

**THE EFFECT OF CREDIT RISK CONTROL ON
FINANCIAL
PERFORMANCE OF COMMERCIAL BANKS IN
KENYA**

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DECLARATION

This research project is my own original work and has never been presented for a degree at any other university for examination.

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This research project has been submitted for examination with my approval as the University supervisor.

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DEDICATION

This work is dedicated to my family as well as all those who supported me in the completion of this project. To my husband Charles Shihusa for his support throughout this journey.

ABSTRACT

Credit risk control is a function that cannot be ignored by any institution regardless of the nature of business that the institution undertakes. This research intended to determine the effect of credit risk control on financial performance of Commercial Banks in Kenya and was steered by the following theories; Liquidity Preference Theory, Credit Risk Theory and Theory of Information Asymmetry. The study employed a descriptive research design which enabled the researcher to describe the characteristics of the research variables. There are 42 commercial banks in Kenya (CBK, 2016). The research focused on all the 42 commercial banks. Secondary data was collected from audited annual financial reports for individual banks found on the Central Bank of Kenya website and library. Annual audited financial statements were used in the study due to ease of availability and the fact that they are credible. The quantitative data generated were analyzed with the help of Statistical Package for Social Sciences (SPSS) version 20. Descriptive statistics was used to quantitatively describe the important features of the variables using: frequency, mean, maximum, minimum and standard deviation. Multiple regressions were also used to measure the quantitative data which was analyzed using the SPSS. Regression was used in determining the effect of credit risk control on financial performance of commercial banks. Credit risk control was found to have a negative statistically significant relationship with the performance of commercial banks. Every shilling classified as NPL leads to a decrease in the performance of commercial banks by 6.1 %. Management should therefore pay more attention to the assessment of credit risk since it impairs the profitability of companies. Management can also increase their monitoring on non performing portfolios and take remedial action in good time to protect their profits. These remedial actions include outsourcing of collection services to manage the existing bad book. The study proposes that a similar research should be done but with a specific focus on East Africa. This is because of the inter trade among the countries it would be important to know how the trade relationships affect the financial performance of commercial banks in East Africa.

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LIST OF ABBREVIATIONS

CAMELS	Capital Adequacy, Asset Quality, Management Quality, Earnings, Liquidity and Sensitivity
CAR	Capital Adequacy Ratio
CBK	Central Bank of Kenya
CBR	Central Bank Rate
CEO	Chief Executive Office
CRO	Credit Risk Officer
GDP	Gross Domestic Product
KIE	Kenya Industrial Estate
LA	Loan and Advances
LLP	Loan loss Provision
MFI s	Micro Financial Institutions
NP	Net Profit
NPA	Non-Performing Assets
NPL	Non-Performing loans
NPL	Non-performing loan
ROA	Return on Assets
ROE	Return on Equity
SACCOS	Savings and Credit Cooperative Societies
SEFCO	Small Enterprises Financial Company
SSA	Sub-Saharan Africa
SPSS	Statistical Package for Social Science
TRWA	Total risk weighted average assets
VIF	Variation Inflation Factor

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The process of controlling risk is a two way process. One process is concerned with identifying the cause of the risk, and the other one is concerned with quantifying the risk using mathematical models (Mutua 2014).

The Kenyan financial sector comprises of the commercial banks, pension funds, insurance companies, and mortgages, which historically are oriented towards meeting the needs of large scale commerce and external trade. The commercial banks do not lend money to households and startup organizations because such organizations and households do not meet their lending conditions. To cater for the financial needs of the startup organizations and households, the Kenyan government has initiated Savings and Credit Cooperative Societies (SACCOS), Kenya Industrial Estate (KIE), Small Enterprises Financial Company (SEFCO) among other financial institutions (Essendi, 2013).

The effectiveness of financial intermediation has to a great extent the capacity to improve economic growth. However, bank insolvency can result to systemic crises which can affect the economy adversely. Based on this fact, banks play an essential role in economic growth and stability. In light of the critical roles that banks play in economic growth, a lot of research has focused its attention on bank management, performance and supervision together with financial markets (Li, 2007). However, financial problems in the banking sector have led to a downfall of a number of banks in Kenya. The weaknesses of the methods used to manage risks in the sector have been cited to be the major cause of the collapse of banks in Kenya (Ongilo, 2012).

The success of managing risks in lending out credit depends largely on the methodology applied in evaluating and awarding credit to customer (Ditcher, 2003). Credit decisions should therefore be based on thorough evaluation of borrower's risks rather than achieving huge loan portfolios.

1.1.1 Credit Risk Control

Credit risk is the probability that a debtor will fail to meet his obligation as outlined in the credit document. This factor is the primary source of crises in the banking industry worldwide (Basel, 1999). Skills in risk management continue to develop through intensive training. The process of controlling credit risk can be defined as the systems, controls and procedures that are set by companies to ensure prompt repayments are received from the clients; hence minimizing the potential non-payment (Kalui & Kiawa, 2015).

Credit risk control is therefore the processes that a lending institution establishes to minimize the non-payment of debts. It entails the identification, measurement, and mitigation as well as the process of monitoring and controlling exposures to credit risks (Raad, 2015). Credit risk control process begins by identifying the hazardous situations when issuing credit to clients. Risk identification is all about analysis of present and future risks of a firm in a widely spread manner in all areas of business. For this to be done more effectively, the bank managers need to identify the kind of risks that the bank is likely to face.

When measuring credit risk, a lending institution must take into consideration three important factors; Probability of default which is the possibility that the loanee will not repay the loan within the set period, exposure of Credit which is how big the debt will be should the default occur and estimated rate of recovery which is the amount of

debt that can be recovered through collateral and freezing of assets. Therefore credit risk is obtained by dividing the nonperforming assets by total assets (Kithinji, 2010).

1.1.2 Financial Performance

The financial performance depicts how well an institution utilizes its business assets to generate revenue. It evaluates the financial health of an institute over a given period of time, and because of its critical role in financial management, it is mostly applied when measuring up the financial performance of firms within the same industry or sector. Studies show commercial banks from the sub-Saharan region of Africa to be more profitable than commercial banks from other parts of the world. Their average ROA is 2 percent (Flamini et al., 2009). For a long time, the financial and operating ratios have been used to measure the financial performances of different firms. Following these ratios, procedures have been developed to identify banks that are likely to face financial challenges.

These procedures vary from nation to the other, and they are designed to create financial sound ratings referred to CAMELS ratings (Gasbarro, 2002). The CBK applies the CAMELS ratings to gauge financial health of commercial banks in Kenya. Studies have proved the efficiency of CAMELS rating. They have concluded that CAMELS ratings combined with data has the capacity to identify the financial problems of the banks that collapse. The CAMELS rating system measure the internal factors that define the performance of an institution. The internal factors are the major causes of financial problems in the banking industry (Sinkey, 1979). The external factors such as; political stability of a country, inflation, interest rates and GDP growth rate also determine the financial performance of a firm. However, they are normally beyond the control of the management team (Naceur, 2003).

