA Kenya Bank Limited	**0.23**	**0.29**	**0.34**	**0.27**	**0.34**
43.	Victoria Commercial Bank Ltd	**0.19**	**0.21**	**0.27**	**0.23**	**0.31**

Capital Management Risk

	Name Of The Bank	**Capital Management Risk**				
#		2011	2012	2013	2014	2015
1.	African Banking Corporation Ltd.	**0.04**	**0.03**	**0.04**	**0.04**	**0.05**
2.	Bank of Africa Kenya Ltd.	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**
3.	Bank of Baroda (K) Ltd.	**0.03**	**0.02**	**0.03**	**0.03**	**0.04**
4.	Bank of India	**0.02**	**0.02**	**0.02**	**0.02**	**0.02**
5.	Barclays Bank of Kenya Ltd.	**0.06**	**0.05**	**0.06**	**0.06**	**0.08**
6.	CFC Stanbic Bank Ltd.	**0.02**	**0.02**	**0.02**	**0.02**	**0.03**

7.	Charterhouse Bank Ltd	**0.02**	**0.02**	**0.02**	**0.02**	**0.03**
8.	Chase Bank (K) Ltd.	**0.01**	**0.01**	**0.01**	**0.01**	**0.01**
9.	Citibank N.A Kenya	**0.28**	**0.26**	**0.31**	**0.28**	**0.39**
10.	Commercial Bank of Africa Ltd.	**0.04**	**0.03**	**0.04**	**0.03**	**0.05**
11.	Consolidated Bank of Kenya Ltd	**0.05**	**0.04**	**0.05**	**0.05**	**0.07**
12.	Co-operative Bank of Kenya Ltd.	**0.10**	**0.09**	**0.10**	**0.10**	**0.13**
13.	Credit Bank Ltd.	**0.16**	**0.14**	**0.17**	**0.15**	**0.22**
14.	Development Bank of Kenya Ltd	**0.10**	**0.09**	**0.11**	**0.10**	**0.15**
15.	Diamond Trust Bank Kenya Ltd	**0.01**	**0.01**	**0.01**	**0.01**	**0.02**
16.	Dubai Bank Kenya Ltd.	**0.26**	**0.24**	**0.28**	**0.26**	**0.36**
17.	Ecobank Kenya Ltd	**0.18**	**0.16**	**0.19**	**0.18**	**0.25**
18.	Equatorial Commercial Bank Ltd.	**0.17**	**0.16**	**0.19**	**0.17**	**0.24**
19.	Equity Bank Ltd.	**0.03**	**0.03**	**0.04**	**0.03**	**0.05**
20.	Family Bank Limited	**0.07**	**0.06**	**0.08**	**0.07**	**0.10**
21.	Fidelity Commercial Bank Ltd	**0.07**	**0.07**	**0.08**	**0.07**	**0.10**
22.	Fina Bank Ltd	**0.06**	**0.05**	**0.06**	**0.06**	**0.08**
23.	First community Bank Limited	**0.11**	**0.10**	**0.12**	**0.11**	**0.16**
24.	Giro Commercial Bank Ltd.	**0.03**	**0.03**	**0.04**	**0.03**	**0.05**
25.	Guardian Bank Ltd	**0.09**	**0.08**	**0.09**	**0.08**	**0.12**
26.	Gulf African Bank Limited	**0.02**	**0.02**	**0.02**	**0.02**	**0.03**
27.	Habib Bank A.G Zurich	**0.03**	**0.03**	**0.03**	**0.03**	**0.04**
28.	Habib Bank Ltd.	**0.02**	**0.02**	**0.02**	**0.02**	**0.03**
29.	Housing Finance Bank Ltd	**0.09**	**0.07**	**0.10**	**0.12**	**0.11**
30.	I & M Bank Ltd	**0.05**	**0.04**	**0.05**	**0.05**	**0.07**
31.	Imperial Bank Ltd	**0.04**	**0.04**	**0.05**	**0.04**	**0.06**
32.	Kenya Commercial Bank Ltd	**0.17**	**0.16**	**0.19**	**0.17**	**0.24**
33.	K-Rep Bank Ltd	**0.19**	**0.17**	**0.20**	**0.19**	**0.26**
34.	Middle East Bank (K) Ltd	**0.06**	**0.06**	**0.07**	**0.06**	**0.09**
35.	National Bank of Kenya Ltd	**0.07**	**0.07**	**0.08**	**0.07**	**0.10**
36.	NIC Bank Ltd	**0.16**	**0.15**	**0.17**	**0.16**	**0.22**
37.	Oriental Commercial Bank Ltd	**0.18**	**0.16**	**0.19**	**0.18**	**0.25**
38.	Paramount Universal Bank Ltd	**0.16**	**0.14**	**0.17**	**0.16**	**0.22**
39.	Prime Bank Ltd	**0.04**	**0.04**	**0.04**	**0.04**	**0.06**
40.	Standard Chartered Bank Kenya	**0.18**	**0.16**	**0.19**	**0.18**	**0.25**
41.	Trans-National Bank Ltd	**0.08**	**0.07**	**0.09**	**0.08**	**0.11**
42.	UBA Kenya Bank Limited	**0.27**	**0.25**	**0.30**	**0.27**	**0.38**
43.	Victoria Commercial Bank Ltd	**0.06**	**0.12**	**0.09**	**0.10**	**0.13**

