

**EFFECTS OF CREDIT RISK MANAGEMENT ON THE FINANCIAL PERFORMANCE
OF COMMERCIAL BANKS IN KENYA**

BY

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DECLARATION

This research project is my original work and has not been presented for a degree in any other university

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DEDICATION

I dedicate this project to my mother, Ms. Nancy Githaiga for her support and encouragement during the entire period of my study.

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ABBREVIATIONS

ANOVA	- Analysis of Variance
APT	- Arbitrage Pricing Theory
BIS	- Bank of International Settlement
CAPM	- Capital Asset Pricing Model
CAR	- Capital Adequacy Ratio
CBK	- Central Bank of Kenya
CRM	- Credit Risk Management
GDP	- Growth Domestic Product
NIM	- Net interest margin
NPLR	- Non- Performing Loans Ratio
ROA	- Return on assets
SPSS	- Statistical Package for Social Sciences

ABSTRACT

This study was undertaken to analyze the effects of credit risk management practices on the performance of Financial Banking Institutions. The study attempted to establish if there exists any relationship between the credit risk management determinants by use of CAMEL indicators and financial performance of commercial banks in Kenya. The study reviewed several literatures in line with the area of study. This review enabled the researcher to demonstrate and familiarize with the area of study. The review also helped identify gaps in previous studies. This study sought to review the effect of credit risk management on the financial performance of commercial banks. The research design used in this study was descriptive research design. The design was appropriate because the study involved an in depth study of credit risk management and the relationship between the two variables i.e. credit risk management and the financial performance of commercial banks was described extensively and this was facilitated by the use of secondary data which was obtained from the Central Bank of Kenya publications on banking sector survey. The study used multiple regression analysis in the analysis of data and the findings have been presented in the form of tables and regression equations. The study found out that there is a strong impact between the CAMEL components on the financial performance of commercial banks. The study also established that capital adequacy management efficiency and liquidity had a strong relationship with financial performance (ROA).The study also established that credit risk had a weak and negative relationship with financial performance (ROA).This study concludes that CAMEL model can be used as a proxy for credit risk management when measuring the financial performance.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Credit creation is the main income generating activity for the banks. But this activity involves huge risks to both the lender and the borrower. When financial institutions issue loans, there is a risk of borrower default. When banks collect deposits and on-lend them to other clients, they put clients' savings at risk. The risk of a trading partner not fulfilling his or her obligation as per the contract on due date or anytime thereafter can greatly jeopardize the smooth functioning of a bank's business. The default of small number of borrowers may result to large losses for a financial institution which can lead to massive financial distress affecting the whole economy (Bessis, 2003).

Credit Risk is the potential that a credit borrower/counter party fails to meet the obligations on agreed terms. There is always scope for the borrower to default from his commitments for one or the other reason resulting in crystallization of credit risk by the financial institution. These losses could take the form of outright default or alternatively, losses from changes in portfolio value arising from actual or perceived deterioration in credit quality. Credit Risk management is necessary to minimize the risk and maximize financial institution's risk adjusted rate of return by assuming and maintaining credit exposure within the acceptable parameters (Pandey, 2004).

Credit or default risk is the risk that the promised cash flows from loans and securities held by

financial institutions may not be paid in full. Should a borrower default, both the principal loaned and the interest payments expected are at risk. The potential loss a financial institution can experience suggests that financial institutions need to collect information about borrowers whose assets are in their portfolios and to monitor those borrowers overtime, (Saunders and Cornett, 2003).Credit risk is the uncertainty associated with borrowers' loan repayments. In general when borrowers' asset values exceed their indebtedness they repay loans but when borrowers' assets values are less than loan values, they do not repay and they could therefore exercise their option to default (Sinkey Jr, 2002).

1.1.1 Credit Risk Management

Credit Risk is the current or prospective risk to earnings and capital arising from an obligor's failure to meet the terms of any contract with the Bank or if an obligor otherwise fails to perform as agreed. Credit Risk arises from the possibility of losses associated with reduction of Credit Quality of borrower's or counterparties. Credit risk refers to the risk that a borrower will default on any type of debt by failing to make required payments. The risk is primarily to the lender and includes lost principal and interest, disruption to cash flows, and increased collection costs. The loss may be complete or partial and can arise in a number of circumstances. Risk management framework is important for commercial banks (CBK, 2013).

Where commercial banks do not have an indication of what proportion of their borrowers will default, earnings will vary thus exposing the banks to an additional risk of variability of their profits. Every financial institution bears a degree of risk when the institution lends

to business and consumers and hence experiences some loan losses when certain borrowers fail to repay their loans as agreed. Principally, the credit risk of a bank is the possibility of loss arising from non-repayment of interest and the principle, or both, or non-realization of securities on the loans (CBK, 2013).

To minimize credit risk, banks are encouraged to use the “know your customer” principle as expounded by the Basel Committee on Banking Supervision (Kunt-Demirguc and Detragiache, 1997; Parry, 1999; Kane and Rice, 1998). Knowledge of the Customer means that Credit shall be granted only to those Customers’ whom the Commercial Bank fully understands their business operations. Knowledge of the Customer must extend beyond data relating to the Customer alone and cover all aspects which can influence credit risk, both qualitative and quantitative in nature (CBK, 2013).

Subjective decision-making by the management of banks may lead to extending credit to business enterprises they own or with which they are affiliated, to personal friends, to persons with a reputation for non-financial acumen or to meet a personal agenda, such as cultivating special relationship with celebrities, politically exposed persons or well-connected individuals. A solution to this may be the use of tested lending techniques and especially quantitative ones, which filter out subjectivity (Griffith and Persuad, 2002).

The Central Bank of Kenya developed risk management guidelines for the purpose of providing minimum direction to banks on risk management and create a working framework befitting international best practices which require banks to have a fully independent credit

risk management responsible for capital adjustment and provision for escalating non-performing loans (CBK, 2013).

The credit risk management function in banks needs to be a robust process that enables the banks to proactively manage the loan portfolios to minimize the losses and earn an acceptable level of return to its shareholders (Kimeu, 2008) The importance of credit risk management is recognized by banks for it can establish the standards of process, segregation of duties and responsibilities.

1.1.2 Financial Performance

Performance may be defined as the reflection of the way in which resources of a company (Bank) are used in the form which enables it to achieve its objectives. Financial performance is the employment of financial indicators to measure the extent of objective achievement, contribution to making available financial resources and support of the Bank with investment opportunities (Heremans, 2007).

Financial performance of a firm is the measure of the level of the organization's profit or losses within a specified period of time. Several measures have been used to measure the financial performance of Banks. These measures include: - Return on Equity (ROE), Return on Asset (ROA) and Net Interest Margin (NIM) (Murthy & Sree, 2003; Alexandru et al., 2008).

Return on Equity (ROE) which is a financial ratio that refers to how much profit a company earns compared to the total amount of shareholder equity invested or found on the balance sheet. ROE is what the shareholders look in return for their investment. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. Thus, the higher the ROE the better the company is in terms of profit generation. It is further explained by Khrawish (2011) that ROE is the ratio of Net Income after Taxes divided by Total Equity Capital. It represents the rate of return earned on the funds invested in the bank by its stockholders. ROE reflects how effectively a bank management is using shareholders' funds. Thus, it can be deduced from the above statement that the better the ROE the more effective the management in utilizing the shareholders capital.

Return on Asset (ROA) a major ratio that indicates the profitability of a bank. It is a ratio of Income to its total asset (Khrawish, 2011). It measures the ability of the bank management to generate income by utilizing company assets at their disposal. In other words, it shows how efficiently the resources of the company are used to generate the income. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution (Khrawish, 2011). Wen (2010) suggests that a higher ROA shows that the company is more efficient in using its resources.

Net Interest Margin (NIM) is a measure of the difference between the interest income generated by banks and the amount of interest paid out to their lenders (for example, deposits), relative to the amount of their (interest- earning) assets. It is usually expressed as a percentage of what the financial institution earns on loans in a specific time period and other assets minus

the interest paid on borrowed funds divided by the average amount of the assets on which it earned income in that time period (the average earning assets). The NIM variable is defined as the net interest income divided by total earnings assets (Gul et al., 2011). Net interest margin measures the gap between the interest income the bank receives on loans and securities and interest cost of its borrowed funds. It reflects the cost of bank intermediation services and the efficiency of the bank. The higher the net interest margin, the higher the bank's profit and the more stable the bank is. Thus, it is one of the key measures of bank profitability. However, a higher net interest margin could reflect riskier lending practices associated with substantial loan loss provisions (Khrawish, 2011).

Financial performance is a subjective measure of how well a bank can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Pandey, 2008).

1.1.3 The Effects of Credit Risk Management on Financial Performance

Credit risk management is a process of decision making which involves minimizing losses from both bad debts and costs of debt operation while maximizing the value of credit sales. Financial Performance is the operational strength of a firm in relation to its revenue and expenditure as revealed by its financial statements. In any organization especially commercial banks, financial performance is affected by credit risk (Lymon and Carles, 1978).

There is a significant relationship between bank performance (in terms of return on asset) and credit risk management (in terms of loan performance) (Achou and Tenguh, 2008). Better credit risk management results in better bank performance. Thus, it is of crucial importance that banks practice prudent credit risk management and safeguarding the assets of the banks and protect the investors' interests.

1.1.4 Commercial Banks in Kenya

Commercial banks are those institutions that are licensed by the Central bank to take deposits and advance credit. As at December 2011; there are 43 licensed commercial banks and 1 mortgage finance company. Out of the 44 institutions, 30 Commercial Banks and 1 mortgage Financial Institutions are locally owned and 13 are foreign owned. The locally owned financial institutions comprise 3 banks with significant shareholding by the Government and State Corporations, 27 commercial banks and 1 mortgage finance institution (CBK, 2012).

The primary responsibility of understanding the risks run by a financial institution and ensuring that the risks are appropriately managed should clearly be vested with the board of directors. The board should set limits by assessing the financial institution's risk and risk-bearing capacity. At the organizational level, overall risk management should be assigned to a Risk Management Committee or an independent Risk Manager that reports directly to the board. The Risk Manager must sufficiently be independent of the business lines in order to ensure an adequate separation of duties and the avoidance of conflicts of interest (CBK, 2005).

The Risk Management Committee or the Risk Manager shall take full responsibility for evaluating the overall risks faced by the financial institution and determining the level of risks that will be in the best interest of the financial institution. The functions of the Risk Management Committee or Risk Manager should essentially be to identify measure, monitor and control the risks undertaken by a financial institution (CBK, 2012).

In the recent years banks have developed sophisticated systems of risk management. Many banks have been exposed to more risk of loan defaulting due to the increase of the amount of loans advanced. In addition to the system, management have had to up there game in securing their assets (Morsman, 1993). Commercial banks have policies which guide on the process of advancing credit. These policies define on who should access credit and the collaterals involved. In addition it guards its back through insurance. Once this is achieved the banks financial performance is expected to go up (IFSB, 2005).

The firm's credit policies are the chief influences on the level of debtors, measuring the manager's position to invest optimally in its debtors and be able to trade profitably with increased revenue (Van Horne, 1995).The credit policy defines a firms' performance, meaning that once a firm adopts an optimal credit policy, it will be able to maximize its investment revenue in debtors and this improves and promotes its financial standing and performance therefore a good credit policy decision is positively related to high financial performance (Pandley, 1995).

1.2 Research Problem

Granting credit to the members is an important activity to commercial banks thus the importance of credit risk management in these institutions. Weak credit risk management is the primary cause of many commercial banks' failures. Mc Menamin (1999) and Hempel et. al (1994) carried out studies of national banks that failed in the mid-1980s in the U.S.A and found out that the consistent element in the failures was the inadequacy of the bank's credit risk management system in the controlling of loan quality.

A common approach to customer's credit selection and analysis is the use of the "six Cs" of credit as an initial screening and risk assessment advice. These Cs are: the capacity, capital, character, collateral, conditions and control. Generally, institutions are expected to manage their credit risk to avoid exposing themselves to unnecessarily high level risk and subsequently a decline in returns. The risks contained in a bank's principal activities, such as those involving its own balance sheet and its basic business of lending and borrowing, are not all borne by the bank itself (Bhattacharya, 1993).

In many instances, the institution will eliminate or mitigate the financial risk associated with a transaction by proper business practices; in others, it will shift the risk to other parties through a combination of pricing and product design. The banking industry recognizes that an institution need not engage in business in a manner that unnecessarily imposes risk upon it; nor should it absorb risk that can be efficiently transferred to other participants. Rather, it should only manage risks at the firm level that are more efficiently managed there than by

the market itself or by their owners in their own portfolios (Babbel and Fabozzi, 1999).