1.1.3 Credit Risk Control and Financial Performance

The financial performance of lending institutions is determined by a number of factors within the internal and external environment. One of these factors is risk. The Kenyan financial institutions face credit risk. According to Ahmed and Malik (2015), this risk has a higher impact on the financial institutions compared to other risks because it has a direct solvency threat to these institutions. Due to intensive loan disbursement, banks are exposed to high risks of default in loan repayment. Poor risk management has led to poor financial performance of commercial banks leading to closure of such institutions. Such financial institutions have developed sophisticated systems and policies of risk management and control in the recent years (Naceur, 2003).

Efficient measures for controlling credit risk balance the tradeoff between risks and reward thereby enhancing the future of an institution (Fameti & Fooladi, 2006). Shafiqand Nasr (2010) observes that banking institutions should not expose themselves to unnecessary risk. Aduda and Gitonga (2011) studied the relationship between the process of managing credit risks and banks' lending profitability. They observed that the processes of managing credit risk have substantial impacts on banks' profitability. Mutua (2015) also evaluated the consequences of managing credit risk on the performance of commercial banks. He equally established a substantial relationship between banks' performances and the process of detecting, monitoring and approving credit. He concluded that a better process of managing credit risks results to a better financial performance. Taiwo and Ucheaga (2017) established that the measures of controlling credit risks had no significant impact on the increase of the total loans and advances of the Nigerian banks. Their research recommended that Nigerian banks should strictly adhere to the credit evaluation policy that ensures only credit worth customers benefit from loan-able funds. The

lending institutions should ascertain that loans are allocated to high credit rating customers.

1.1.4 Commercial Banks in Kenya

The Kenyan banking sector is regulated by the Banking Act, CBK Act and Companies' Act together with the prudential guidelines set by the CBK. Regulation and licensing of banks is guided by the Kenyan Banking Act, which is a creation of the Parliament of Kenya and effected by the central Bank of Kenya in association with other legal agencies. The CBK formulates and implements the monetary policies in Kenya. It also evaluates the solvency, functioning and liquidity of the Kenyan banks. For the past one decade, the Kenyan banking environment has witnessed major reforms and regulations. The reforms have initiated structural changes in the sector, which have in return attracted foreign banks into the country. The commercial banks dominate the Kenyan financial sector; as such, financial intermediation is heavily dependent on commercial banks (Kamau, 2009).

Currently, the Kenyan banking industry comprises of the CBK, which regulate the industry; forty-three banks of which forty-two are commercial banks and one mortgage finance company; eight foreign banks; three credit reference bureaus (CRBs); twelve microfinance banks; eighty forex bureaus and fifteen Money Remittance Providers (MRPs). Out of the forty-three banks, forty are privately owned with the Kenyan government having the majority ownership of three banks. Among the forty privately owned banks, twenty-six of them are owned by local investors whereas fourteen of them are owned by foreigners. One of the twenty-six banks owned locally is a mortgage financier whereas the rest are commercial banks. The fourteen foreign-owned banks are commercial banks four of which are branches of

foreign banks and ten subsidiaries. The Kenyan CRBs, forex bureaus, MRPs and microfinance banks are owned by private investors (The bank supervision annual report, 2015).

Effective credit risk control practices involve reporting and reviewing the structures that have been set to ensure that the process of identifying and assessing credit risks are in place within commercial banks (CBK, 2015). It also involves ensuring that appropriate control and response measures are also in place within commercial banks. Consequently, once a loan has been approved, it is monitored continuously to track borrowers' compliance with credit terms, identify and control risks as well as conduct periodical valuation together with monitoring timely repayments. Based on this fact, an empirical study needs to be conducted to identify those measures and their effects on the banking industry.

Ngure (2014) established that the volatility of interest rates in Kenya had significant effects on the profitability of Kenyan banks. The research proposed effective policies to be put in place to shield and monitor bank lending rates. Further, so as to cushion consumers from exploitation by commercial banks, the Central Bank need to exercise their supervision roles rigorously and discipline any commercial banks that may be increasing the interest rates arbitrarily to boost their profitability. As if to answer Ngure's call, in the year 2016, CBK amended the banking act which was signed by the president capping the lending interest rate at 14.5 per cent which is not more than 4 per cent of the CBR. This amendment was celebrated by many who felt that the banks were charging too much for credit.

1.2 Research Problem

Credit risk control is a function that cannot be ignored by any institution regardless of the nature of business of that the institution undertakes. The biggest risk in the financial institutions is on lending money and not being able to collect it back (Agola 2014). This results to credit risk. The process of controlling credit risk involves evaluating risk and mitigating it whenever identified. On the other hand, the process of awarding credit begins from the application of the loan and ends when the loan is fully paid. Its success, however, depends largely on the approach applied to assess and award the loan (Clarke, 1999). The main source of credit risk for commercial banks therefore is the loans and credit risk is one of the most expensive risks as it has a potential of a direct solvency threat to any financial institution (Warsame, 2016).

The CBK's prudential rule on risk categorization of assets and provisioning obliges commercial banks to categorize loans according to performance. The performance criterion is set on repayment ability of the loanee and the loans are categorized as normal, watch, substandard, doubtful or loss. The loans and advances in the watch, substandard and doubtful classification went up by 33.8%, 62.4% and 40.9% respectively. This is also shown by the high levels of these classifications in the whole loan book. The watch, substandard and doubtful classifications accounted for 7.7%, 2.1% and 3.6% of the loan book in 2015 compared to 6.5%, 1.4% and 2.8% in 2014. The rise was caused by weakening asset quality due to delayed payments, re-categorization and provisioning of loans, poor working environmental conditions and changes interest rates (CBK, 2015).

Bank troubles, especially failures and financial distress have led to closure of banks and others being held under receivership by the regulatory authorities. In Kenya some

of the commercial banks like chase and imperial bank have been put under statutory management. The weaknesses of the methods used to manage risks in the sector have been cited to be the major cause of the collapse of banks in Kenya (Ongilo, 2012). As credit risk exposure persist to be the foremost cause of failure of banks world-wide, the management ought to learn from the past experiences on the importance of identifying, measuring, monitoring and controlling credit risk in order to ensure that they have adequate capital to cover the risks and that there is adequate compensation for risks undertaken (Basel, 1999).

According to Cauoette, Altman, and Narayanan (1998), majority of the banks are concerned about their relationships with customers than the profitability of certain loan facilities. As a consequence, other factors rather than credit risk may determine the financial performance of lending institutions.