Bank Size

	Name Of The Bank	Bank size				
#		2011	2012	2013	2014	2015
1.	African Banking Corporation Ltd.	**0.34**	**0.38**	**0.51**	**0.45**	**0.55**
2.	Bank of Africa Kenya Ltd.	**0.54**	**0.61**	**0.81**	**0.73**	**0.88**
3.	Bank of Baroda (K) Ltd.	**0.20**	**0.23**	**0.30**	**0.27**	**0.32**
4.	Bank of India	**0.12**	**0.14**	**0.18**	**0.17**	**0.20**
5.	Barclays Bank of Kenya Ltd.	**0.47**	**0.53**	**0.70**	**0.63**	**0.76**
6.	CFC Stanbic Bank Ltd.	**0.60**	**0.68**	**0.90**	**0.81**	**0.98**
7.	Charterhouse Bank Ltd	**0.55**	**0.62**	**0.83**	**0.75**	**0.90**
8.	Chase Bank (K) Ltd.	**0.31**	**0.35**	**0.47**	**0.42**	**0.51**
9.	Citibank N.A Kenya	**0.17**	**0.31**	**0.75**	**0.57**	**0.89**
10.	Commercial Bank of Africa Ltd.	**0.51**	**0.58**	**0.77**	**0.69**	**0.83**
11.	Consolidated Bank of Kenya Ltd	**0.44**	**0.50**	**0.66**	**0.60**	**0.71**
12.	Co-operative Bank of Kenya Ltd.	**0.64**	**0.71**	**0.95**	**0.86**	**0.03**
13.	Credit Bank Ltd.	**0.74**	**0.84**	**0.11**	**0.00**	**0.20**
14.	Development Bank of Kenya Ltd	**0.44**	**0.50**	**0.66**	**0.60**	**0.71**
15.	Diamond Trust Bank Kenya Ltd	**0.39**	**0.44**	**0.58**	**0.52**	**0.63**
16.	Dubai Bank Kenya Ltd.	**0.79**	**0.89**	**0.18**	**0.07**	**0.28**
17.	Ecobank Kenya Ltd	**0.72**	**0.81**	**0.08**	**0.97**	**0.17**
18.	Equatorial Commercial Bank Ltd.	**0.84**	**0.95**	**0.26**	**0.14**	**0.36**
19.	Equity Bank Ltd.	**0.43**	**0.49**	**0.65**	**0.58**	**0.70**
20.	Family Bank Limited	**0.67**	**0.76**	**0.01**	**0.91**	**0.09**
21.	Fidelity Commercial Bank Ltd	**0.37**	**0.42**	**0.55**	**0.50**	**0.60**
22.	Fina Bank Ltd	**0.06**	**0.20**	**0.59**	**0.43**	**0.72**
23.	First community Bank Limited	**0.70**	**0.79**	**0.05**	**0.95**	**0.14**
24.	Giro Commercial Bank Ltd.	**0.31**	**0.35**	**0.47**	**0.42**	**0.51**
25.	Guardian Bank Ltd	**0.62**	**0.69**	**0.93**	**0.83**	**0.03**
26.	Gulf African Bank Limited	**0.76**	**0.85**	**0.13**	**0.02**	**0.22**
27.	Habib Bank A.G Zurich	**0.41**	**0.46**	**0.62**	**0.55**	**0.66**
28.	Habib Bank Ltd.	**0.32**	**0.36**	**0.48**	**0.43**	**0.52**
29.	Housing Finance Bank Ltd	**0.**	**0.00**	**0.00**	**0.00**	**0.00**
30.	I & M Bank Ltd	**0.53**	**0.59**	**0.79**	**0.71**	**0.85**
31.	Imperial Bank Ltd	**0.43**	**0.49**	**0.65**	**0.59**	**0.70**
32.	Kenya Commercial Bank Ltd	**0.74**	**0.83**	**0.11**	**0.09**	**0.19**
33.	K-Rep Bank Ltd	**0.78**	**0.87**	**0.16**	**0.05**	**0.26**
34.	Middle East Bank (K) Ltd	**0.77**	**0.87**	**0.16**	**0.04**	**0.25**
35.	National Bank of Kenya Ltd	**0.75**	**0.84**	**0.12**	**0.01**	**0.21**