Muasya (2009) analyzed the impact of non- performing loans on the performance of the banking sector in Kenya in the time of global financial crises. The findings confirmed that non-performing loans do affect commercial banks in Kenya. Wanjira (2010) studied the relationship between non- performing loans management practices and financial performance of commercial banks in Kenya. The study concluded that there is a need for commercial banks to adopt non-performing loans management practices. The study further concluded that there was a positive relationship between non- performing loans management practices and the financial performance of commercial banks in Kenya which implies that the adoption of non- performing loans management practices leads to improved financial performance of commercial banks in Kenya.

Muthee (2010) conducted a research on the relationship between credit risk management and profitability in commercial banks in Kenya. The findings and analysis revealed that credit risk management has an effect on profitability in all the commercial banks analyzed. The study used regression analysis to establish the relationship between NPLR and ROE. A forecasting model was developed and tested for accuracy in obtaining predictions. The finding of the study indicated that the model was moderately significant. NPLR as an independent variable was linearly related with the dependent variable ROE thus simple linear regression was used.

Mutua (2014) conducted a research to investigate the effects of Credit Risk Management on the financial performance of commercial banks in Kenya. The study revealed that Sixty four

percent (64%) of the respondents felt that Non-performing loans contribute to the financial performance practices in the commercial banks.

This study utilized CAMEL approach to check up the financial health of commercial banks, in line with the recommendations of the Basel Committee on Banking Supervision of the Bank of International Settlements (BIS) of 1988 (ADB in Baral, 2005). Most studies conducted in relation to bank performances focused on sector-specific factors that affect the overall banking sector performances (Chantapong, 2005; Olweny and Shipho, 2011 and Heng et al., 2011). Nevertheless, there was need to include the macroeconomic variables. Thus, this study incorporated key macroeconomic variables (Inflation and GDP) in the analysis.

1.3 Research Objective

The objective of the study was to establish the effects of credit risk management on the financial performance of commercial banks in Kenya.

1.4 Value of the Study

The question of credit risk and common exposures are clearly of enormous importance for regulators, industry participants and investors. The results of this research will have implications and importance to various stakeholders as follows: To regulators and policy makers, the research will provide the basis for regulatory policy framework to mitigate the financial system from financial crises and to better appreciate and quantify those credit risk

exposures. To investors, this study will help them to understand the factors that influence the returns on their investments.

To commercial banks, this paper will provide an insight into the credit risk attributes which may need to be incorporated in their investment decision processes. The study will improve not only researcher's scope of understanding risk management but also entire public hence gain exposure to the banking industry. These findings will be used as reference material by future researchers interested in further research on credit risk management and its effects on financial performance of commercial banks.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents theoretical background and defines the process of Credit risk management by commercial banks. The chapter aims at acknowledging and appreciating work done by other researchers on the same topic. Literature review will also help in establishing existing gaps, some of which were addressed by this study.

2.2 Theoretical Background

Theories are formulated to explain, predict, and understand phenomena and, in many cases, to challenge and extend existing knowledge, within the limits of the critical bounding assumptions. A theory consists of concepts, together with their definitions, and existing theory/theories that are used for the particular study.

2.2.1 Portfolio Theory

Since the 1980s, companies have successfully applied modern portfolio theory to market risk. Many companies are now using value at risk models to manage their interest rate and market risk exposures. Unfortunately, however, even though credit risk remains the largest risk facing most companies, the practice of applying modern portfolio theory to credit risk has lagged (Margrabe, 2007).

Companies recognize how credit concentrations can adversely impact financial performance. As a result, a number of institutions are actively pursuing quantitative approaches to credit risk measurement. This industry is also making significant progress toward developing tools that measure credit risk in a portfolio context. They are also using credit derivatives to transfer risk efficiently while preserving customer relationships. Portfolio quality ratios and productivity indicators have been adapted (Kairu, 2009). The combination of these developments has vastly accelerated progress in managing credit risk in a portfolio context.

Traditionally, organizations have taken an asset-by-asset approach to credit risk management. While each company's method varies, in general this approach involves periodically evaluating the quality of credit exposures, applying a credit risk rating, and aggregating the results of this analysis to identify a portfolio's expected losses. The foundation of the asset-by-asset approach is a sound credit review and internal credit risk rating system. This system enables management to identify changes in individual credits, or portfolio trends in a timely manner. Based on the changes identified, credit identification, credit review, and credit risk rating system management can make necessary modifications to portfolio strategies or increase the supervision of credits in a timely manner.

While the asset-by-asset approach is a critical component to managing credit risk, it does not provide a complete view of portfolio credit risk, where the term risk refers to the possibility that actual losses exceed expected losses. Therefore, to gain greater insight into credit risk, companies increasingly look to complement the asset-by-asset approach with a quantitative portfolio review using a credit model (Mason and Roger, 1998).

Companies increasingly attempt to address the inability of the asset-by-asset approach to measure unexpected losses sufficiently by pursuing a portfolio approach. One weakness with the asset-by-asset approach is that it has difficulty identifying and measuring concentration. Concentration risk refers to additional portfolio risk resulting from increased exposure to credit extension, or to a group of correlated creditors (Richardson, 2002).

2.2.2 Information Theory

Derban, Binner and Mullineux (2005) recommended that borrowers should be screened especially by banking institutions in form of credit assessment. Collection of reliable information from prospective borrowers becomes critical in accomplishing effective screening as indicated by symmetric information theory.

Qualitative and quantitative techniques can be used in assessing the borrowers although one major challenge of using qualitative models is their subjective nature. However according to Derban, Binner and Mullineux (2005), borrowers attributes assessed through qualitative models can be assigned numbers with the sum of the values compared to a threshold. This technique minimizes processing costs, reduces subjective judgments and possible biases. The rating systems will be important if it indicates changes in expected level of credit loan loss. Brown Bridge (1998) concluded that quantitative models make it possible to numerically establish which factors are important in explaining default risk, evaluating the relative degree of importance of the factors, improving the pricing of default risk, screening out bad loan

applicants and calculating any reserve needed to meet expected future loan losses.

2.2.3 Credit Scoring Model

Huang (2001) observes that Credit scoring models also form part of the framework used by lending institutions to grant credit to clients. For corporate and commercial borrowers, these models generally have qualitative and quantitative sections outlining various aspects of the risk including, but not limited to, operating experience, management expertise, asset quality, and leverage and liquidity ratios, respectively. Once this information has been fully reviewed by credit officers and credit committees, the lender provides the funds subject to the terms and conditions presented within the contract.

Any lending decision should always be preceded by detailed analysis of risks and the outcome of analysis should be taken as a guide for the credit decision. As there is a significant correlation between credit ratings and default frequencies, any derivation of probability from such historical data can be relied upon.

The model may consist of minimum of six grades for performing and two grades for non-performing assets. The distribution of rating of assets should be such that not more than 30% of the advances are grouped under one rating (Saunders and Cornett, 2007).

2.3 Determinants of Financial Performance of Commercial Banks

The determinants of bank performances can be classified into bank specific (internal) and macroeconomic (external) factors (Al-Tamimi, 2010; Aburime, 2005). These are stochastic variables that determine the output. Internal factors are individual bank characteristics which affect the banks performance. These factors are basically influenced by internal decisions of management and the board. The external factors are sector-wide or country-wide factors which are beyond the control of the company and affect the profitability of banks. The overall financial performance of banks in Kenya in the last two decade has been improving. However, this doesn't mean that all banks are profitable, there are banks declaring losses (Oloo, 2010).

According to the Bank Supervision Annual Report (2014) the banking sector registered an enhanced performance during the year ended December 2014. The Sector recorded a 12.2% growth in pre-tax profits during the year. However, asset quality registered a decline with the non-performing loans (NPLs) ration increasing from 5.2% in December 2013 to 5.6% in December 2014. The increase in NPLs was partly attributed to the lag effects of high interest regime in 2012/2013 and subdued economic activities witnessed in the period ended December 2014.

Studies have shown that bank specific and macroeconomic factors affect the performance of commercial banks (Flamini et al., 2009). In this regard, the study of Olweny and Shipho (2011) in Kenya focused on sector-specific factors that affect the performance of commercial banks.

Yet, the effect of macroeconomic variables was not included. Moreover, to the researcher's knowledge the important element, the moderating role of ownership identity on the performance of commercial banks in Kenya was not studied. Thus, this study was conducted with the intention of filling this gap.

The internal factors are bank specific variables which influence the profitability of specific bank. These factors are within the scope of the bank to manipulate them and that they differ from bank to bank. These include capital size, size of deposit liabilities, size and composition of credit portfolio, interest rate policy, labor productivity, and state of information technology, risk level, management quality, bank size, ownership and the like. CAMEL framework often used by scholars to proxy the bank specific factors (Dang, 2011). CAMEL stands for Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability and Liquidity. Each of these indicators is further discussed below.

2.3.1 Capital Adequacy

Capital is the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation (Athanasoglou et al., 2005). According to CBK Prudential Guideline (2013), the minimum regulatory capital adequacy requirement that are measured by the ratio of Core Capital and Total Capital to Total Risk weighted Assets are 8.0% and 12.0% respectively. Capital adequacy is the level of capital required by the banks to enable them withstand the risks such as credit, market and operational risks they are exposed to in order to absorb the potential losses and protect the bank's debtors.

According to Dang (2011), the adequacy of capital is judged on the basis of capital adequacy ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis. Capital adequacy ratio is directly proportional to the resilience of the bank to crisis situations. It has also a direct effect on the profitability of banks by determining its expansion to risky but profitable ventures or areas (Sangmi and Nazir, 2010).

2.3.2 Credit Risk

The solvency of financial institutions is typically at risk when their assets become impaired, so it is important to monitor indicators of the quality of their assets in terms of overexposure to specific risks trends in non-performing loans and the health and profitability of bank borrowers. Credit risk is inherent in lending which is the major banking business. It arises when a borrower defaults on the loan payment agreement. A financial institution whose borrower defaults on their payment may face cash flow problems, which eventually affects its liquidity position. Ultimately, this negatively impacts on the profitability and capital through extra specific provisions for bad debts (BOU, 2002) the quality of loan portfolio determines the profitability of banks.

The highest risk facing a bank is the losses derived from delinquent loans (Dang, 2011). Thus, nonperforming loan ratios are the best proxies for Asset quality. It is the major concern of all commercial banks to keep the amount of nonperforming loans to low level. This is so because high NPLs affect the profitability of the bank. Thus, low NPLs to total loans shows that the

good health of the portfolio a bank. The lower the ratio the better the bank performing (Sangmi and Nazir, 2010).

2.3.3 Management Efficiency

Management Efficiency is one of the key internal factors that determine the bank profitability. It is represented by different financial ratios like total asset growth, loan growth rate and earnings growth rate. Yet, it is one of the complexes subject to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for management quality. The performance of management is often expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff, and others. Yet, some financial ratios of the financial statements act as a proxy for management efficiency.

The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. Cost efficiency is approximated by a simple ratio of Operating Expenses to Total Revenues, denoted as Efficiency Ratio, which measures management flexibility to adjust costs to changes in the business development signaled by revenues. The higher is the Efficiency Ratio, the higher is the default risk.

2.3.4 Liquidity Management

Liquidity is another factor that determines the level of bank performance. Liquidity is the degree to which debts obligations coming due in the next 12 months can be paid in cash or assets that will be turned into cash. According to Dang (2011) adequate level of liquidity is positively related with bank profitability. The most common financial ratios that reflect the liquidity position of a bank according to the above author are customer deposit to total asset and total loan to customer deposits. However, the study conducted in China and Malaysia found that liquidity level of banks has no relationship with the performances of banks (Said and Tumin, 2011).

Initially solvent financial institutions may be driven towards closure by management of short term liquidity. Indicators should cover funding sources and capture large maturity mismatches. Liquidity is the degree to which debts obligations coming due in the next 12 months can be paid in cash or assets that will be turned into cash .The mismatching and controlled mismatching of the maturities and interest rate of assets and liabilities is fundamental to the management of commercial banks.

2.3.5 External Factors/ Macroeconomic Factors

The macroeconomic policy stability, Gross Domestic Product, Inflation, Interest Rate and Political instability are also other macroeconomic variables that affect the performances of banks. For instance, the trend of GDP affects the demand for banks asset. During the declining

GDP growth the demand for credit falls which in turn negatively affect the profitability of banks. On the contrary, in a growing economy as expressed by positive GDP growth, the demand for credit is high due to the nature of business cycle. During boom the demand for credit is high compared to recession (Athanasoglou et al., 2005).