Different studies on credit risk control and financial performance have been conducted both locally and internationally. The studies provide insight into the practice of credit control within the lending institutions. Such studies have given different results and different recommendations on credit risk control and financial performance of different institutions. A study by Owusu (2008), establishes that the appraisal of loan application in Ghana does not assess adequately the inherent risks of loans in decision making processes. The study recommends that loan amounts ought to be properly assessed so that enough funding can be allocated. Ericsson and Renault (2006) established an inverse link between credit risk and liquidity.

According to Fredrick (2013), the asset quality, capital adequacy, liquidity and management efficiency have a weak correlation with financial performance while a strong correlation between earnings and financial performance was observed. The

research also observed that credit risk management by use of CAMEL model had a strong impact on the financial performance of commercial banks in Kenya. The research concluded that CAMEL indicators can be used as a proxy for credit risk management. This study was carried out in 2009 and hence there is a need to carry out the same study currently and see if the status is upheld.

Kithinji (2010), studied the effects of credit risk management in the Kenya banking industry between 2004 and 2008. The study established that the profitability of the Kenyan banks was never influenced by non-performing loans. This suggests that the profitability of the Kenyan banks is driven by other factors other than the non-performing loans. In light of this study, the proposed study will utilize the CAMEL ratings as the alternative variable for evaluating the effects of credit risk management on the financial performance of Kenyan banks as Kithinji (2010) recommends.

Credit risk theory and liquidity preference theory concur with each other that every lending institution should develop a credit risk measurement policy and that the borrowers should be examined closely to ensure they are credit worth as a way of managing credit risk. The theory of information asymmetry, on the other hand, argues that lending institutions lack the capacity to differentiate the risk between high and low risk loan applicants. Therefore, the formal financial institutions are disadvantaged when competing with informal institutions when lending money because the informal lenders can access more information about borrowers than the formal institutions do cost effectively.

This research therefore aims to close the knowledge gap by answering the question; what is the effect of credit risk control on financial performance of the lending institutions specifically commercial banks in Kenya?

1.3 Objective of the Study

To establish the effect of credit risk control on financial performance of commercial banks in Kenya.

1.4 The Value of the Study

This study will be important to the management of lending institutions especially the banking institutions. It will help them to comprehend the relationship between the financial performances of their institutions and credit risk control measures. The management teams will therefore establish policies that will provide guidelines to be followed in the control of credit risk as the study will provide an insight on the best credit risk control measures and be relevant when setting the credit appraisal checklist.

The government is responsible of the performance of all lending institutions as they influence the economic performance of the country. The institutions are therefore accountable to the government through different regulatory authorities. The study will be useful to the government when setting up such regulatory authorities which oversee the performance of the lending institutions. On the other hand, each and every regulatory authority will obtain insight on the guidelines to be followed by the lending institutions in Kenya.

The research will also add to the development of the existing literature on credit risk. It will as well fill the current knowledge gap. Apart from filling that gap, it will also identify the research gaps that other researchers and academicians can research about in the future.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter outlines the theoretical background of the proposed study, conducts an empirical review of the previous studies and defines the process of risk control as practiced by the commercial banks. The chapter helps the researcher to clarify the strengths of the proposed study. It also guides the various stages of the study right from the formulation of the topic to the utilization of literature in the research.

2.2 Theoretical Background

Theories are used to explicate, predict, and understand phenomena. They are also used to test and extend the existing knowledge. They consist of concepts as well as definitions together with existing theories used in particular fields of study (Torraco, 2011).

2.2.1 Liquidity Preference Theory

This theory evaluates the demand for money, which is also known as the liquidity. The liquidity concept was developed for the first time by John Keynes in 1936. Keynes explained the process that is used to determine interest rates based on the supply and demand for money. He argued that money is the most liquid asset in the world. He also argued that the easier an asset can be changed into cash, the more liquid it is (Keynes, 1936). Liquidity preference theory claims that investors demand premiums for securities that have high maturities because they prefer holding cash that is less risky. According to this theory, the more liquid an asset is, the faster it is to dispose for its total worth (Shanken & Smith, 1996).

Three motives namely transaction, speculative and precautionary motives drive the demand for liquidity (Keynes, 1989). The transaction motive claims that people fancy liquidity because it assures them basic transactions when their incomes are not available. As a result, liquidity in this case is determined by income meaning that the higher the income the more money is required to cater for increased spending. The speculative motive claims that investors retain liquidity in the hope that bond prices will fall at one time (Pasinetti, 1997). Consequently, a fall in interest rate, leads to an increase in the demand for liquidity to hold onto until the interest rates increase (Reilly & Norton, 2006). The precautionary motive claims that people prefer to stay liquid in order to meet social unexpected needs that may call for unusual costs (Al-Khouri, 2011). The liquidity in this case is determined by the levels of incomes.

A commercial bank lending credit to investors may experience default problems if investors are unable to repay their debts when they fall due (Myers & Mjuf, 2004). This would force the banks to adopt risk rating measures to identify the credit risk exposed by the borrowers. The analysis would then help the banks to sort the risk depending on their importance. The higher the income of the borrower the lesser risky they are and vice versa. In return, the bank's management team would develop the necessary risk management practices to reduce the non-repayment rates. According to this theory, it is therefore in the interest of the lending institutions to reduce the levels of credit risks by making sure the loanees are credit worth before loan is advanced (Rogers, 1997).

2.2.2 Credit Risk Theory

According to Lando (2009), the model of credit risk originated from the development of option-pricing techniques together with its application in the study of corporate liabilities. Melton (1974) established the credit risk theory. He referred to the credit risk theory as the event where default originates and therefore presents the foundation for efforts to measure and control credit risk exposure. This theory views default as an embedded put option offered to the borrower when circumstances are economically attractive for the borrower to exercise their option to default.

Woolcock (2000) proposed that markets for credit or loans are highly shaped by the lending institutions' strategies for prospective borrowers screening and by addressing the opportunistic behavior which may be encouraged by the nature of loan contracts. Lenders would therefore increase the credit pricing to a point where they suppose income to be maximum. According to Mattius (2009), a cost increase of a loan raises the expected return of a lender, but on the other hand, leads to an increase in the probability that the borrower will default. This theory influences the development of credit guidelines that outline the extent of credit allocation together with the manner of managing credit portfolio.

Demand for credit often tends to be inversely correlated to both interest rate and the required collateral. Lending institutions apply the credit risk management theory by taking advantage of opportunistic behavior presented by the prospective borrowers. Consumption of credit is related to the collateral requirements and a variable interest rate pricing policy may be utilized by individual lenders (Tanui, Wanyoike & Ngahu, 2015). Every lending institution therefore should develop a credit risk measurement

policy across a number of instruments such as; commercial contracts, commitments and letters of credit (Padilla & Pagano, 2000).