36.	NIC Bank Ltd	**0.75**	**0.84**	**0.12**	**0.01**	**0.21**
37.	Oriental Commercial Bank Ltd	**0.57**	**0.64**	**0.86**	**0.77**	**0.92**
38.	Paramount Universal Bank Ltd	**0.74**	**0.83**	**0.11**	**0.12**	**0.19**
39.	Prime Bank Ltd	**0.74**	**0.83**	**0.11**	**0.12**	**0.20**
40.	Standard Chartered Bank Kenya	**0.75**	**0.84**	**0.12**	**0.16**	**0.21**
41.	Trans-National Bank Ltd	**0.50**	**0.56**	**0.75**	**0.67**	**0.80**
42.	UBA Kenya Bank Limited	**0.57**	**0.64**	**0.85**	**0.76**	**0.92**
43.	Victoria Commercial Bank Ltd	**0.75**	**0.85**	**0.13**	**0.02**	**0.22**

Bank Deposit

	Name Of The Bank	**Bank deposit**				
#		**2011**	**2012**	**2013**	**2014**	**2015**
1.	African Banking Corporation Ltd.	**0.18**	**0.24**	**0.27**	**0.24**	**0.22**
2.	Bank of Africa Kenya Ltd.	**0.14**	**0.18**	**0.20**	**0.18**	**0.17**
3.	Bank of Baroda (K) Ltd.	**0.21**	**0.28**	**0.31**	**0.28**	**0.26**
4.	Bank of India	**0.39**	**0.52**	**0.57**	**0.51**	**0.48**
5.	Barclays Bank of Kenya Ltd.	**0.28**	**0.37**	**0.41**	**0.37**	**0.34**
6.	CFC Stanbic Bank Ltd.	**0.15**	**0.19**	**0.21**	**0.19**	**0.18**
7.	Charterhouse Bank Ltd	**0.13**	**0.17**	**0.19**	**0.17**	**0.16**
8.	Chase Bank (K) Ltd.	**0.32**	**0.43**	**0.48**	**0.43**	**0.40**
9.	Citibank N.A Kenya	**0.32**	**0.43**	**0.48**	**0.43**	**0.40**
10.	Commercial Bank of Africa Ltd.	**0.15**	**0.20**	**0.22**	**0.20**	**0.18**
11.	Consolidated Bank of Kenya Ltd	**0.13**	**0.17**	**0.19**	**0.17**	**0.16**
12.	Co-operative Bank of Kenya Ltd.	**0.12**	**0.16**	**0.17**	**0.15**	**0.14**
13.	Credit Bank Ltd.	**0.34**	**0.45**	**0.50**	**0.45**	**0.41**
14.	Development Bank of Kenya Ltd	**0.24**	**0.32**	**0.36**	**0.32**	**0.30**
15.	Diamond Trust Bank Kenya Ltd	**0.17**	**0.22**	**0.24**	**0.22**	**0.20**
16.	Dubai Bank Kenya Ltd.	**0.32**	**0.43**	**0.47**	**0.42**	**0.39**
17.	Ecobank Kenya Ltd	**0.17**	**0.23**	**0.25**	**0.23**	**0.21**
18.	Equatorial Commercial Bank Ltd.	**0.13**	**0.17**	**0.19**	**0.17**	**0.16**
19.	Equity Bank Ltd.	**0.25**	**0.34**	**0.37**	**0.33**	**0.31**
20.	Family Bank Limited	**0.21**	**0.28**	**0.31**	**0.28**	**0.26**
21.	Fidelity Commercial Bank Ltd	**0.16**	**0.21**	**0.23**	**0.21**	**0.19**
22.	Fina Bank Ltd	**0.13**	**0.17**	**0.18**	**0.17**	**0.15**
23.	First community Bank Limited	**0.15**	**0.20**	**0.22**	**0.20**	**0.19**
24.	Giro Commercial Bank Ltd.	**0.22**	**0.30**	**0.33**	**0.30**	**0.27**
25.	Guardian Bank Ltd	**0.17**	**0.23**	**0.25**	**0.23**	**0.21**
26.	Gulf African Bank Limited	**0.15**	**0.19**	**0.21**	**0.19**	**0.18**
27.	Habib Bank A.G Zurich	**0.36**	**0.48**	**0.53**	**0.48**	**0.44**