2.4 Empirical Evidence

Khan and Ahmed (2001) carried a study on risks arising from profit-sharing investment deposits. The objective of the study was to find out whether bankers considered these unique risks more serious than conventional risks faced by financial institutions. The results of survey of risk perception in different modes of financing showed that risk level is considered elevated. They concluded that the high perception of risks may be an indication of the low degree of active risk management due to the absent of risk control through internal processes and control, especially in the case of credit risk.

Nelson (2002) did a study on Commercial banking crises in Kenya and investigated the causes of nonperforming loans. Their objectives included, to investigate the actions that bank managers have taken to mitigate that problem and the level of success of such actions. Using a sample of 30 managers selected from the ten largest banks the study found that national economic downturn was perceived as the most important external factor. Customer failure to disclose vital information during the loan application process was considered to be the main customer specific factor. They found that many financial institutions that collapsed in Kenya

since 1986 failed due to non-performing loans. The study concluded that lack of an aggressive debt collection policy was perceived as the main bank specific factor, contributing to the non performing debt problem in Kenya.

Valsamakis et al (2005) carried out a study on risk to earnings or capital due to borrowers' late and nonpayment of loan obligations. His objective was to assess whether risk of non-repayment will result to loan default. He found that Credit risk encompasses both the loss of income resulting from the sector inability to collect anticipated interest earnings as well as the loss of principal resulting from loan defaults. Credit risk arises because of the possibility that the expected cash flows from advances and securities held, might not be paid in full. He concluded that credit risk is considered the most lethal of the risks firms face.

Haron and Hin (2007) did a study on credit risks experienced by commercial banks. His objective was to find out the complexities of a number of their products, as well as their relative novelty in the contemporary financial services market, combined with the fiduciary obligations of the bank when it acts as a custodian, imply that for Banks, credit risk is very important for consideration. He found that Investment Account Holders may be considered in the absence of misconduct and negligence by the bank to bear credit and market risks of assets if their funds have been invested by the bank, the latter must be considered as being exposed to the credit risk arising from its management of those funds. He concluded that that Banks are exposed to a number of credit risks that differ from those that are faced by conventional banks.

Mohammad (2008) did a study on risk management in Bangladesh Banking Sector. His main objective was to investigate the contribution of credit risk on non-performing loans. He found that, the crux of the problem lies in the accumulation of high percentage of non-performing loans over a long period of time. As per him unless NPL ratio of the country can be lowered substantially they will lose competitive edge in the wave of globalization of the banking service that is taking place throughout the world. Since they have had a two-decade long experience in dealing with the NPLs problem and much is known about the causes and remedies of the problem, he concluded that it is very important for the lenders, borrowers and policy makers to learn from the past experience and act accordingly.

Waweru and Kalani (2009) studied commercial banking crises in Kenya. They found that some of the causes of non-performing loans in Kenyan banks were national economic downturn, reduced consumer, buying ability and legal issues. This current study appreciate that the nonperforming loan and loan delinquency concepts are similar. However this study differs significantly from Waweru and Kalani (2010) in terms of area of study, and study methodology.

Muasya (2009) analyzed the impact of non- performing loans on the performance of the banking sector in Kenya in the time of global financial crises. The findings confirmed that non-performing loans do affect commercial banks in Kenya. Further analysis of individual banks with more than Ksh. 25 billion worth of asset indicated that while the impacts are negative, the magnitude of non- performing loans to both interest income and profitability are not adverse

for 7 of the 13 analyzed banks and that asset quality of the whole banking sector has been improving to settle at 7.17%.

Wanjira]m (2010) studied the relationship between non- performing loans management practices and financial performance of commercial banks in Kenya. The study concluded that there is a need for commercial banks to adopt non-performing loans management practices. Such practices include ensuring sufficient collaterals, limiting lending to various kinds of businesses, loan securitization, ensuring clear assessment framework of lending facilities and use of procedures in solving on problematic loans among others. The study further concluded that there was a positive relationship between non- performing loans management practices and the financial performance of commercial banks in Kenya which implies that the adoption of non- performing loans management practices leads to improved financial performance of commercial banks in Kenya.

Aboagye and Otioku, (2010) conducted a study on Credit Risk Management and Profitability in financial institutions in Sweden. The main objective was to find out if the management of the risk related to that credit affects the profitability of the financial institutions. They found that credit risk management in financial institutions has become more important not only because of the financial crisis that the world is experiencing nowadays but also the introduction of Basel II. They concluded that since granting credit is one of the main sources of income in financial institutions, the management of the risk related to that credit affects the profitability of the financial institutions (Aboagye and Otiokun, 2010).

Kithinji (2010) analyzed the effect of credit risk management (measured by the ratio of loans and advances on total assets and the ratio of non-performing loans to total loans and advances on return on total asset in Kenyan banks between 2004 to 2008). The study found that the bulk of the profits of commercial banks are not influenced by the amount of credit and non-performing loans. The implication is that other variables apart from credit and non-performing loans impact on banks' profit. Kithinji (2010) result provides the rationale to consider other variables that could impact on bank's performance.

Mutua (2014) conducted a research to investigate the effects of Credit Risk Management on the financial performance of commercial banks in Kenya. The study revealed that Sixty four percent (64%) of the respondents felt that Non-performing loans contribute to the financial performance practices in the commercial banks.

2.5 Summary of Literature Review

Generally, from almost all surveys reviewed in the literature, it is evident that credit risk management is essential in optimizing the performance of financial institutions. In addition, an effective credit risk management involves establishing an appropriate credit risk environment, operating under a sound credit granting process, maintaining appropriate credit administration that involves the identification, analysis and monitoring process as well as adequate controls over credit risk.

According to Parrenas (2005), organizations have long viewed the problem of risk management as the need to control risks which make up most, if not all, of their risk exposure, credit, interest rate, foreign exchange and liquidity risk. While they recognize counterparty and legal risks, they view them as less central to their concerns. Where counterparty risk is significant, it is evaluated using standard credit risk procedures, and often within the credit department itself. Likewise, most financial institutions would view legal risks as arising from their credit decisions or, more likely, proper process not employed in financial contracting.

In respect to the theories and the empirical evidence, there was need to adopt the best Credit risk management practices that minimize the losses arising from loans. This needed to be an active process that enables the banks to proactively manage the loan portfolios, minimize provisions, lost interest income and minimal write-offs. Financial institutions shall enhance growth through adoption of better credit risk management practices which involve methods, procedures, processes and rules used in minimizing loan losses facing institutions in their lending endeavors.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology that will be used to carry out the research. It presents the research design, the target population, sample size and sampling procedure, data collection and analysis.

3.2 Research Design

Research design is the plan and structure of investigation so conceived so as to obtain answers to research questions. Descriptive research is the investigation in which quantity data is collected and analyzed in order to describe the specific phenomenon in its current trends, current events and linkages between different factors at the current time (Kerlinger, 1986). Descriptive research design was used because it enabled the researcher to generalise the findings to a larger population which was all the commercial banks in Kenya.

3.3 Target Population

Target population can be defined as a complete set of individuals, cases/objects with some common observable characteristics of a particular nature distinct from other population. Target population is that population to which a researcher wants to generalize the results of the study (Mugenda and Mugenda, 2003). This definition ensures that population of interest is

homogeneous. The population of interest for the study was all licensed commercial banks in Kenya. As at December 2014, there were 43 licensed commercial banks. This study thus constituted a census of the 43 licensed commercial banks (Appendix 1) in the period 2010 to 2014.

3.4 Data Collection

Secondary data was used for the purpose of this study and this data was deduced from the audited financial statements of the Commercial banks. The major dependent performance indicator that was used was ROA. ROA gives an idea as to how efficient management is at using its assets to generate earnings. Using ROA as a comparative measure was the best to compare it against a company's previous ROA numbers or the ROA of similar financial institutions. This data was deduced from the statement of comprehensive income and statement of financial position of the commercial banks. These were obtained from the Central Bank of Kenya Website and CBK's Annual Supervision reports.

3.5 Data Analysis

The data collected from the annual reports of the banks was analyzed using multiple regression analysis: the relation of one dependant variable to multiple independent variables. Then the data was analyzed by the use of Descriptive statistics using Microsoft Excel and SPSS.

3.5.1 Analytical Model

The study adopted multiple regression model to analyze the results of this study by determining the relation of one dependant variable to multiple independent variables. The major dependent performance indicators used was ROA. ROA gave an idea as to how efficient management is at using its assets to generate earnings. In this case, the required information was available in the annual reports of the banks under appendices section (Appendix II). Using ROA as a comparative measure is best to compare it against a company's previous ROA numbers or the ROA of similar financial institutions.

The major independent variables are capital adequacy, asset quality, management efficiency and liquidity status which shall be proxied by selected ratios. The CAMEL ratios are the popular bank specific factors often used in representing bank specific factors in relation to performance. The CBK also uses CAMEL ratios to evaluate the performances of commercial banks (Olweny & Shipho, 2011). The macroeconomic variables used as independent variables are GDP growth rate and average annual Inflation Rate.) In this study the following baseline model was used:

$$\pi_{it} = \alpha_0 + \alpha_1 CA_{it} + \alpha_2 AQ_{it} + \alpha_3 ME_{it} + \alpha_4 LM_{it} + \alpha_5 GDP_{it} + \alpha_6 INF_{it} + \varepsilon_{it} \dots\dots\dots (1)$$

Where:

- Π_{it} = Performance of Bank i at time t as expressed by ROA
- α_0 = Intercept
- CA_{it} = Capital Adequacy of bank i at time t
- AQ_{it} = Asset Quality of bank i at time t
- ME_{it} = Management Efficiency of Bank i at time t
- LM_{it} = Liquidity of Bank i at time t

- $a_1 - a_6$ = Coefficients parameters
- GDP_t = Gross Domestic Product (GDP) at time t
- INF_t = Average annual inflation rate at time t
- ε_{it} = Error term

This section presents the measurements that was used to operationalise the study variables.

Variable	Measurement
ROA	Net Income after Taxes to its total asset
Capital Adequacy	Total Capital to Total Asset
Credit Risk (Asset Quality)	Non-performing loans to total loans
Management Efficiency	Total Operating Expense to Total revenue
Liquidity	Total Loans to Total Customer Deposit
GDP	Yearly Gross Domestic product
Inflation	Yearly average Inflation

3.5.2 Test of Significance

The F- test was used to determine the significance of the regression. The coefficient of determination (R^2) is defined as the sum of squares due to the regression divided by the sum of total squares. Usually, R^2 is interpreted as representing the percentage of variation in the dependent variable explained by variation in the independent variables. This is defined in terms of variation about the mean of Y (Profitability) so that if a model is rearranged and the dependent variable changes, R^2 changes. It is thus goodness of fit statistic given by ratio of the explained sum of squares. Correlation analysis was carried out to find the direction of the relationship between ROA and the independent variables.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the analysis of secondary data collected and discusses the findings of the effects of credit risk management on the financial performance of commercial banks in Kenya. It shows the response rate and further presents the analyzed data using the Microsoft Excel and SPSS software. Regression Analysis was used to investigate the effect of credit risk management on the financial performance of commercial banks in Kenya. Credit risk management on financial performance (dependent variable) is explained by the Capital Adequacy, Credit risk, Management efficiency and Liquidity Management (independent variables). The data was gathered exclusively from the statement of Comprehensive Income and Statements of Financial Position of the Commercial Banks as the research instruments. It also presents the response rate, respondents' characteristics and preliminary findings.

4.2 Response Rate

The target population for this study constituted 43 commercial banks registered and operational as at 31st December, 2011 licensed to carry out banking business in Kenya under the Banking Act Cap. 488. A population census was applied in this study. However, commercial bank(s) which were not in operation for the entire 5 year period or under receivership were dropped due to incompleteness of the records or missing data. This research used secondary data which was collected from the CBK publications on banking sector survey and the respective banks'

financial statements for the period of analysis 2010- 2014. The data analysis method used was based on Pearson correlation analysis and a multiple regression model which took the form of:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

Where:

- Y = Performance of Bank i at time t as expressed by ROA
- β_0 = Intercept
- β_{1it} = Capital Adequacy of bank i at time t
- β_{2it} = Asset Quality of bank i at time t
- β_{3it} = Management Efficiency of Bank i at time t
- β_{4it} = Liquidity of Bank i at time t
- $a_1 - a_6$ = Coefficients parameters
- GDP_t = Gross Domestic Product (GDP) at time t
- INF_t = Average annual inflation rate at time t
- ϵ_{it} = Error term

The dependent variable was the financial performance of the banks whereas the independent variables were the CAMEL components of Capital adequacy, Asset quality, Management efficiency and Liquidity Management.

4.3 Descriptive Statistics

Table 4.1 below summarizes the descriptive statistics of the variables included in the regression models as presented. It represents the variables of 43 Commercial Banks operating in the Kenya whose financial results were available for the years 2010-2014.