2.2.3 Theory of Information Asymmetry

Akerlof (1970) developed the theory of information asymmetry. He argued that buyers use market statistical information to measure the value of goods before they buy them. According to this theory, a buyer looks at the typical market whereas the seller possesses the understanding of a specific thing. Akerlof says that information asymmetry enables sellers to vend goods that are of less quality than the market average. The theory argues that when there is information asymmetry, disclosure decisions that managers make affect stock prices by raising transaction cost and reducing the expected market liquidity of a share (Bartov & Bodnar, 1996).

Information asymmetry theory therefore describes a situation of non-disclosure of information to all players in a market (Eppy, 2005). According to Stiglitz (2001) such markets may lead to inter-temporal competitive market behavior. The information asymmetry may pose two technical issues to the firm, adverse selection and moral hazard thus making inappropriate lending decisions.

Robinson (2001) argues that the theory assumes that lending institutions lack the capacity to differentiate the risk between high and low risk loan applicants. Consequently, formal lending institutions are inept of competing effectively with the informal money lenders that have access to more information about different types of loan applicants. This theory is relevant in that, if the lending institutions exchange information about the borrower's creditworthiness, they can lower the loan repayment rate and hence reduce the credit risk (Weinberg, 2006). Credit Reference Bureaus

(CBR) develops credit risk management practices hence reducing the information asymmetry among the lenders and borrowers.

2.3 The Determinants of Financial Performance of Commercial Banks

2.3.1 Capital Adequacy

Capital adequacy is among the major factors that affect the levels of financial performance and profitability of commercial banks. It represents the amount of cash that banks have at hand to support their financial activities. By so doing, it depicts the ability of a bank to undertake new investment opportunities and absorb effectively risks such as market and operational risks as well as credit risks. It therefore cushions a bank against adverse situations (Athanasoglou et al., 2005). The Capital Adequacy Ratio (CAR), which relates directly to the resilience of a firm to possible financial crises, measures the capital adequacy of a firm (Dang, 2011). Based on this fact, it affects directly the profitability of a bank. According to (Afriyie & Akotey, 2012), capital adequacy entails different kinds of financial capital that are well contemplated as liquid and reliable. Prudential guideline from CBK mandates all banks to adhere to the recommended CAR measured by core capital and total capital to total risk weighted average assets which are 10.5% and 14.5% respectively (CBK 2015).

2.3.2 Liquidity

Liquidity represents the amount of funds that is readily available to a firm at any given time, and the speed with which a firm can settle its short term liabilities when they fall due using the current assets (alkihatib & Harasheh, 2012). Liquidity is therefore characterized by high turnover rate (Parrenas, 2005). The availability of large sums of money enables firms that are more liquid to exploit profitable

investments faster than less liquid firms. The bank's risk management task involves managing capital to guard against insolvency and holding of liquid assets and access to a variety of borrowing sources to caution against any unexpected cash shortfall. It is therefore the duty of a bank's finance manager to establish the corporate liquidity failures that may affect the liquidity of the bank (Harvey & Roper, 2004). In his article the Determinants of Financial Performance, Onjala (2012) recommends that banks should improve their liquidity in order to have ability to pay the depositors on time to avoid financial crises and closure. Liquidity is measured by dividing Liquid Assets by Short-term Liabilities.

2.3.3 Asset Quality

The quality of assets of a bank is determined by its exposure to credit risks, the trend of its nonperforming loans together with the profitability of its loans. On the contrary, credit risk is determined by the asset quality of the firm (Baral, 2005). According to Mwege (2009), poor asset quality is among the leading causes of bank failure in Kenya. Bank failure was experienced in Kenya for the first time in the 1980s and 1990s when 37 banks collapsed due to the banking crises of between 1986 and 1989, and between 1993 and 1998. Many of the banks that collapsed during these periods collapsed due to the non-performance of their loans issued to insiders (Waweru & Kalani, 2009). The CBK uses the ratio of the net nonperforming loans to gross loans to measure the asset quality of the Kenyan banks. Koch (1995) claims that the ratio of loan loss to gross loan is the best tool for quantifying the asset quality of a bank. He argues that it captures the expectation of loan performance.

A study on the relationship between financial performance and asset quality that was conducted by Nzoka (2015) established a negative relationship between the two. Based on its findings the study recommended that for high assets quality levels to be achieved, improved investment asset levels and low rate of Non-Performing Assets are to be realized through credit risk identification, measurement, monitoring and controlling.

2.3.4 Managerial Efficiency

According to Dahigaard et al (2012), management commitment, focus on clients and employees, attention to facts and details, consistent perfection and improvement and everyone's participation are the main principles of quality management and control. Poor management of expenses contributes to low profitability (Sufian & Chong 2008). Operational efficiency is used as a yardstick to measure managerial efficiency in banks.

In his study on the effects of corporate governance on the liquidity and credit risk of the Ethiopian commercial banks, Abate (2014) found out that Central Bank's regulations affected measures of risk negatively. Management efficiency had a positive impact on both risks. Board of directors meeting frequency had a negative impact on both risks, firm size and inflation had significant impact on credit risk but insignificant for liquidity. The research concluded that corporate governance had an impact on bank risk control.

The default rate is a major indicator of risk management and control in the banking industry. Consequently, it can be used to predict the financial performance of a bank. Managerial efficiency will determine how the risk will be managed and more

emphasis should be put on efficiency of the managers as this contributes significantly to bank performance (Poudel, 2012).

2.3.5 Bank Size

The size of a firm may affect its goodwill, customer loyalty and stakeholder responsiveness (Foyeke, Odianonsen& Aanu, 2015).A bank's size matters especially on its routine operations (Davis, 2012). Keeping all other factors constant, the size of the bank determines the level of risks its partners are exposed to. A big bank has more assets to keep it going even in times of industrial crisis and this means that loans by larger banks are most likely to be repaid compared to small bank loans. There exists a direct relation between bank size and profits from it.

Some supporters for negative relationship between firm size and financial performance base their argument on agency theory. They argue that the difference between shareholders and managers leads to increased agency cost or information asymmetry. Black (2001) states that, when using scale and product mix there is a negative relation between returns and size of banks. On the contrary, Davis (2012) argued that there is inverse relationship between net return and bank size on small business lending. Large banks have ability to do business in a very different market sector than the small banks, enabling a comparative advantage in market activities that may warrant incurring quite significant fixed costs but with an assurance that the bank will experience economies of scale. According to Davis (2012) activities that are market-based can cause unstable funding and increased leverage because the securities can be collateral in repos.

2.4 Empirical Studies

This section of the study reviews the empirical studies that evaluate the relationships between the measure of controlling credit risks and the financial performance of firms especially banks. It provides a summary of the previous studies that have been reviewed to identify the research gap as well as the basis of the conceptual model.