28.	Habib Bank Ltd.	**0.38**	**0.50**	**0.55**	**0.50**	**0.46**
29.	Housing Finance Bank Ltd	**0.21**	**0.17**	**0.29**	**0.31**	**0.36**
30.	I & M Bank Ltd	**0.44**	**0.58**	**0.64**	**0.58**	**0.54**
31.	Imperial Bank Ltd	**0.19**	**0.25**	**0.28**	**0.25**	**0.23**
32.	Kenya Commercial Bank Ltd	**0.88**	**0.17**	**0.29**	**0.16**	**0.07**
33.	K-Rep Bank Ltd	**0.87**	**0.16**	**0.28**	**0.15**	**0.07**
34.	Middle East Bank (K) Ltd	**0.85**	**0.13**	**0.24**	**0.12**	**0.04**
35.	National Bank of Kenya Ltd	**0.85**	**0.13**	**0.24**	**0.12**	**0.03**
36.	NIC Bank Ltd	**0.75**	**0.66**	**0.71**	**0.76**	**0.63**
37.	Oriental Commercial Bank Ltd	**0.56**	**0.75**	**0.82**	**0.74**	**0.68**
38.	Paramount Universal Bank Ltd	**0.74**	**0.99**	**0.09**	**0.98**	**0.91**
39.	Prime Bank Ltd	**0.82**	**0.09**	**0.20**	**0.08**	**0.09**
40.	Standard Chartered Bank Kenya Ltd	**0.80**	**0.07**	**0.18**	**0.06**	**0.98**
41.	Trans-National Bank Ltd	**0.85**	**0.14**	**0.25**	**0.12**	**0.04**
42.	UBA Kenya Bank Limited	**0.83**	**0.11**	**0.22**	**0.10**	**0.01**
43.	Victoria Commercial Bank Ltd	**0.87**	**0.16**	**0.28**	**0.15**	**0.06**

Foreign Exchange Risk

#	**Foreign Exchange Risk**					
		2011	**2012**	**2013**	**2014**	**2015**
1.	African Banking Corporation Ltd.	0.13	0.14	0.19	0.17	0.19
2.	Bank of Africa Kenya Ltd.	0.07	0.08	0.11	0.10	0.11
3.	Bank of Baroda (K) Ltd.	0.10	0.12	0.16	0.14	0.16
4.	Bank of India	0.14	0.15	0.20	0.18	0.20
5.	Barclays Bank of Kenya Ltd.	0.18	0.21	0.28	0.25	0.28
6.	CFC Stanbic Bank Ltd.	0.08	0.09	0.12	0.11	0.12
7.	Charterhouse Bank Ltd	0.09	0.10	0.13	0.12	0.13
8.	Chase Bank (K) Ltd.	0.22	0.24	0.32	0.29	0.32
9.	Citibank N.A Kenya	0.34	0.39	0.52	0.46	0.52
10.	Commercial Bank of Africa Ltd.	0.11	0.13	0.17	0.15	0.17
11.	Consolidated Bank of Kenya Ltd	0.09	0.10	0.13	0.12	0.13
12.	Co-operative Bank of Kenya Ltd.	0.09	0.10	0.13	0.12	0.13
13.	Credit Bank Ltd.	0.21	0.23	0.31	0.28	0.31
14.	Development Bank of Kenya Ltd	0.17	0.19	0.25	0.23	0.25
15.	Diamond Trust Bank Kenya Ltd	0.12	0.14	0.18	0.16	0.18
16.	Dubai Bank Kenya Ltd.	0.12	0.14	0.18	0.16	0.18
17.	Ecobank Kenya Ltd	0.14	0.15	0.20	0.18	0.20
18.	Equatorial Commercial Bank Ltd.	0.08	0.09	0.12	0.11	0.12
19.	Equity Bank Ltd.	0.17	0.19	0.25	0.23	0.25
20.	Family Bank Limited	0.15	0.17	0.23	0.21	0.23
21.	Fidelity Commercial Bank Ltd	0.08	0.09	0.12	0.11	0.12
22.	Fina Bank Ltd	0.08	0.09	0.12	0.11	0.12
23.	First community Bank Limited	0.08	0.09	0.12	0.11	0.12