Table 4.1: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Error	Std. Deviat	Skewness	Std. Error	Kurtosis	Std. Error
Capital adequacy	8.9	110.48	75.3	0.5099	1.1401	0.405	0.732	-0.178	2.132
Credit risk	0.67	76	55.1	0.3355	0.7503	0.481	0.316	-0.656	2.631
Management efficiency	25	121.59	69.5	1.4657	3.277	1.146	0.783	1.082	1.912
Liquidity management	1.916	95.27	77.02	1.861	4.161	-0.516	0.215	0.724	1.572
GDP	4.4	5.6	4.92	0.2267	0.50695	0.593	0.824	-1.932	2.063
Inflation	3.2	18.93	7.956	2.8237	6.314	1.928	0.917	3.933	2.248
ROA	-13.6	10.4	5.54	0.0602	0.1348	0.881	0.175	-1.579	2.416

Return on Assets (ROA) had a mean value of 4.51 and a standard deviation of 0.1348. The highest performance was 7.4 while the least performance -13.6 was for the five year period. This findings show that some Commercial Banks were not able to hold their financial performance as a result of varied Credit Risk.

Credit Risk had a mean of 5.24 and a standard deviation of 0.7503; Liquidity Management had a mean of 77.02 and a standard deviation of 4.161; Management efficiency had a mean of 46.12 and a standard deviation of 3.277; Capital Adequacy had a mean of 82.5 and a standard deviation of 1.1401 while External Factors measured by GDP had a mean 4.92 of and a standard deviation of 0.50695 and Inflation had a mean 7.956 and a standard deviation of 6.314.

4.4 Correlation analysis

To evaluate the association between the variables, the data collected was analyzed to generate the Pearson correlation coefficient which gives tests the presence of association

between the variables. The significance level was set at 5% with a 2-tailed test. The results are therefore as presented in table 4.2 below.

Table 4. 2: Correlation Table

	ROA	Capital adequacy	Credit Risk	Management efficiency	Liquidity management	GDP	Inflation
Return On Assets	1						
Capital adequacy	0.738	1					
Credit Risk	0.394	0.523	1				
Management efficiency	0.722	0.743	0.597	1			
Liquidity management	-0.529	-0.533	-0.72	-0.531	1		
GDP	0.341	0.445	0.6	0.443	0.523	1	
Inflation	-0.496	0.419	-0.566	0.417	-0.492	-0.507	1

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

From the table, all the factors have a positive correlation with the dependent variable. This indicates that, the credit risk of the Commercial Banks in Kenya has a positive association with their financial performance.

The strength of the association is measured based on the Pearson's correlation scale where a value in the interval 0.0-0.3 is an indication of no correlation, 0.3-0.5 is a weak correlation, 0.5-0.7 is a fair correlation and a correlation value in the interval 0.7 and 1 is an indication of a strong correlation. A correlation value of 1 indicates a presence of a perfect association between the variables. The magnitude of the association (+ or -) indicates the nature of association (positive or negative association).

Table 2 reveals the correlation coefficients between the variables and financial performance. Table 2 shows that capital adequacy has a correlation coefficient of 0.738 at $p=0.029$ with

financial performance. The correlation coefficient between Credit Risk and financial performance is ($R = -0.394$) at $p = 0.017$. Management Efficiency also had a correlation with financial performance given R values of 0.722 at $p = 0.031$. A correlation was also established between Liquidity Management and ROA at 95% confidence levels with R values of -0.529 at $p = 0.047$.

External factors: GDP and financial performance indicated a correlation coefficient of 0.341 which is a weak and positive correlation. Also, Inflation and ROA indicated a correlation coefficient of -0.5 which is a weak and negative correlation. Testing the significance of the association at 5% level with a 2-tailed test, all the independent variables and the dependent variable were found to have a statistically significant association as the given by the significance sign (*) in the correlation values.

Based on these intervals, the table illustrates that, Credit Risk of the firms and the financial performance has a correlation coefficient of 0.393 . This is an indication of a weak and positive association between Credit Risk and Financial performance of Commercial Banks in Kenya.

4.5 Regression Analysis

The relationship between Credit Risk and the financial performance of Commercial Banks in Kenya was evaluated through a regression analysis. The results presents the regression model summary in table 4.3 which gives the coefficient of determination showing the extent to which the predictor variables influences the dependent variable, the analysis of variance

in table 4.4 which determines the reliability of the model developed in explaining the relationship and the regression coefficients in table 4.5 which gives the coefficient explaining the extent at which the independent variables influence the dependent variable.

Table4. 3: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.941 ^a	.910	.899	.22692

- Predictors: (Constant), Credit Risk, Liquidity Management, Management Efficiency, Capital Adequacy, External Factors (GDP and Inflation).
- Dependent Variable: ROA

The coefficient of determination (R square value) from the table is 0.910. This indicates that, the variability in the financial performance of Commercial Banks is 91% explained by the liquidity Management, Credit Risk, Management Efficiency, capital adequacy and the external factors. This being the case therefore, the variability due to other factors which were not studied in the current research is 9.0%. From the table also, the adjusted R square is 0.899 which measures the reliability of the results. Thus, the study results are 89.9% reliable and therefore the model results are significant and reliable in explaining the influence of the predictor variables to the dependent variable.

Table 4.4 : Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.813	7	0.302	11.203	.00049a
	Residual	0.971	213	0.027		
	Total	2.784	220			

- Predictors: (Constant), Credit Risk, Liquidity Management, Management Efficiency, Capital Adequacy, External Factors (GDP and Inflation).
- Dependent Variable: ROA

The table presents the F statistic which is used to test the significance of the relationship between the dependent and the independent variables. The F value in the table is 11.203 with a distribution F(6,36). The probability of observing a value greater than or equal to 11.203 is less than 0.025 as indicated by the significance value of 0.00049 which is less than 0.025 testing at 5% level. Therefore, based on these, there is strong evidence that the regression model developed is statistically significance and the variation in the results is insignificant. It is clear from the results that the relationship between the variables is statistically significant.

Table 4. 5: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.242	0.298		4.168	0.015
	Capital adequacy	0.703	0.139	0.42	5.058	0.027
	Credit risk	-0.494	0.124	-0.296	-3.984	0.019
	Management efficiency	0.659	0.119	0.395	5.538	0.006
	Liquidity management	0.376	0.098	0.222	3.837	0.045
	GDP	0.276	0.104	0.159	5.538	0.037
	Inflation	-0.413	0.156	-0.061	-2.647	0.021

- Dependent Variable: ROA

The table gives the regression coefficients which are used to answer the regression model proposed;

$$\pi_{it} = \alpha_0 + \alpha_1 CA_{it} + \alpha_2 AQ_{it} + \alpha_3 ME_{it} + \alpha_4 LM_{it} + \alpha_5 GDP_{it} + \alpha_6 INF_{it} + \varepsilon_{it}$$

Where:

- π_{it} = Performance of Bank i at time t as expressed by ROA
- α_0 = Intercept

- CA_{it} = Capital Adequacy of bank i at time t
- AQ_{it} = Asset Quality of bank i at time t
- ME_{it} = Management Efficiency of Bank i at time t
- LM_{it} = Liquidity of Bank i at time t
- $a_1 - a_6$ = Coefficients parameters
- GDP_t = Gross Domestic Product (GDP) at time t
- INF_t = Average annual inflation rate at time t
- ε_{it} = Error term

Based on the table results, the model therefore becomes;

$$Y = 1.242 + 0.703 CA_{it} + (-0.494)AQ_{it} + 0.659 ME_{it} + 0.376 LM_{it} + 0.276 GDP_{it} + (-0.413) INF_{it} + \varepsilon_{it}$$

From the model, it is clear that Credit Risk is negatively related to the dependent variable as the coefficient is negative. However, Capital Adequacy, Management Efficiency and Liquidity Management variables are positively related to the dependent variable as all the coefficients are positive. Inflation as one of the external factors is negatively related to the dependent variable as the coefficient is negative. However, GDP is positively related to the dependent variable as its coefficients are positively related. The model also shows that holding the predictor variables constant at zero (0), the financial performance (ROA) would be 1.242. Further, the results show that, Credit Risk has a negative relationship with financial performance of Commercial Banks in Kenya where a unit increase in Credit Risk would result to 0.494 times decrease in financial performance of the Commercial Banks.

From the model, it is also clear that, a unit increase in the Capital Adequacy would result to 0.703 times increase in the financial performance, a unit increase in the Management efficiency would lead to 0.659 times increase in financial performance and a unit change in Liquidity Management would result to 0.376 times changes in financial performance while a unit change in external factors; Inflation a unit increase would result to 0.413 times decrease in the financial performance and a unit increase of GDP would result to 0.276 times increase in financial performance of the Commercial Banks. The significance of the coefficients at 5% level with a 2-tailed test was found to be significant as indicated by their p-values which are all less than 0.025 (the critical value at 5% level).

4.6 Discussion of Research Findings

The overall objective of this study was to examine the effects of bank specific factors and macroeconomic factors on the performance of commercial banks in Kenya. The study findings illustrated that there is a significant positive association between Credit Risk of Commercial Banks and their financial performance. This was indicated by the correlation coefficient of 0.394 which shows a strong positive correlation between the variables. This indicates that, there is a direct association between Credit Risk and financial performance and that poor asset quality or high non-performing loans to total asset related to poor bank performance. Thus, asset quality strongly determines the performance of commercial banks in Kenya.

The regression test results indicated that the Credit Risk of Commercial Banks and their financial performance has a negative relationship where an increase in Credit Risk would result to 0.494 times decrease in financial performance of the Commercial Banks. This

illustrates that; efforts of decreasing a unit change in Credit Risk would see the Commercial experiencing significant growth financially.

The findings as well indicated that Capital Adequacy and Management Efficiency and the financial performance of Commercial Banks are strongly and positively correlated. This had a correlation coefficient of 0.738 and 0.722 respectively indicating that the two variables are strongly associated. The regression coefficient indicated that, an increase in the Capital Adequacy and Management Efficiency would lead to significant growth in the financial performance of Commercial Banks. Therefore, increasing quality of assets brings in improved performances in finance.

Inflation as one of the External factors and financial performance were found to have a negative and strong correlation as given by a correlation value of -0.5. The regression results also support this where the results shows that units increase in Inflation would decrease the financial performance of the Commercial Banks. This shows that inflation affects negatively the profitability of commercial banks in Kenya for the period under study. GDP as the other External factors and financial performance were found to have a positive and weak correlation as given by a correlation value of 0.341. The regression results also support this where the results shows that units increase in GDP would increase the financial performance of the Commercial Banks. Moreover, the relationship was not significant.

This empirical study showed that capital adequacy, Credit Risk and management efficiency significantly affect the performance of commercial banks in Kenya. However, the effect of liquidity on the performance of commercial banks is not strong. The relationship between bank performance and capital adequacy and management efficiency was found to be positive and for Credit Risk the relationship was negative. This indicates that poor credit risk or high non-performing loans to total asset related to poor bank performance. Thus, it is possible to conclude that banks with high credit risk and low non-performing loan are more profitable than the others.

The other bank specific factor liquidity management represented by liquidity ratio was found to have no significant effect on the performance of commercial banks in Kenya. This shows that performance is not as such about keeping high liquid asset; rather it is about asset quality, capital adequacy, efficiency and others. But, this doesn't mean that liquidity status of banks has no effect at all. Rather it means that liquidity has lesser effect on performance of commercial banks in the study period in Kenya. Thus, it is possible to conclude that those bank managers who invest their liquid assets can generate income and boost their performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the key findings of the study as well as the conclusions and recommendations made based on the findings. The chapter also presents the areas that were pointed out during study for further research.

5.2 Summary of Findings

The study was undertaken with the aim of evaluating the effect of credit risk management on the financial performance of the commercial Banks in Kenya. Secondary data was used in the analysis to study the variables. 5 year data was collected from the publications of the Central Bank of Kenya. To address the aim of the study, inferential statistics were conducted where correlation analysis was used to study the association between the variables and regression analysis undertaken to study the relationship between the variables. A multiple regression analysis was conducted to develop the regression model relating the study variables. The significance of the results was tested at 5% level in a 2-tailed test.

Credit risk management of the commercial Banks and their financial performance has a correlation coefficient of 0.394 which is a weak positive correlation coefficient. Also, the findings indicated that, the Capital adequacy and the financial performance of Commercial

Banks has a strong positive correlation of coefficient of 0.738. Management efficiency was found to have positive and strong correlation with financial performance as given by the coefficients of 0.722. and Liquidity Management was as well found to have negative and weak correlation with financial performance as given by the coefficients of -0.529.