A study conducted by Byusa and Nkusi (2012) that assessed the effects of credit policies on the financial performances of the Rwandan banks utilizing quantitative data collection, questionnaire, and review of the existing literature, evaluated the banking sector financial results, its deepening over time, and competency in the light of post-liberalization procedures. The banks had adequate credit policies which was displayed in their banks' mission statement, goals, credit responsibility, collection policy and credit evaluation policies ranging from car loans, personal loans, overdrafts and mortgages at interest rate ranging from 17.25% to 20% per year. The results obtained indicated that the Rwanda's commercial banks increase both the accounts and customer base, hence maximizing their income.

Kargi (2011) employed the traditional profit theory to appraise the effects of the practices of managing credit risks on the profitability of the Nigerian commercial banks. He measured the profitability of the banks by their Return on Asset (ROA). He also used the panel model to approximate the determinants of the profit function. The results showed banks' profitability to be cross-sectional invariant meaning that they were not affected by the time of collecting the data. The study showed that a 100% increase of the non-performing loan reduced the banks' profitability by approximately 6.2% whereas a 100% increase in loan loss reduced the banks' income by approximately 0.65%. The study further showed that a 100% increase in the total loan

increased the banks' profitability by approximately 9.6%. The however did not determine if credit risk control practices had any impact on the financial performance.

Aebi, Sabato and Schmid (2012) researched on the relationship between corporate governance and risk management on banks' financial performance during the 2007/2008 financial crisis. The study used a sample of 372 USA banks. It also used ROE and buy-and-hold returns to measure the financial performance of the banks and board sizes and independence together with CEO ownership to measure corporate governance. The study showed that banks whose CRO reported directly to the boards of directors as opposed to CEOs had significantly higher stock returns and ROE. However, corporate governance variables did not affect banks' performance significantly. The study established a substantial relationship between banks' financial performances and their practices of managing risks.

Bhattarai (2016) studied the effects of credit risks on the financial performance of the Naples' banks. He used a causal-comparative and descriptive research designs, and collected his data from 14 banks for the period between 2010 and 2015. He established that NPL loan ratio had adverse effects on the performance of banks whereas the cost of a loan asset had a positive effect on the overall performance of the banks. He found that the indicators of credit risk and banks' sizes impacted banks' performances positively. The study established that the ratio of capital adequacy and cash reserve had no influence on bank performance; hence, concluded that there was a substantial relationship between banks' performances and their credit risk indicators. However, he did not evaluate the effects of credit risk control measures on the financial performances of the banks.

Poudel (2012) researched on the impact of managing credit risks on the financial performance of banks with a special focus on the cost of loan assets and default rates. He showed credit risk management to be a major gauge of the financial performance of banks. He also showed default rate to affect banks' profitability by 56 percent and capital adequacy ratio by 25 percent. The study showed credit risk management to contribute to banks' profitability by up to 22.6 percent. The management of default rate comes out as the main predictor of banks' financial performances. As a result, in order to reduce credit risks, banks should manage default rates and maintain optimum levels of capital adequacy.

Kalui and Kiawa (2015) studied the procedures of managing credit risk and the processes that Kenyan microfinance organizations adopt in their financial practices. They utilized a descriptive research design in their study. Their sample comprised of credit managers and fifty-four credit officers from Microfinance Institutions based in Nairobi County. The study established that the organizations that were included in the study considered the processes of identifying, assessing and analyzing risks as well as monitoring risks as the processes of managing credit risks. The study concluded that the above procedures were important in risk management because they improved risks in the institutions. However, the study solely focused on microfinance institutions in Kenya and not commercial banks.

Kibor, Ngahu and Kwasira (2015) assessed the effect of managing credit risk on loan performances of commercial banks based in Nakuru town using a descriptive and correlation research design. The researchers utilized a questionnaire to collect the data. The study established a moderate positive relationship between loan performance and lending policies. The correlation between loan performance and

credit standards was established to be positive and statistically significant but the study focused on credit risk management practices on loan performance and not financial performance.

Tanui, Wanyoike and Ngahu (2015) studied the impact of credit scoring and credit administration on performance in financial perspective of SACCOs in Nakuru County. This study used a descriptive survey design and targeted credit officers and credit managers in those selected SACCOs. Questionnaires were used in data collection from the sample of 90 respondents. The study findings revealed a strong relationship between the credit scoring and the performance in financial perspective of the SACCOs and found that issuing of credit for deposit taking SACCOs had a strong relationship with performance in financial perspective. They recommended that SACCO's should reinforce on their credit scoring and credit administration as credit management practice to improve on their financial performance. The study focused on SACCOs and not commercial banks in Kenya.

Fredrick (2013) studied the effect of credit risk management on commercial banks and observed that credit risk management by use of CAMEL model had a strong effect on the financial performance of commercial banks in Kenya. His research therefore concluded that CAMEL model can be used as a proxy for credit risk management. The CAMEL indicators in his research had strong effect on the financial performance with the CAMEL components explaining the disparity of up to 94.3% in 2009 of the financial performance of commercial banks.

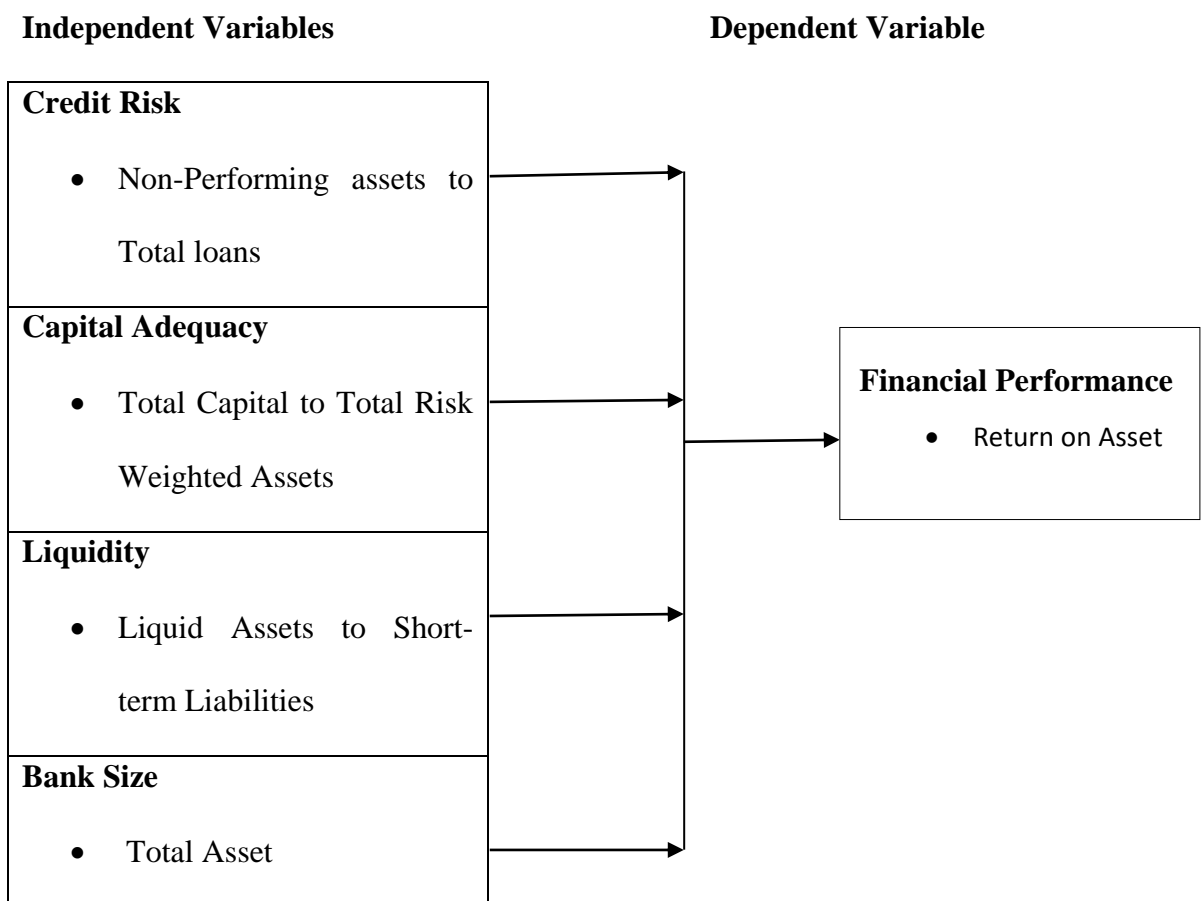
Kithinji (2010) evaluated the effects of managing credit risk using different loan ratios. He collected his data from the Kenyan banks between 2004 and 2008. He established that the profitability of the Kenyan banks was not affected by non-