24.	Giro Commercial Bank Ltd.	0.12	0.14	0.18	0.16	0.18
25.	Guardian Bank Ltd	0.11	0.13	0.17	0.15	0.17
26.	Gulf African Bank Limited	0.11	0.13	0.17	0.15	0.17
27.	Habib Bank A.G Zurich	0.12	0.13	0.18	0.16	0.18
28.	Habib Bank Ltd.	0.18	0.20	0.26	0.24	0.26
29.	Housing Finance Bank Ltd	0.15	0.17	0.12	0.18	0.21
30.	I & M Bank Ltd	0.16	0.18	0.24	0.22	0.24
31.	Imperial Bank Ltd	0.11	0.13	0.17	0.15	0.17
32.	Kenya Commercial Bank Ltd	0.16	0.18	0.24	0.22	0.24
33.	K-Rep Bank Ltd	0.18	0.20	0.26	0.24	0.26
34.	Middle East Bank (K) Ltd	0.31	0.35	0.47	0.42	0.47
35.	National Bank of Kenya Ltd	0.15	0.17	0.23	0.21	0.23
36.	NIC Bank Ltd	0.12	0.14	0.18	0.16	0.18
37.	Oriental Commercial Bank Ltd	0.24	0.27	0.36	0.32	0.36
38.	Paramount Universal Bank Ltd	0.18	0.20	0.26	0.24	0.26
39.	e Bank Ltd	0.07	0.08	0.11	0.10	0.11
40.	Standard Chartered Bank Kenya Ltd	0.09	0.10	0.13	0.12	0.13
41.	Trans-National Bank Ltd	0.40	0.45	0.60	0.54	0.60
42.	UBA Kenya Bank Limited	0.61	0.68	0.91	0.82	0.91
43.	Victoria Commercial Bank Ltd	0.17	0.19	0.25	0.23	0.25

Interest Rate Risk

#	Name of the Bank	Interest rate risk				
		2011	2012	2013	2014	2015
1.	African Banking Corporation Ltd.	**0.17**	**0.23**	**0.15**	**0.18**	**0.16**
2.	Bank of Africa Kenya Ltd.	**0.10**	**0.13**	**0.09**	**0.11**	**0.10**
3.	Bank of Baroda (K) Ltd.	**0.21**	**0.28**	**0.18**	**0.22**	**0.20**
4.	Bank of India	**0.38**	**0.50**	**0.34**	**0.40**	**0.36**
5.	Barclays Bank of Kenya Ltd.	**0.23**	**0.31**	**0.21**	**0.25**	**0.22**
6.	CFC Stanbic Bank Ltd.	**0.09**	**0.12**	**0.08**	**0.10**	**0.09**
7.	Charterhouse Bank Ltd	**0.13**	**0.17**	**0.11**	**0.13**	**0.12**
8.	Chase Bank (K) Ltd.	**0.32**	**0.42**	**0.28**	**0.34**	**0.30**
9.	Citibank N.A Kenya	**0.32**	**0.42**	**0.28**	**0.34**	**0.30**
10.	Commercial Bank of Africa Ltd.	**0.14**	**0.19**	**0.13**	**0.15**	**0.14**
11.	Consolidated Bank of Kenya Ltd	**0.13**	**0.17**	**0.11**	**0.13**	**0.12**
12.	Co-operative Bank of Kenya Ltd.	**0.10**	**0.13**	**0.09**	**0.11**	**0.10**
13.	Credit Bank Ltd.	**0.33**	**0.44**	**0.30**	**0.36**	**0.32**
14.	Development Bank of Kenya Ltd	**0.23**	**0.30**	**0.20**	**0.24**	**0.22**
15.	Diamond Trust Bank Kenya Ltd	**0.14**	**0.18**	**0.12**	**0.14**	**0.13**
16.	Dubai Bank Kenya Ltd.	**0.32**	**0.42**	**0.28**	**0.34**	**0.30**
17.	Ecobank Kenya Ltd	**0.17**	**0.23**	**0.15**	**0.18**	**0.16**