Inflation as one of the External factors and financial performance were found to have a negative and strong correlation as given by a correlation value of -0.5. The regression results also support this where the results shows that units increase in Inflation would decrease the financial performance of the Commercial Banks. This shows that inflation affects negatively the profitability of commercial banks in Kenya for the period under study. GDP as the other External factors and financial performance were found to have a positive and weak correlation as given by a correlation value of 0.341. The regression results also support this where the results shows that units increase in GDP would increase the financial performance of the Commercial Banks. Moreover, the relationship was not significant.

The regression analysis results indicated that the variability in the financial performance of Commercial Banks is 91% explained by the liquidity Management, Credit Risk, Management Efficiency, capital adequacy and the external factors. The study results were found to be 89.9% reliable and therefore giving significant model in explaining the influence of the Credit Risk on financial performance. The model developed indicated that, there is negative relationship between Credit Risk and financial performance of Commercial banks as all the variables studied were found to have positive coefficients in the model.

The study findings also illustrated that holding the predictor variables constant at zero, the financial performance of the Commercial Banks would be 1.242. Credit Risk has a negative relationship with financial performance of Commercial Banks which the results revealed that, increasing the Credit Risk or non-performing loans by a unit would result to 0.494 times decrease in financial performance of the Commercial Banks.

From the model, it is also clear that, a unit increase in the Capital Adequacy would result to 0.703 times increase in the financial performance, a unit increase in the Management efficiency would lead to 0.659 times increase in financial performance and a unit change in Liquidity Management would result to 0.376 times changes in financial performance while a unit change in external factors; Inflation a unit increase would result to 0.413 times decrease in the financial performance and a unit increase of GDP would result to 0.276 times increase in financial performance of the Commercial Banks.

5.3 Conclusion

The study established that credit risk management by use of CAMEL indicators has a strong impact on the financial performance of commercial banks in Kenya. This study therefore concludes that CAMEL model can be used as a proxy for credit risk management. The CAMEL indicators in this study had strong impact on the financial performance. The study also established the relationship between credit risk management proxied by CAMEL indicators and financial performance of commercial banks in Kenya. The study concludes that

capital adequacy, Liquidity Management, management efficiency and liquidity have weak relationship with financial performance of banks in Kenya.

Credit Risk has a strong negative relationship with financial performance. This indicates that poor credit risk or high non-performing loans to total assets related to poor bank performance. Thus, Commercial banks with high credit risk and low non-performing loans are more profitable than the others.

5.4 Recommendations

Commercial banks should also check their credit policy and practices. By this they would reduce loss on non- performing loans which raises their expenses and consequent reduction in financial performance. All banks should have established Credit Policies (“Lending Guidelines”) that clearly outline the senior management’s view of business development priorities and the terms and conditions that should be adhered to in order for loans to be approved. The Lending Guidelines should be updated at least annually to reflect changes in the economic outlook and the evolution of the bank’s loan portfolio, and be distributed to all lending/marketing officers. The Lending Guidelines should be approved by the Managing Director/CEO & Board of Directors of the bank based on the endorsement of the bank’s Head of Credit Risk Management and the Head of Corporate/Commercial Banking.

The study also recommends that commercial banks should also try to keep their operational cost low as this negates their profits margin thus leading to low financial performance. This is depicted by the strong effect of earnings on financial performance.

5.5 Limitations of the Study

The study was limited to the banking sector only having in mind the bigger banking and financial institutions industry in the country and the challenges facing the service industry. The data used was only from those organizations whose information is available in public domain and from their website.

Secondly this study includes only four years data. To find consistent results long time series data is required. Thirdly we can find the impact of capital structure on firm's financial performance by sector and then compare the results to know the real picture of the relationship.

5.6 Suggestions for further Research

The study suggests that a further study can be done on the impact of credit risk management by use of CAMEL indicators on the financial performance of other financial institutions like the micro finance institutions (MFIs) and SACCOs. This is to ascertain if the CAMEL model can be applied as a proxy for credit risk management on the other financial institutions in the Kenyan market.

Further studies can also be undertaken on risk management practices followed by commercial banks in Kenya whereby the study will aim to investigate on the awareness about risk management practices within the banking sector. The study can comprise of data collected through both, primary as well as secondary sources with the purpose of using primary source

data being to check the extent to which different risk management practices have been followed by the commercial banks through the use of a questionnaires whereas, the objective to use secondary data will be to link the risk weighted Capital Adequacy Ratio (CAR) to the different financial indicators of the commercial banks that are used to measure the banks' financial soundness.

Further studies should be conducted to find out whether the development of credit reference bureau in Kenya will go hand in hand in reducing the credit risk posed by lending to investigate the cut in insurance costs associated with loans and cutbacks in profitability of these firms.

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APPENDIX I : COMMERCIAL BANKS IN KENYA

African Banking Corporation Ltd.	First community Bank Limited
Bank of Africa Kenya Ltd.	Giro Commercial Bank Ltd.
Bank of Baroda (K) Ltd.	Guardian Bank Ltd
Bank of India	Gulf African Bank Limited
Barclays Bank of Kenya Ltd.	Habib Bank A.G Zurich
CFC Stanbic Bank Ltd.	Habib Bank Ltd.
Charterhouse Bank Ltd	Imperial Bank Ltd
Chase Bank (K) Ltd.	I & M Bank Ltd
Citibank N.A Kenya	Jamii Bora Bank Ltd.
Commercial Bank of Africa Ltd.	Kenya Commercial Bank Ltd
Consolidated Bank of Kenya Ltd.	K-Rep Bank Ltd
Co-operative Bank of Kenya Ltd.	Middle East Bank (K) Ltd
Credit Bank Ltd.	National Bank of Kenya Ltd
Development Bank of Kenya Ltd.	NIC Bank Ltd
Diamond Trust Bank (K) Ltd.	Oriental Commercial Bank Ltd
Dubai Bank Kenya Ltd.	Paramount Universal Bank Ltd
Ecobank Kenya Ltd	Prime Bank Ltd
Equatorial Commercial Bank Ltd.	Standard Chartered Bank (K) Ltd
Equity Bank Ltd.	Trans-National Bank Ltd
Family Bank Ltd	Victoria Commercial Bank Ltd
Fidelity Commercial Bank Ltd	UBA Kenya Bank Ltd.
Fina Bank Ltd	

Source: CBK 2014

APPENDIX II FINANCIAL INSTITUTIONS PROFITABILITY- DEC 2010- 2014

	2014			2013			2012			2011			2010		
BANKS	a	b	a/b	a	b	a/b	a	b	a/b	a	b	a/b	a	b	a/b
African Banking Corporation Ltd	319	21,439	1.49%	578	19,639	2.90%	557	19,071	2.90%	515.47	12,507	4.12%	480	10,297	4.67%
Bank of Africa (K) Ltd	204	62,212	0.33%	1,028	52,683	2.00%	636	48,958	1.30%	554.55	38,734	1.43%	484	26,699	1.81%
Bank of Baroda (K) Ltd	2,695	61,945	4.35%	2,505	52,022	4.80%	607	24,877	2.40%	1,676.38	36,701	4.57%	1,828	32,332	5.65%
Bank of India	1,284	34,370	3.74%	1,253	30,721	4.10%	13,020	185,102	7.00%	975.17	23,352	4.18%	991	19,671	5.04%
Barclays Bank of Kenya Ltd	12,294	226,043	5.44%	11,921	207,010	5.80%	1,667	46,138	3.60%	12,012.56	167,305	7.18%	10,775	172,691	6.24%
CFC Stanbic Bank (K) Ltd	7,391	171,347	4.31%	7,005	170,726	4.10%	4,712	133,378	3.50%	3,128.37	140,087	2.23%	2,104	107,139	1.96%
Charterhouse Bank Ltd **	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chase Bank Ltd	3,302	107,112	3.08%	2,251	76,569	2.90%	1,316	49,105	2.70%	849.93	36513	2.33%	535	21,859	2.45%
Citibank N.A. Kenya	4,145	79,398	5.22%	4,984	71,243	7.00%	7,229	69,580	10.40%	4,801.89	74,646	6.43%	2,879	62,070	4.64%
Commercial Bank of Africa Ltd	12,515	282,689	4.43%	4,464	124,882	3.60%	3,998	100,456	4.00%	2,984.47	83,283	3.58%	2,695	63,592	4.24%
Consolidated Bank of Kenya Ltd	4,522	175,809	2.57%	-142	16,779	-0.80%	176	18,001	1.00%	246.54	15,318	1.61%	258	10,479	2.46%
Co-operative Bank of Kenya Ltd	-274	15,077	-1.82%	10,705	228,874	4.70%	9,574	199,663	4.80%	6,167.77	167,772	3.68%	5,559	153,984	3.61%
Credit Bank Ltd	-90	8,865	-1.02%	72	7,309	1.00%	81	6,407	1.30%	51.28	5,394	0.95%	34	4,530	0.74%
Development Bank of Kenya Ltd	318	16,954	1.88%	274	15,581	1.80%	104	13,417	0.80%	157.44	11,523	1.37%	236	10,650	2.22%
Diamond Trust Bank (K) Ltd	6,307	141,176	4.47%	5,566	114,136	4.90%	4,670	94,512	4.90%	3,248.47	77,453	4.19%	2,872	58,606	4.90%
Dubai Bank Ltd	7	3,502	0.21%	16	2,927	0.50%	-29.89	2,584	-1.20%	20.77	2,316	0.90%	3	1,874	0.18%
Ecobank Kenya Ltd	-499	45,934	-1.09%	-1,231	36,907	-3.30%	-1533.8	31,771	-4.80%	121.4	27,210	0.45%	188	26,892	0.70%
Equatorial Commercial Bank Ltd	-461	16,589	-2.78%	152	15,562	1.00%	-656	14,109	-4.60%	71.18	12,927	0.55%	-34	10,399	-0.32%
Equity Bank Ltd	20,112	277,116	7.26%	18,233	238,194	7.70%	16,060	215,829	7.40%	12,103.51	176,911	6.84%	9,312	133,890	6.95%
Family Bank Ltd	2,618	61,813	4.24%	1,758	43,501	4.00%	843	30,985	2.70%	522.57	26,002	2.01%	501	20,188	2.48%
Fidelity Commercial Bank Ltd	298	16,515	1.80%	316	12,779	2.50%	102	11,772	0.90%	301.52	10,789	2.79%	377	8,209	4.59%
First Community Bank Ltd	102	15,278	0.67%	200	11,305	1.80%	294	9,959	2.90%	111.63	8740	1.28%	-160	6,380	-2.50%
Giro Commercial Bank Ltd	472	15,082	3.13%	383	13,623	2.80%	207	12,280	1.70%	329.93	11,846	2.79%	634	10,234	6.20%
Guaranty Trust Bank Ltd	687	32,992	2.08%	413	25,638	1.60%	348	17,150	2.00%	310.48	14,630	2.12%	151	14,112	1.07%
Guardian Bank Ltd	378	14,571	2.59%	384	12,835	3.00%	223	11,745	1.90%	169.74	8,836	1.92%	112	8,031	1.39%
Gulf African Bank Ltd	615	19,754	3.11%	434	16,054	2.70%	374	13,562	2.80%	155.38	12,915	1.20%	47	9,594	0.49%
Habib Bank A.G. Zurich	643	12,147	5.29%	474	11,009	4.30%	412	9,702	4.20%	253.68	8722	2.91%	248	8,127	3.05%
Habib Bank Ltd	532	9,449	5.63%	500	8,078	6.20%	456	7,014	6.50%	270.99	5,861	4.62%	235	5,426	4.34%
Housing Finance Co. of Kenya Ltd	1,285	60,491	2.12%	1,213	46,755	2.60%	902	40,686	2.20%	976	31,972	3.10%	560	29,326	1.91%
I&M Bank Ltd	7,749	137,299	5.64%	6,060	110,316	5.50%	4,722	91,520	5.20%	4,457.33	76,903	5.80%	3,004	62,552	4.80%
Imperial Bank Ltd	2,689	56,599	4.75%	2,494	43,006	5.80%	1,912	34,590	5.50%	1,631.69	25,618	6.37%	1,248	19,399	6.43%
Jamii Bora Bank Ltd	96	13,118	0.73%	90	7,010	1.30%	53	3,480	1.50%	-37	2070	-1.79%	-84	1,723	-4.85%
K - Rep Bank Ltd	729	15,799	4.61%	557	13,199	4.20%	306	9,546	3.20%	255.94	9,319	2.75%	111	7,670	1.44%
Kenya Commercial Bank Ltd	22,362	376,969	5.93%	17,746	323,312	5.50%	15,756	304,112	5.20%	14,081.87	282,494	4.98%	11,538	223,025	5.17%
Middle East Bank (K) Ltd	76	5,937	1.28%	81	5,766	1.40%	47	5,870	0.80%	92.46	4,639	1.99%	206	4,018	5.11%
National Bank of Kenya Ltd	2,332	122,865	1.90%	1,779	92,493	1.90%	1,147	67,155	1.70%	2,443.85	68,665	3.56%	2,698	60,027	4.49%
NIC Bank Ltd	6,081	137,087	4.44%	5,221	112,917	4.60%	4,311	101,772	4.20%	3,360.60	73,581	4.57%	2,416	54,776	4.41%
Oriental Commercial Bank Ltd	84	7,858	1.07%	178	7,007	2.50%	114	6,220	1.80%	192.6	5,030	3.83%	183	4,558	4.01%
Paramount Universal Bank Ltd	137	10,402	1.32%	99	8,029	1.20%	90	7,255	1.20%	112.8	4,727	2.39%	281	4,420	6.35%
Prime Bank Ltd	2,298	54,918	4.18%	1,893	49,461	3.80%	1,161	43,463	2.70%	1,080.69	35,185	3.07%	770	32,444	2.37%
Standard Chartered Bank (K) Ltd	14,300	222,636	6.42%	13,316	220,524	6.00%	11,519	195,493	5.90%	8250.84	164,182	5.03%	7,668	142,880	5.37%
Trans - National Bank Ltd	191	10,240	1.86%	225	9,658	2.30%	322	8,801	3.70%	294.93	7,287	4.05%	159	4,762	3.33%
UBA Kenya Ltd	-331	4,756	-6.97%	-278	3,710	-7.50%	-396.94	2,924	-13.60%	-183	3,206	-5.72%	-138	2,363	-5.85%
Victoria Commercial Bank Ltd	635	17,244	3.68%	586	13,644	4.30%	491	10,323	4.80%	329.69	7,645	4.31%	311	6,215	5.00%