performing loans. He concluded that other factors influence the profitability of the Kenyan commercial banks.

2.5 Conceptual Framework

This is a diagrammatic illustration of the variables used in a study. It depicts the relationship between the independent variables, which in this study include credit risk, capital adequacy, liquidity, and asset quality, and the dependent variable, which in this study is the banks' financial performance.

Figure 2.1: Conceptual Framework



Source: Author, 2017

2.6 Summary of the Literature Review

Numerous studies have been carried out to determine the relationship between the credit risk control and the financial performance of commercial banks. The literature review shows credit risk control policies as being critical in the financial performances of commercial banks and other lending institutions. A study by Poudel (2012) identifies credit risk management as a critical component in the improvement of the financial performance of banks. Aebi, Sabato and Schmid (2012) conducted a study for the 2007/2008 financial crisis that established a significant relationship between risk management and banks' financial performance. Tanui, Wanyoike and Ngahu (2015) studied the impact of credit scoring and credit administration on performance in financial perspective of SACCOs in Nakuru County. They also found out that correlation between loan performance and credit standards was established to be positive and statistically significant but the study focused on credit risk management practices on loan performance and not financial performance.

Other researchers contradict the above findings. Kithinji (2010) in particular established that nonperforming loans do not affect the profitability of the Kenyan banks. Cauoette, Altman, Narayanan (1998) claim that majority of the banks are concerned about their relationships with banks than the profitability of some of their loans. The literature review shows a contradiction among the various studies conducted in Kenya to evaluate the relationship between the financial performance of the Kenyan commercial banks and their measures of controlling credit risks. The research seeks to bridge the gap by determining the effects of credit risk control on the financial performance of Kenyan banks.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the study's research design; its population and sample; the method of collecting data that will be utilized in the study and the techniques that will be employed to analyze the data.

3.2 Research Design

It is the plan that guides a researcher in organizing research activities (Bryman & Bell, 2003). According to Mugenda & Mugenda (2003) it is the method used to conduct a study. The descriptive research design will be used because it offers the state of affairs as they appear on the ground. The research design will be utilized to evaluate and demonstrate the connection between the variables of the study.

3.3 Population of the Study

The population of a study includes the people or items from which a sample of the study comes from (Zikmund et al., 2013). According to Mugenda and Mugenda (2003), it includes the sets of individuals or objects with similar observable characteristics that are distinct from the characteristics of other populations. In line with these definitions, the population of this study includes the forty-two Kenyan commercial banks spread across the country. The census approach was used since the population is small hence all the 42 commercial banks registered as at 31st December 2016 were studied (CBK 2016). The banks that were not in operation or were under receivership were not included in the study.

3.4 Data Collection

The study utilized secondary data contained in the CBK's website and library. From the audited annual financial reports, non-performing loans over gross loans were obtained to determine the credit risk. Total assets and total capital were extracted from the statement of the financial position of the commercial banks to determine the capital adequacy ratio. The audited annual financial reports are reliable and readily available as all the commercial banks are supposed to file annual performance reports with the CBK on an annual basis. The annual financial reports for the period between 2012 and 2016 were analyzed in line with the period under investigation.

3.5 Data Analysis

Data analysis is the process used to describe, illustrate, condense and evaluate data systematically using statistical and logical techniques. A variety of analytical procedures provide ways of drawing inductive inferences from the data that has been collected by highlighting the phenomena of interest from statistical fluctuations that may be in the data (Shamoo & Resnik, 2003). The research sought to establish whether there was linearity between independent variables and the dependent variable. The research utilized average values of the dataset for five year period between 2012 and 2016.

The multiple linear regression analysis model was utilized to evaluate the relationship between the financial performance and independent variables. The correlation coefficient between the two variables will be calculated and interpreted. The SPSS program was utilized to analyze the data.

3.5.1 Diagnostic Test

A regression diagnostic is one of a set of procedures that seek to evaluate the validity of a model in different ways. Using the assumption of regression model, the determination of explicit form of regression equation is the ultimate objective of regression analysis. The study utilized Durbin Watson (DW) method to check that the residuals of the models are not auto-correlated since independence of the residuals is one of the basic hypotheses of regression analysis. If the DW statistics are close to value of 1- 4, there will be no autocorrelation. Normality was tested using measures of skewness and kurtosis.

3.5.2 Analytical Model

The following multiple linear regression equation will be used to summarize the results of the proposed study.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where: Y=financial performance of the banks measured by the Net Profit after Tax over Total Assets)

α =constant term

$\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficients to regression model

X_1 = Credit Risk (Measured by NPAs to Total Loans)

X_2 =Capital Adequacy (Total Capital to Total Risk Weighted Assets)

X_3 = Liquidity (Measured by ratio of Liquid Assets to Short Term Liabilities)

X_4 =Bank Size (Measured by Value of Total Assets)

e= error term accounting for all other variables that affect profitability but not captured in the model.

3.5.3 Test of Significance

Pearson correlation will be utilized to analyze the correlations between the financial performance and the independent variables. The Pearson correlation coefficient, r , ranges between +1 and -1. A value of 0 will indicate that there is no correlation between the two variables. A value greater than 0 will show a positive relationship; meaning that an increase in the value of one variable leads to an increase in the value of the other variable. A value less than 0 indicates a negative correlation; that is, as the rate of one variable increases, the rate of the other variable decreases.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents results of analyzed data, which are presented, in form of tables. The chapter describes the response rate, data reliability and descriptive statistics, correlation analysis results, regression analysis results and the interrelation of the study findings.