18.	Equatorial Commercial Bank Ltd.	**0.12**	**0.16**	**0.10**	**0.12**	**0.11**
19.	Equity Bank Ltd.	**0.20**	**0.26**	**0.18**	**0.21**	**0.19**
20.	Family Bank Limited	**0.21**	**0.28**	**0.18**	**0.22**	**0.20**
21.	Fidelity Commercial Bank Ltd	**0.14**	**0.19**	**0.13**	**0.15**	**0.14**
22.	Fina Bank Ltd	**0.13**	**0.17**	**0.11**	**0.13**	**0.12**
23.	First community Bank Limited	**0.13**	**0.17**	**0.11**	**0.13**	**0.12**
24.	Giro Commercial Bank Ltd.	**0.22**	**0.29**	**0.19**	**0.23**	**0.21**
25.	Guardian Bank Ltd	**0.17**	**0.23**	**0.15**	**0.18**	**0.16**
26.	Gulf African Bank Limited	**0.14**	**0.18**	**0.12**	**0.14**	**0.13**
27.	Habib Bank A.G Zurich	**0.36**	**0.48**	**0.32**	**0.38**	**0.35**
28.	Habib Bank Ltd.	**0.37**	**0.49**	**0.33**	**0.39**	**0.35**
29.	Housing Finance Bank Ltd	**0.22**	**0.26**	**0.31**	**0.19**	**0.17**
30.	I & M Bank Ltd	**0.22**	**0.29**	**0.19**	**0.23**	**0.21**
31.	Imperial Bank Ltd	**0.18**	**0.24**	**0.16**	**0.19**	**0.17**
32.	Kenya Commercial Bank Ltd	**0.19**	**0.25**	**0.17**	**0.20**	**0.18**
33.	K-Rep Bank Ltd	**0.21**	**0.28**	**0.18**	**0.22**	**0.20**
34.	Middle East Bank (K) Ltd	**0.47**	**0.62**	**0.42**	**0.50**	**0.45**
35.	National Bank of Kenya Ltd	**0.32**	**0.43**	**0.29**	**0.35**	**0.31**
36.	NIC Bank Ltd	**0.14**	**0.18**	**0.12**	**0.14**	**0.13**
37.	Oriental Commercial Bank Ltd	**0.32**	**0.42**	**0.28**	**0.34**	**0.30**
38.	Paramount Universal Bank Ltd	**0.41**	**0.55**	**0.37**	**0.44**	**0.40**
39.	Prime Bank Ltd	**0.13**	**0.17**	**0.11**	**0.13**	**0.12**
40.	Standard Chartered Bank Kenya Ltd	**0.13**	**0.17**	**0.11**	**0.13**	**0.12**
41.	Trans-National Bank Ltd	**0.63**	**0.84**	**0.56**	**0.67**	**0.60**
42.	UBA Kenya Bank Limited	**0.73**	**0.97**	**0.65**	**0.78**	**0.70**
43.	Victoria Commercial Bank Ltd	**0.21**	**0.28**	**0.18**	**0.22**	**0.20**

APPENDIX II: LIST OF LICENSED COMMERCIAL BANKS IN KENYA AS AT 31.12.2015

1. African Banking Corporation Ltd.	32. Kenya Commercial Bank Ltd
2. Bank of Africa Kenya Ltd.	33. K-Rep Bank Ltd
3. Bank of Baroda (K) Ltd.	34. Middle East Bank (K) Ltd
4. Bank of India	35. National Bank of Kenya Ltd
5. Barclays Bank of Kenya Ltd.	36. NIC Bank Ltd
6. CFC Stanbic Bank Ltd.	37. Oriental Commercial Bank Ltd
7. Charterhouse Bank Ltd	38. Paramount Universal Bank Ltd
8. Chase Bank (K) Ltd.	39. Prime Bank Ltd
9. Citibank N.A Kenya	40. Standard Chartered Bank Kenya Ltd
10. Commercial Bank of Africa Ltd.	41. Trans-National Bank Ltd
11. Consolidated Bank of Kenya Ltd	42. UBA Kenya Bank Limited
12. Co-operative Bank of Kenya Ltd.	43. Victoria Commercial Bank 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 Limit	

Source: Central Bank of Kenya (www.centralbank.go.ke).