a. Profit Before Tax

b. Net Asset

a/b Profit before Tax/ Net Asset

Source: CBK Annual Supervision Reports

APPENDIX III FINANCIAL INSTITUTIONS CAPITAL ADEQUACY- DEC **2010- 2014**

BANKS	a	b	a/b	a	b	a/b	a	b	a/b	a	b	a/b	a	b	a/b
African Banking Corporation Ltd	2,945	17,096	17.20%	1,873	12,429	15.10%	1,739	12,079	14.40%	1,599	9,086	17.60%	1,394	6,924	20.13%
Bank of Africa (K) Ltd	8,244	51,781	15.90%	5,587	43,923	12.70%	4,547	34,543	13.20%	4,303	26,888	16.00%	2,682	17,684	15.17%
Bank of Baroda (K) Ltd	9,683	40,044	24.20%	7,663	35,458	21.60%	4,090	10,096	40.50%	4,667	21,812	21.40%	3,472	14,708	23.61%
Bank of India	6,037	15,316	39.40%	5,068	12,205	41.50%	32,169	124,840	25.80%	3,522	7,589	46.41%	2,756	6,373	43.24%
Barclays Bank of Kenya Ltd	38,419	205,806	18.70%	33,172	191,652	17.30%	5,875	24,951	23.50%	33,478	120,366	27.81%	33,311	106,928	31.15%
CFC Stanbic Bank (K) Ltd	30,529	138,735	22.00%	25,125	119,641	21.00%	21,231	83,127	25.50%	15,356	80,655	19.04%	12,314	76,004	16.20%
Charterhouse Bank Ltd **	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chase Bank Ltd	10,376	67,948	15.30%	7,086	47,133	15.00%	4,982	37,709	13.20%	2,844	22,554	12.61%	1,700	11,744	14.47%
Citibank N.A. Kenya	18,057	66,136	27.30%	15,786	44,600	35.40%	17,225	41,192	41.80%	15,680	49,816	31.48%	12,738	35,352	36.03%
Co - operative Bank of Kenya Ltd	55,534	256,511	21.60%	10,927	81,060	13.50%	10,063	62,608	16.10%	8,038	55,270	14.54%	6,028	41,553	14.51%
Commercial Bank of Africa Ltd	21,705	121,180	17.90%	1,217	11,254	10.80%	1,543	10,268	15.00%	1,190	9,402	12.65%	1,082	8,205	13.18%
Consolidated Bank of Kenya Ltd	1,444	13,139	11.00%	43,195	205,152	21.10%	34,542	145,187	23.80%	22,622	137,792	16.42%	18,402	111,233	16.54%
Credit Bank Ltd	1,165	6,185	18.80%	1,256	4,719	26.60%	1,203	3,914	30.70%	965	3,215	30.01%	918	2,442	37.58%
Development Bank of Kenya Ltd	2,010	6,780	29.60%	1,640	6,944	23.60%	1,634	6,558	24.90%	1,562	5,768	27.08%	1,454	5,349	27.18%
Diamond Trust Bank (K) Ltd	25,065	132,274	18.90%	18,484	87,817	21.00%	13,511	68,104	19.80%	9,718	57,898	16.79%	7,973	43,249	18.43%
Dubai Bank Ltd	1,040	4,768	21.80%	1,036	6,023	17.20%	916	1,978	46.30%	112	1,953	36.47%	596	1,670	35.68%
Ecobank Kenya Ltd	6,530	32,967	19.80%	7,018	22,968	30.60%	6,275	19,303	32.50%	4,557	17,811	25.58%	2,758	14,265	19.33%
Equatorial Commercial Bank Ltd	1,442	13,457	10.70%	1,485	12,122	12.30%	848	9,556	8.90%	1,152	8,074	14.27%	886	6,118	14.49%
Equity Bank Ltd.	47,552	268,518	17.70%	44,151	187,346	23.60%	44,741	148,660	30.10%	27,633	127,548	21.67%	25,320	90,805	27.88%
Family Bank Ltd.	10,551	52,067	20.30%	5,896	31,127	18.90%	4,786	21,096	22.70%	3,150	18,519	17.01%	2,995	12,523	23.92%
Fidelity Commercial Bank Ltd	1,678	10,230	16.40%	1,402	7,574	18.50%	1,185	6,410	18.50%	996	6,548	15.21%	801	4,583	17.49%
First Community Bank Ltd	1,423	12,413	11.50%	1,140	7,702	14.80%	1,788	10,602	16.90%	767	5,403	14.19%	565	3,918	14.43%
Giro Commercial Bank Ltd	2,422	10,186	23.80%	2,087	7,212	28.90%	1,008	6,397	15.80%	1,579	6,658	23.71%	1,340	5,386	24.87%
Guaranty Trust Bank Ltd	4,862	18,750	25.90%	4,353	12,892	33.80%	1,775	6,014	29.50%	1,546	8,133	19.01%	1,321	7,743	17.06%
Guardian Bank Ltd	1,755	10,600	16.60%	1,494	8,312	18.00%	1,219	7,048	17.30%	1,065	5,841	18.23%	948	4,917	19.29%
Gulf African Bank Ltd	3,147	23,285	13.50%	2,686	14,804	18.10%	1,561	10,757	14.50%	1,319	9,264	14.24%	1,224	7,542	16.23%
Habib Bank A.G. Zurich	2,243	6,036	37.20%	1,835	5,533	33.20%	1,490	2,618	56.90%	1,229	3,279	37.48%	1,027	2,550	40.28%
Habib Bank Ltd	1,942	5,924	32.80%	1,660	4,477	37.10%	1,348	3,204	42.10%	1,062	3,163	33.58%	896	2,148	41.72%
Housing Finance Company of Kenya Ltd	6,571	43,534	15.10%	6,246	28,946	21.60%	6,448	21,848	29.50%	5,911	17,369	34.03%	6,373	13,077	48.73%
I&M Bank Ltd	22,863	121,260	18.90%	18,547	97,526	19.00%	12,109	69,848	17.30%	3,072	14,894	20.62%	8,924	44,807	19.92%
Imperial Bank Ltd	6,634	43,219	15.30%	4,755	31,709	15.00%	3,752	20,057	18.70%	771	698	110.48%	2,369	11,192	21.17%
Jamii Bora Bank Ltd	2,273	8,709	26.10%	1,447	5,600	25.80%	1,338	1,600	83.60%	39,920	192,939	20.69%	231	646	35.69%
K - Rep Bank Ltd	2,379	11,572	20.60%	1,852	8,654	21.40%	44,925	197,734	22.70%	1,315	6,650	19.78%	35,280	152,311	23.16%
Kenya Commercial Bank Ltd	71,210	338,877	21.00%	61,199	272,565	22.50%	1,492	6,929	21.50%	11,584	60,079	19.28%	1,141	5,281	21.61%
Middle East Bank (K) Ltd	1,227	3,641	33.70%	1,165	3,212	36.30%	1,104	2,741	40.30%	1,080	2,478	43.57%	1,006	1,915	52.53%
National Bank of Kenya Ltd	11,206	80,433	13.90%	10,948	45,333	24.10%	10,027	35,280	28.40%	10,004	34,286	29.18%	9,447	25,591	36.92%
NIC Bank Ltd	27,340	131,045	20.90%	14,108	95,220	14.80%	13,246	80,565	16.40%	9,623	60,555	15.89%	7,283	46,955	15.51%
Oriental Commercial Bank Ltd	1,450	5,659	25.60%	1,372	4,510	30.40%	1,188	3,939	30.20%	1,113	3,156	35.28%	1,004	2,789	35.99%
Paramount Universal Bank Ltd	1,376	5,404	25.50%	1,220	2,914	41.90%	1,136	2,390	47.50%	1,026	1,900	53.99%	785	1,655	47.44%
Prime Bank Ltd	6,722	40,100	16.80%	4,951	26,914	18.40%	3,816	22,412	17.00%	3,242	19,641	16.51%	2,258	16,411	13.76%
Standard Chartered Bank (K) Ltd	36,288	183,105	19.80%	30,721	147,682	20.80%	23,929	132,652	18.00%	16,414	114,760	14.30%	11,729	81,936	14.32%
Trans - National Bank Ltd	1,915	8,824	21.70%	1,869	5,956	31.40%	1,825	4,718	38.70%	1,738	3,707	46.87%	1,541	2,182	70.62%
UBA Kenya Ltd	1,139	1,943	58.60%	1,059	2,258	46.90%	1,219	1,678	72.70%	728	1,040	70.00%	889	1,093	81.40%
Victoria Commercial Bank Ltd	2,756	14,376	19.20%	2,373	11,980	19.80%	2,072	8,258	25.10%	1,269	5,772	21.99%	1,099	4,677	23.50%