4.2 Data Collection

The study utilized secondary data contained in the CBK's website and library. From the audited annual financial reports, non-performing loans over gross loans were obtained to determine the credit risk. Core capital and risk weighted asset were extracted from the statement of the financial position of the commercial banks to determine the capital adequacy ratio. Profit before tax and net assets were obtained to determine the return on asset.

4.3 Response Rate

A census of the 42 commercial banks in Kenya was done but obtained full data from only 38 commercial banks. This represents a response rate of 90.47%, which was appropriate for the study.

4.4 Data Validity

A regression diagnostic is one of the set of procedures available for regression analysis that seek to assess the validity of a model in any of a number of different ways. Using the assumption of regression model, the determination of explicit form of regression equation is the ultimate objective of regression analysis.

4.4.1 Normality Test

Skewness and Kurtosis is used to test for data normality. The decision criterion involves a physical inspection, a data set is assumed to be normal if the 3 times standard error is less than the statistic value. Ie ($0.177*3= 0.531<1.480$) hence the variables are normally distributed. As shown in the table below.

Table 4.1: Measure of Skewness and Kurtosis

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Financial Performance	188	-1.48	0.177	4.815	0.353
Liquidity	188	1.687	0.177	4.673	0.353
Capital Adequacy	188	2.321	0.177	8.815	0.353
Credit Risk	188	2.211	0.177	6.464	0.353
Size	188	0.223	0.177	-1.132	0.353
Valid N (list wise)	188				

Source: Research Findings

4.4.2 Multicollinearity test

Table 4.2: Test of multicollinearity

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	1.000 ^a	1	1	0.000	0.375

Source: Research Findings

The Durbin Watson test of serial correlation ranges from 1 to 4. A value of 3.75 indicates that the error terms are not correlated. That means that the independent variables are not related at all.

4.5 Descriptive Statistics

Table 4.3: Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Financial Performance	188	-0.13575	0.10389	0.02456	0.03028
Credit Risk	188	0.00032	0.61606	0.10287	0.10208
Capital Adequacy	188	0.05734	0.82812	0.23044	0.10175
Liquidity	188	0.017	1.128	0.41147	0.15169
Size	188	3.46597	5.7031	4.56274	0.55811
Valid N (list wise)	188				

Source Research Findings

The mean for financial performance is 0.024 which means that the financial sector earn on average 2.4 % return for every shilling investment. The return on investment data however contains negative figures with a minimum loss on investment of 13.57% and a maximum return of 10.38 %.which means that for every shilling on investment the financial sector can either lose 13 cents or gain up to 10 cents per shilling invested. The average mean score for credit risk is 0.1028.This means that for every shilling issued to borrowers 10.28 cents become non-performing. However there are some banks with good credit quality and are therefore able to control their credit risk. Such banks hardly have any non-performing loans, the minimum quantum of 0.0003 represent this category. This means that for this category a shilling disbursed leads to a NPL of 0.03 cents. The maximum quantum is 0.6160 which means that 61.60 % of total loans issued become nonperforming. This means that if credit risk is not well controlled, then every shilling disbursed leads to NPL of 61.60%.

The minimum liquidity for the banking industry is 0.4111, this means that on average banks are able to honour 41.11 % of their maturing obligation. However some banks are more liquid with a maximum liquidity ratio of 1.13, this means that these banks

have more cash than their obligation they can pay all their liquidity plus a reserve amounting to 13% of their liabilities. On the lower quadrant are banks with liquidity challenge the lowest of them have a ratio of 0.0170. These banks can only repay 0.17 % of their maturing obligations. These liquidity challenges could be attributable to the high non-performing loans. The results indicate that the banking industry has a minimum capital adequacy ratio of 0.057, a mean of 0.23 and a maximum ratio of 0.8281 this compares to CBK prudential guidelines of 10.5% (0.105). with a mean of 23%, it shows that most the banks have adhered to the CBK prudential guideline.

4.6 Correlation Analysis

Table 4.4: Pearson Correlation

		Financial Performance	Credit Risk	Capital Adequacy	Liquidity	Size
Financial Performance	Pearson Correlation	1	-.362**	-0.139	-0.003	.579**
	Sig. (2-tailed)		0.000	0.056	0.964	0.000

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

Source: Research Findings

The two tailed non directional hypothesis testing is designed to test the correlation between the dependent variable (Financial performance) and the independent variables (credit risk, capital adequacy, liquidity, and size). The null hypothesis in this case is set as; there is no statistically significant relationship between the dependent and independent variables. This hypothesis is rejected if the significance value is less than 0.05 in which case the correlation is deemed significant. The hypothesis is accepted if the significance value is more than 0.05 in which case the correlation is rejected.

The SPSS output indicate a negative relationship between financial performance and liquidity with a coefficient of -0.003. Even though this relationship is not significant at 95% confidence level it is consistent with the general economic reasoning. This is because an increase in liquidity leads to a decrease in investment and consequently a decrease in profits. The more liquid a bank is the lesser the profits because money loses its value with the passage of time. The results also show that there is a negative relationship between capital adequacy and financial performance with a correlation coefficient of -0.139 and a significance of 5.6%. This means that the demand for additional capital requirement by the regulator decreases the return on investment majorly because it is a call for idle resources. This is true because these resources would have a return on investment had they been lent out to borrowers.

The results also indicate that there is a negative relationship between financial performance and non-performing loans. The correlation coefficient is -0.362 with a significance level of 0.000, this means that this relationship is statistically significant at 95% confidence level. The economic explanation of this relationship is based on the fact that asset quality affects returns negatively. Any delay in repayment of loans reduces profits directly because the non-performing loans would have been re-issued to new borrowers at a profit. The situation worsens if the borrower does not pay at all. Finally the results indicate that there is a statistically significant correlation between return on investment and the size of the company. The correlation coefficient is 0.579 and the significance level is 0.000. This means that an increase of investment in the financial sector leads to an increase in profits at a rate which is higher than the rate of increase in investment. More investments leads to more resources which can be used to originate more loans and hence the positive relationship.