a. Total Capital

b. Total Risk Weighted Assets

a/b Total Capital/Total Risk Weighted assets

Source: CBK Annual Supervision Reports

APPENDIX IV LIQUIDITY RATIO - DEC 2010 – DEC 2014

BANKS	2010 Ksh. Millions			2011			2012			2013			2014		
	a	b	a/b	a	b	a/b	a	b	a/b	a (loans)	b(deposit)	a/b	a (Loans)	b (Deposits)	a/b
African Banking Corporation Ltd	5,685.50	8,353	68.07	7,385.00	10,471	70.53	8,086.70	15,255.41	53.01	9,596.80	15,894	60.38	13,513	16,050	84.19
Bank of Africa Ltd	8,326.80	19,784	42.09	8,657.70	23,986	36.09	10,856.10	35,099.55	30.93	13,209.30	42,081	31.39	39,236	49,674	78.99
Bank of Baroda Ltd	5,269.00	25,600	20.58	6,886.00	30,264	22.75	8,938.00	38,382.46	23.29	9,084.00	41,877	21.69	29,002	48,683	59.57
Bank of India Ltd	4,292.80	16,076	26.7	6,325.80	18,475	34.24	8,855.10	18,282.19	48.44	9,714.20	22,778	42.65	12,438	24,668	50.42
Barclays Bank of Kenya Ltd	123,826.00	180,757	68.5	124,207.00	185,744	66.87	137,915.39	209,200.50	65.92	160,125.00	288,019	55.6	128,204	176,915	72.47
CFC Stanbic Bank Ltd	18,889.40	72,778	25.95	23,072.90	74,335	31.04	30,852.80	75,632.93	40.79	53,250.60	111,181	47.9	89,797	102,244	87.83
Charterhouse Bank Ltd			0		0	0			0			0			0
Chase Bank Ltd	3,452.40	16,880	20.45	4,639.70	24,822	18.69	5,528.10	36,506.01	15.14	9,036.50	54,960	16.44	55,837	79,149	70.55
Citibank N.A.	891.1	38,215	2.332	976.5	46,534	2.098	843.1	44,012.19	1.916	728.4	51,219	1.422	24,541	56,518	43.42
Commercial Bank of Africa Ltd	15,236.00	53,195	28.64	17,176.00	67,303	25.52	28,604.00	79,996.16	35.76	30,087.00	91,001	33.06	92,667	121,963	75.98
Consolidated Bank of Kenya Ltd	1,458.00	8,008	18.21	2,245.00	12,010	18.69	2,750.00	13,324.85	20.64	3,868.00	12,023	32.17	10,766	11,125	96.77
Co-operative Bank of Kenya Ltd	88,108.00	124,012	71.05	118,854.10	142,705	83.29	117,111.90	162,267.23	72.17	120,860.40	176,614	68.43	181,370	219,416	82.66
Credit Bank Ltd	3,724.50	3,258	114.3	4,981.20	3,937	126.5	4,228.80	4,781.15	88.45	4,677.00	5,667	82.53	5,887	7,323	80.39
Development Bank of Kenya Ltd	1,952.00	4,105	47.55	2,477.00	4,171	59.39	3,439.00	6,952.88	49.46	4,768.00	10,683	44.63	9,332	10,800	86.41
Diamond Trust Bank Ltd	17,352.00	44,904	38.64	19,753.00	59,772	33.05	34,064.00	72,505.12	46.98	30,634.00	84,964	36.06	95,258	102,060	93.34
Dubai Bank Ltd	562.00	1,206	46.6	748.00	1,561	47.92	957.00	1,360.92	70.32	1,144.00	1,582	72.31	4,208	1,751	240.3
Ecobank Ltd	7,241.00	16,494	43.9	12,734.40	16,566	76.87	15,298.30	21,475.30	71.24	17,811.60	25,242	70.56	24,116	32,363	74.52
Equatorial Bank Ltd	4,863.80	8,037	60.52	5,079.90	9,834	51.66	6,648.70	12,962.77	51.29	6,296.50	13,850	45.46	11,555	14,331	80.63
Equity Bank Ltd	19,526.00	95,204	20.51	21,836.00	121,774	17.93	44,194.00	140,285.67	31.5	63,379.00	158,682	39.94	192,973	202,560	95.27
Family Bank Ltd	3,596.00	15,731	22.86	4,102.00	21,444	19.13	5,890.00	24,630.28	23.91	7,675.00	34,597	22.18	39,681	47,318	83.86
Fidelity Commercial Bank Ltd	3,134.90	7,204	43.52	3,078.90	9,490	32.44	4,122.10	10,526.70	39.16	5,760.20	11,519	50.01	10,467	14,216	73.63
First Community Bank Ltd	653.00	5,611	11.64	725.00	7,812	9.281	868.00	8,832.86	9.827	2,290.00	9,933	23.05	9,990	13,339	74.89
Giro Commercial Bank Ltd	8,735.00	8,308	105.1	9,428.70	10,069	93.64	8,486.90	10,419.78	81.45	8,791.10	11,461	76.7	7,786	12,455	62.51
Guaranty Trust Bank Ltd	10,133.10	11,590	87.43	11,661.80	12,395	94.08	13,943.00	13,746.53	101.4	17,985.00	18,980	94.76	12,851	23,030	55.8
Guardian Bank Ltd	8,486.90	6,971	121.7	9,468.70	7,648	123.8	9,548.80	10,373.57	92.05	10,725.40	11,181	95.93	10,295	12,643	81.43
Gulf African Bank Ltd	942.00	8,163	11.54	1,020.00	10,865	9.388	1,932.00	11,684.32	16.53	4,950.00	12,592	39.31	14,068	15,335	91.74
Habib Bank A.G. Zurich	2,886.80	6,672	43.27	3,089.50	6,661	46.38	3,561.80	7,747.85	45.97	4,492.90	8,317	54.02	3,443	8,929	38.56
Habib Bank Ltd	2,363.80	3,933	60.1	2,035.70	4,718	43.15	2,278.50	5,194.69	43.86	2,660.00	5,599	47.51	4,707	6,399	73.56
Housing Finance Co. of Kenya Ltd	28,905.10	15,945.00	181.3	27,029.50	18,674	144.7	23,198.30	22,968.21	101	24,905.80	26,589	93.67	46,260	36,310	127.4
I & M Bank Ltd	22,592.60	45,995	49.12	30,329.80	56,944	53.26	39,627.80	65,640.24	60.37	51,727.20	74,846	69.11	91,163	87,185	104.6
Imperial Bank Ltd	10,909.50	13,678	79.76	12,008.70	19,245	62.4	15,228.90	27,581.36	55.21	19,569.80	35,027	55.87	31,827	48,168	66.07
Jamii Bora Bank Ltd	532.00	2547	20.89	393.00	3568	11.01	1,213.12	4,365.00	27.79	175.00	3,420	5.117	6,464	8,497	76.07
K-Rep Bank Ltd	4,586.00	5,454	84.09	5,111.00	6,446	79.29	5,935.00	6,649.64	89.25	4,816.00	9,165	52.55	11,214	12,066	92.94
Kenya Commercial Bank Ltd	120,641.60	163,189	73.93	121,828.90	210,174	57.97	142,407.20	223,493.28	63.72	192,573.60	237,213	81.18	257,399	276,750	93.01
Middle East Bank Ltd	2,527.00	4,538	55.68	2,703.00	4,929	54.84	3,906.54	5,573.50	70.09	4,522.00	5,216	86.7	3,719	4,632	80.29
National Bank of Kenya Ltd	47,805.00	92,385	51.75	56,728.00	144,696	39.2	55,191.43	156,657.00	35.23	33,045.80	78,508	42.09	68,093	104,458	65.19
NIC Bank Ltd	32,253.50	45,318	71.17	39,675.80	62,009	63.98	46,281.80	77,466.04	59.74	61,038.50	84,033	72.64	97,984	91,997	106.5
Oriental Commercial Bank Ltd	3,615.10	3,266	110.7	394.9	3,694	10.69	2,542.60	4,806.22	52.9	2,718.70	5,377	50.56	5,078	6,231	81.5
Paramount Universal Bank Ltd	956.00	3,562	26.84	1,052.00	3,674	28.63	1,268.00	6,084.29	20.84	1,355.00	6,602	20.52	5,389	8,035	67.07
Prime Bank Ltd	7,425.00	25,512	29.1	9,580.80	28,872	33.18	13,777.60	36,714.62	37.53	17,614.10	40,497	43.49	35,060	45,022	77.87
Standard Chartered Bank Ltd	72,209.40	100,504	71.85	93,694.80	122,323	76.6	99,391.00	140,524.85	70.73	108,787.70	157,684	68.99	128,768	161,904	79.53
Trans-National Bank Ltd	950.00	3,037	31.28	1,208.00	5,283	22.87	1,441.00	6,535.40	22.05	1,688.00	7,172	23.54	6,609	7,659	86.29
UBA Kenya Bank Ltd	295.00	1,168	25.26	320.00	1,270	25.2	450.00	1,343.12	33.5	580.00	2,299	25.23	785	3,136	25.03
Victoria Commercial Bank Ltd	1,956.00	4,935	39.64	2,388.00	5,907	40.43	2,779.00	7,560.89	36.75	436.00	9,044	4.821	10,979	12,289	89.34

a. Total Loans

b. Total Deposits

a/b Total Loans/Total Deposits

Source: CBK Annual Supervision Reports

APPENDIX V CREDIT RISK FROM DEC 2010-DEC 2014

BANKS	2010 Ksh. Millions			2011			2012			2013			2014		
	a (NPL's)	b (Loans)	a/b	a (NPL's)	b (Loans)	a/b	a (NPL's)	b (Loans)	a/b	a (NPL's)	b (Loans)	a/b	a (NPL's)	b (Loans)	a/b
African Banking Corporation Ltd	372	5,685.50	6.54	484	7,385.00	6.55	530	8,086.70	6.55	629	9,596.80	6.6	885	13,513	6.55
Bank of Africa Ltd	512	8,326.80	6.15	532	8,657.70	6.14	667	10,856.10	6.14	812	13,209.30	6.1	2,412	39,236	6.15
Bank of Baroda Ltd	158	5,269.00	3	232	6,886.00	3.37	325	8,938.00	3.64	357	9,084.00	3.9	1,065	29,002	3.67
Bank of India Ltd	1,032	4,292.80	24	1,060	6,325.80	16.8	1,194	8,855.10	13.5	1,644	9,714.20	17	1,771	12,438	14.2
Barclays Bank of Kenya Ltd	5,150	180,757.00	2.85	5,398	185,743.50	2.91	6,582	209,200.50	3.15	7,547	288,018.60	2.6	7,750	128,204	6.05
CfC Stanbic Bank Ltd	130	18,889.40	0.69	174	23,072.90	0.75	207	30,852.80	0.67	339	53,250.60	0.6	3,370	89,797	3.75
Charterhouse Bank Ltd	-	-	0	-	-	0	-	-	0	-	-	0	-	-	0
Chase Bank Ltd	1,499	3,452.40	43.4	1,668	4,639.70	36	1,931	5,528.10	34.9	1,980	9,036.50	22	3,196	55,837	5.72
Citibank N.A.	321	891.1	36	350	976.5	35.8	370	843.1	43.9	551	728.4	76	881	24,541	3.59
Commercial Bank of Africa Ltd	3,585	15,236.00	23.5	4,835	17,176.00	28.1	4,764	28,604.00	16.7	4,917	30,087.00	16	3,770	92,667	4.07
Consolidated Bank of Kenya Ltd	972	1,458.00	66.7	1,301	2,245.00	58	1,104	2,750.00	40.1	1,221	3,868.00	32	2,811	10,766	26.1
Co-operative Bank of Kenya Ltd	3,191	88,108.00	3.62	5,605	118,854.10	4.72	6,737	117,111.90	5.75	7,845	120,860.40	6.5	7,982	181,370	4.4
Credit Bank Ltd	484	3,724.50	13	506	4,981.20	10.2	662	4,228.80	15.7	627	4,677.00	13	586	5,887	9.95
Development Bank of Kenya Ltd	444	1,952.00	22.7	436	2,477.00	17.6	584	3,439.00	17	816	4,768.00	17	1,322	9,332	14.2
Diamond Trust Bank Ltd	897	17,352.00	5.17	900	19,753.00	4.56	950	34,064.00	2.79	1,050	30,634.00	3.4	1,199	95,258	1.26
Dubai Bank Ltd	562	1,259.00	44.6	748	1,575.00	47.5	420	957.00	43.9	1,144	2,219.00	52	2,314	4,208	55
Ecobank Ltd	866	7,241.00	12	966	12,734.40	7.59	974	15,298.30	6.37	1,095	17,811.60	6.1	2,461	24,116	10.2
Equatorial Bank Ltd	756	4,863.80	15.5	810	5,079.90	15.9	933	6,648.70	14	1,177	6,296.50	19	3,028	11,555	26.2
Equity Bank Ltd	6,129	19,526.00	31.4	6,517	21,836.00	29.8	7,050	44,194.00	16	7,215	63,379.00	11	7,469	192,973	3.87
Family Bank Ltd	2,074	3,596.00	57.7	1,939	4,102.00	47.3	1,664	5,890.00	28.3	1,787	7,675.00	23	2,847	39,681	7.17
Fidelity Commercial Bank Ltd	1,751	3,134.90	55.9	1,156	3,078.90	37.5	2,201	4,122.10	53.4	4,008	5,760.20	70	811	10,467	7.75
First Community Bank Ltd	1,150	653.00	176	1,275	725.00	176	1,358	868.00	156	1,495	2,290.00	65	1,518	9,990	15.2
Giro Commercial Bank Ltd	156	8,735.00	1.79	177	9,428.70	1.88	192	8,486.90	2.26	207	8,791.10	2.4	250	7,786	3.21
Guaranty Trust Bank Ltd	167	10,133.10	1.65	170	11,661.80	1.46	205	13,943.00	1.47	192	17,985.00	1.1	472	12,851	3.67
Guardian Bank Ltd	350	8,486.90	4.12	476	9,468.70	5.03	575	9,548.80	6.02	650	10,725.40	6.1	787	10,295	7.64
Gulf African Bank Ltd	659	942.00	70	420	1,020.00	41.2	869	1,932.00	45	987	4,950.00	20	1,033	14,068	7.34
Habib Bank A.G. Zurich	44	2,886.80	1.52	56	3,089.50	1.81	62	3,561.80	1.74	66	4,492.90	1.5	84	3,443	2.44
Habib Bank Ltd	539	2,363.80	22.8	696	2,035.70	34.2	1,001	2,278.50	43.9	1,280	2,660.00	48	342	4,707	7.27
Housing Finance Co. of Kenya Ltd	2,064	28,905.10	7.14	2,719	27,029.50	10.1	3,038	23,198.30	13.1	4,050	24,905.80	16	4,163	46,260	9
I & M Bank Ltd	1,515	22,592.60	6.71	1,966	30,329.80	6.48	2,086	39,627.80	5.26	2,283	51,727.20	4.4	1,913	91,163	2.1
Imperial Bank Ltd	1,152	10,909.50	10.6	1,502	12,008.70	12.5	1,852	15,228.90	12.2	1,953	19,569.80	10	2,020	31,827	6.35
Jamii Bora Bank Ltd	320	2,547.00	12.6	352	3,568.00	9.87	478	4,365.00	11	585	5,985.00	9.8	602	6,464	9.31
K-Rep Bank Ltd	560	4,586.00	12.2	597	5,111.00	11.7	695	5,935.00	11.7	720	4,816.00	15	776	11,214	6.92
Kenya Commercial Bank Ltd	8,995	120,641.60	7.46	11,908	121,828.90	9.77	11,976	142,407.20	8.41	13,303	192,573.60	6.9	13,368	257,399	5.19
Middle East Bank Ltd	798	4,538.30	17.6	856	4,629.00	18.5	952	5,573.50	17.1	1,059	5,215.90	20	1,116	3,719	30
National Bank of Kenya Ltd	3,201	92,384.80	3.46	4,259	144,696.30	2.94	4,758	156,657.00	3.04	6,215	33,045.80	19	7,237	68,093	10.6
NIC Bank Ltd	3,306	32,253.50	10.3	4,440	39,675.80	11.2	4,961	46,281.80	10.7	5,230	61,038.50	8.6	5,969	97,984	6.09
Oriental Commercial Bank Ltd	352	3,615.10	9.74	115	394.9	29.1	496	2,542.60	19.5	520	2,718.70	19	552	5,078	10.9
Paramount Universal Bank Ltd	583	956.00	61	456	1,052.00	43.3	856	1,268.00	67.5	952	1,355.00	70	1,063	5,389	19.7
Prime Bank Ltd	329	7,425.00	4.43	305	9,580.80	3.18	269	13,777.60	1.95	342	17,614.10	1.9	361	35,060	1.03
Standard Chartered Bank Ltd	7,253	72,209.40	10	7,669	93,694.80	8.19	8,515	99,391.00	8.57	9,503	108,787.70	8.7	10,752	128,768	8.35
Trans-National Bank Ltd	426	950.00	44.8	453	1,208.00	37.5	496	1,441.00	34.4	514	1,688.00	30	529	6,609	8
UBA Kenya Bank Ltd	37	295.00	12.5	39	320.00	12.2	42	450.00	9.33	49	580.00	8.4	52	785	6.62
Victoria Commercial Bank Ltd	300	1,956.00	15.3	950	2,388.00	39.8	1,006	2,779.00	36.2	1,906	5,506.00	35	3,016	10,979	27.5

a. Non-Performing Loans

b. Total Loans

a/b Non-performing Loans /Total Loans

Source: CBK Annual Supervision Reports

APPENDIX VI MANAGEMENT EFFICIENCY FROM DEC 2010 –DEC

2014

	2011 Ksh. Millions			2012			2013			2014		
BANKS	a(Expenses)	b(Income)	a/b	a(Expenses)	b(Income)	a/b	a(Expenses)	b(Income)	a/b	a(Expenses)	b(Income)	a/b
African Banking Corporation Ltd	603,637.00	645,602.00	93.50	505,545.00	729,758.00	69.28	583,950.00	827,475.00	70.57	650,676.00	1,127,365.00	57.72
Bank of Africa Ltd	429,307.00	587,118.00	73.12	1,093,370.00	1,364,790.00	80.11	761,091.00	1,021,527.00	74.51	1,010,993.00	1,495,470.00	67.60
Bank of Baroda Ltd	424,841.00	947,920.00	44.82	727,156.00	1,359,990.00	53.47	556,256.00	1,282,549.00	43.37	609,294.00	2,436,867.00	25.00
Bank of India Ltd	248,888.00	722,454.00	34.45	310,148.00	919,031.00	33.75	354,727.00	963,618.00	36.81	178,962.00	1,169,505.00	15.30
Barclays Bank of Kenya Ltd	11,781,635.00	18,860,435.00	62.47	15,611,745.00	23,627,526.00	66.07	14,394,870.00	23,397,336.00	61.52	15,248,327.00	26,023,681.00	58.59
CFC Stanbic Bank Ltd	1,447,470.00	2,641,625.00	54.79	3,303,187.00	4,615,791.00	71.56	5,045,602.00	6,378,531.00	79.10	6,499,187.00	8,603,170.00	75.54
Charterhouse Bank Ltd			0.00			0.00			0.00			0.00
Chase Bank Ltd	312,567.00	492,074.00	63.52	516,383.00	763,777.00	67.61	739,494.00	1,057,630.00	69.92	1,202,888.00	1,737,970.00	69.21
Citibank N.A.	1,228,651.00	3,010,681.00	40.81	1,315,442.00	4,668,310.00	28.18	1,434,398.00	4,489,653.00	31.95	1,855,743.00	4,734,278.00	39.20
Commercial Bank of Africa Ltd	1,699,868.00	3,116,357.00	54.55	2,431,014.00	4,196,412.00	57.93	2,525,044.00	4,292,751.00	58.82	3,309,819.00	6,004,740.00	55.12
Consolidated Bank of Kenya Ltd	596,980.00	622,801.00	95.85	615,986.00	700,914.00	87.88	792,431.00	908,999.00	87.18	991,319.00	1,249,067.00	79.36
Co-operative Bank of Kenya Ltd	5,957,331.00	8,275,855.00	71.98	6,291,554.00	9,650,373.00	65.19	7,827,915.00	11,554,769.00	67.75	9,844,520.00	15,403,548.00	63.91
Credit Bank Ltd	168,015.00	298,970.00	56.20	218,028.00	297,225.00	73.35	259,740.00	342,299.00	75.88	440,120.00	473,732.00	92.90
Development Bank of Kenya Ltd	175,901.00	333,278.00	52.78	195,541.00	364,740.00	53.61	205,839.00	395,114.00	52.10	290,079.00	526,084.00	55.14
Diamond Trust Bank Ltd	1,121,382.00	2,046,536.00	54.79	2,048,402.00	3,675,213.00	55.74	1,812,626.00	3,446,914.00	52.59	2,693,261.00	5,565,072.00	48.40
Dubai Bank Ltd	120,000.00	237,677.00	50.49	260,055.00	266,765.00	97.48	246,146.00	255,023.00	96.52	243,359.00	246,678.00	98.65
Ecobank Ltd	568,121.00	685,342.00	82.90	605,076.00	672,048.00	90.03	937,764.00	2,088,374.00	44.90	1,683,749.00	1,871,669.00	89.96
Equatorial Bank Ltd	221,328.00	294,298.00	75.21	250,000.00	356,664.00	70.09	276,978.00	351,238.00	78.86	598,021.00	634,001.00	94.32
Equity Bank Ltd	3,458,783.44	5,822,601.24	59.40	7,617,166.68	12,605,369.20	60.43	10,456,348.86	15,676,169.36	66.70	10,881,849.00	20,193,667.00	53.89
Family Bank Ltd	837,877.00	1,105,578.00	75.79	1,420,579.00	1,951,312.00	72.80	1,847,882.00	2,190,490.00	84.36	2,618,165.00	3,118,827.00	83.95
Fidelity Commercial Bank Ltd	177,856.00	226,625.00	78.48	242,213.00	314,794.00	76.94	261,399.00	313,406.00	83.41	323,587.00	700,174.00	46.22
First Community Bank Ltd	0.00	0.00	0.00	324,970.00	375,680.00	86.50	445,599.00	550,251.00	80.98	385,620.00	485,937.00	79.36
Giro Commercial Bank Ltd	377,270.00	418,307.00	90.19	319,806.00	445,414.00	71.80	336,569.00	521,652.00	64.52	409,753.00	1,044,087.00	39.25
Guaranty Trust Bank Ltd	523,272.00	638,662.00	81.93	1,069,583.00	1,225,495.00	87.28	1,295,693.00	1,469,634.00	88.16	1,087,192.00	1,238,504.00	87.78
Guardian Bank Ltd	297,004.00	322,005.00	92.24	416,067.00	459,944.00	90.46	388,639.00	449,712.00	86.42	375,532.00	487,170.00	77.08
Gulf African Bank Ltd	111,600.00	275,636.00	40.49	247,605.00	629,939.00	39.31	735,388.00	985,020.00	74.66	809,834.00	856,874.00	94.51
Habib Bank A.G. Zurich	225,489.00	429,708.00	52.47	253,021.00	494,624.00	51.15	247,961.00	534,051.00	46.43	260,320.00	507,939.00	51.25
Habib Bank Ltd	167,637.00	274,282.00	61.12	147,635.00	293,721.00	50.26	163,381.00	360,031.00	45.38	157,563.00	392,765.00	40.12
Housing Finance Co. of Kenya Ltd	742,638.00	873,361.00	85.03	841,672.00	1,044,342.00	80.59	1,002,338.00	1,356,213.00	73.91	1,093,183.00	1,653,417.00	66.12
I & M Bank Ltd	1,062,831.00	2,356,994.00	45.09	1,447,772.00	3,039,323.00	47.63	1,476,409.00	3,228,634.00	45.73	1,956,904.00	4,961,387.00	39.44
Imperial Bank Ltd	880,692.00	1,444,650.00	60.96	954,504.00	1,627,931.00	58.63	1,085,817.00	1,887,627.00	57.52	1,478,528.00	2,726,389.00	54.23
Jamii Bora Bank Ltd	338,482.00	615,844.00	54.96	497,322.00	962,197.00	51.69	74,652.00	68,128.00	109.58	165,205.00	182,650.00	90.45
K-Rep Bank Ltd	913,099.00	1,102,905.00	82.79	1,179,925.00	1,652,347.00	71.41	1,628,218.00	1,339,066.00	121.59	1,141,810.00	1,252,326.00	91.18
Kenya Commercial Bank Ltd	10,618,152.00	14,844,134.00	71.53	15,936,080.00	21,948,942.00	72.61	14,244,209.00	20,669,767.00	68.91	16,848,749.00	28,386,282.00	59.36
Middle East Bank Ltd	169,154.00	263,170.00	64.28	220,498.00	250,481.00	88.03	184,405.00	227,923.00	80.91	226,616.00	432,136.00	52.44
National Bank of Kenya Ltd	3,071,038.00	4,681,122.00	65.60	3,266,280.00	5,062,845.00	64.51	3,577,197.00	5,736,638.00	62.36	4,402,093.00	7,099,916.00	62.00
NIC Bank Ltd	1,344,331.00	2,394,238.00	56.15	1,707,163.00	3,191,337.00	53.49	2,125,393.00	3,654,285.00	58.16	2,256,111.00	4,672,453.00	48.29
Oriental Commercial Bank Ltd	174,556.00	383,752.00	45.49	125,408.00	193,627.00	64.77	159,091.00	192,150.00	82.80	235,540.00	418,470.00	56.29
Paramount Universal Bank Ltd	130,765.00	173,914.00	75.19	138,485.00	189,641.00	73.02	164,975.00	207,062.00	79.67	205,231.00	486,104.00	42.22
Prime Bank Ltd	503,969.00	820,688.00	61.41	731,923.00	1,192,283.00	61.39	760,208.00	1,323,825.00	57.43	1,036,790.00	1,806,420.00	57.39
Standard Chartered Bank Ltd	4,683,441.00	9,593,629.00	48.82	5,457,261.00	10,177,075.00	53.62	5,701,422.00	12,427,373.00	45.88	6,463,462.00	14,130,994.00	45.74
Trans-National Bank Ltd	332,064.00	412,741.00	80.45	348,205.00	469,374.00	74.18	396,521.00	484,097.00	81.91	484,032.00	642,615.00	75.32
UBA Kenya Bank Ltd	411,697.00	452,870.00	90.91	465,304.00	470,832.00	98.83	352,105.00	357,223.00	98.57	465,304.00	470,832.00	98.83
Victoria Commercial Bank Ltd	116,256.00	267,277.00	43.50	142,145.00	312,215.00	45.53	170,519.00	386,938.00	44.07	212,464.00	523,396.00	40.59

a. Total Operating Expenses

b. Total Operating Income

a/b Total Operating Expenses/Total Operating Income

Source: CBK Annual Supervision Reports

APPENDIX VII MICRO-ECONOMIC FACTORS

YEAR	2010	2011	2012	2013	2014
INFLATION	4.50%	18.93%	3.20%	7.15%	6.05%
GDP	5.60%	4.40%	4.60%	4.70%	5.30%

Source: CBK Annual Supervision Reports