4.7 Regression Analysis and Hypothesis Testing

The research employed the use of ordinary least square regression model. The model predicts the extent to which repressors affect the dependent variable (financial performance). Given below are the SPSS output of the regression

4.7.1 Hypothesis Testing for the Independent Variables

Table 4.5: Regression Analysis

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-0.102	0.02		-5.122	0.000	-0.142	-0.063
	Credit Risk	-0.061	0.019	-0.205	-3.176	0.002	-0.099	-0.023
	Capital Adequacy	0.029	0.022	0.097	1.318	0.189	-0.014	0.072
	Liquidity	-0.022	0.014	-0.112	-1.597	0.112	-0.05	0.005
	Size	0.03	0.004	0.548	8.008	0	0.022	0.037

A. Dependent Variable: Financial Performance

Source: Research Findings

$$Y = -0.102 - 0.061 X_1 + 0.029 X_2 + 0.022 X_3 + 0.03 X_4 + \epsilon$$

The null hypothesis that independent variables do not affect the dependent variables was tested for statistical significance at 5% level of significance using the P-test. The P value tests the hypothesis that the coefficients of independent variables are different from zero. The hypothesis is rejected if the P-value is less than 0.05 otherwise it is accepted. A rejection of the null leads to an acceptance that the independent variable truly explains the movements in the dependent variables. The following null hypotheses were tested.

Ho; There is no relationship between financial performance and credit risk

Ho; There is no relationship between financial performance and capital adequacy

Ho; There is no relationship between financial performance and liquidity

Ho; There is no relationship between financial performance and size of the bank

Ho; The constant value is zero

The results indicate that the P values of constant, credit risk and the size of the bank is 0.00 which means that the variables are statistically significant. The P-value in SPSS indicates the probability that the coefficients of the independent variables are equal to zero. In our case that probability is zero and as such we reject the null hypothesis. On the other hand the P-value for liquidity and capital adequacy is 0.112 and 0.189 which is higher than 0.05. we therefore accept the null hypothesis that those coefficients are not different from zero and hence they have no relationship with the financial performance.

Table 4.6: ANOVA

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.065	4	0.016	27.803	0.000b
	Residual	0.107	183	0.001		

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Size , Liquidity , Credit Risk, Capital Adequacy

Source: Research Findings

The analysis of variance tests the null hypothesis that the means of all the means of different independent variables are all the same. Against the alternate hypothesis that there is a difference in the means'. The null hypothesis is rejected if the p value is less than 0.05. In this study the significance level is .000 and hence the null hypothesis is rejected and the alternate hypothesis is accepted. This means that the true means of the independent variables are different.

4.7.2 F-Test for the Model

The F statistics is utilized to test the statistical significance of the model as a whole. This test assesses the suitability of the selected variables in explaining the movements of the dependent variables. It assesses whether credit risk, capital adequacy, liquidity and bank size affect financial performance. For this case the following hypothesis was tested.

The null hypothesis is that the coefficients of the independent variables as a group equal zero the alternate hypothesis claims that the coefficients are different from zero this is mathematically represented below.

$H_0; \beta_1=\beta_2=\beta_3=\beta_4=0$ Versus $H_A \beta_j \neq 0$

Table 4.7: The F-Test of Goodness of Fit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
1	.615 ^a	0.378	0.364	0.02415	0.378	27.803	0.000

Source: Research Findings

The null hypothesis is rejected if the significance is less than 0.05 otherwise it is accepted in our case the model is statistically significant because the Sig F is 0.000 which is less than 0.05. therefore the results of this model can be relied upon to explain the movements in financial performance.

4.8 Discussion of Research Findings

The OLS regression model indicates that 61.5% of the changes in financial performance are actually explained by credit risk, capital adequacy, liquidity and the bank size. This means that 28.5 % of the changes in financial performance are determined by other factors like macroeconomic events and management skills. Credit risk and constant was found to have a statistically significant negative

relationship with financial performance. Capital adequacy was found to have a positive relationship with performance even though this relationship is not statistically significant. Liquidity was found to have a negative relationship with performance of the bank this relationship however was not significant. On the other hand the bank size was found to have a positive relationship with financial performance. An increase in the level of investments was found to have a positive influence on the performance of the banks.

The theoretical explanation for the positive relationship between size and return on investment is premised on the fact that an increase in the loanable funds directly leads to an increase in the earnings of a bank because of increased capacity. Banks can exercise their pricing power by lending at higher interest rates and hence increased earnings. The results indicate that a shilling investment leads to a return of 3 cents. Capital adequacy also has a positive coefficient of 0.029 which means that any capital invested in the core assets leads to an increase in the performance of the bank. Growth in net worth of the bank leads to an increase in the consumer confidence. The bank can then leverage on this confidence to amass cheap funds and issue more loans.

The constant is negatively related with the performance and it is statistically significant. This means that with the passage of time money loses value. The constant's coefficient of 0.102 is interpreted to mean that an idle shilling loses value by 10.2 cents every year. This is because inflation reduces the real value of money with the passage of time.

Credit risk has a statistically significant negative relationship with a coefficient of -0.061 this means that every shilling that is classified as nonperforming reduce the earnings of a bank by 6.1 cents. Liquidity is found to have a coefficient of -0.022 this coefficient is found to be statistically significant at 95% confidence level. This means that any idle shilling reduced earnings power by 2.2 cents. This is particularly true because if this idle cash could be invested in productive sectors it would have earned the banks positive returns.

The findings agree well with the findings of Ahmed and Malik (2015), who argued that credit risk has a higher impact on the financial institutions compared to other risks because it has a direct solvency threat to these institutions. Due to intensive loan disbursement, banks are exposed to high risks of default in loan repayment. Naceur (2003) stated that poor risk management has led to poor financial performance of commercial banks leading to closure of such institutions. Such financial institutions have developed sophisticated systems and policies of risk management and control in the recent years. Shafiq and Nasr (2010) observe that banking institutions should not expose themselves to unnecessary risk. Aduda and Gitonga (2011) studied the relationship between the process of managing credit risks and banks' lending profitability. They concluded that the processes of managing credit risk have substantial impacts on banks' profitability. On the other hand the results have differed with Taiwo and Ucheaga (2017) who established that the measures of controlling credit risks had insignificant impact on the growth of the total loans and advances of the Nigerian banks.

In case of bank size and financial performance, other studies which found a positive correlation include; Davis (2012) found out that there exists a direct relation between bank size and profits from it. Large banks have ability to do business in a very different market sector than the small banks, enabling a comparative advantage in market activities that may warrant incurring quite significant fixed costs but with an assurance that the bank will experience economies of scale. On the other hand, Black (2001) states that, when using scale and product mix there is a negative relation between returns and size of banks.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The study was commissioned to investigate the effects of credit risk control on the performance of commercial banks in Kenya. Data was collected from all the regulated 42 commercial banks in Kenya for a period of 5 years from 2012 to 2016. All the variables formed a cross sectional data set and were analyzed using the ordinary least square regression method using the SPSS software.

5.2 Summary of Findings

The correlation results showed that liquidity, capital adequacy and the constant have a negative association.

These results are consistent with the general economic reasoning. The negative relationship between liquidity and financial performance is attributable to the fact that money has an opportunity cost. Failure to invest money in productive investments result in the loss of the benefits that would have accrued to the lender had they invested that money on productive ventures. Similarly the negative relationship between the constant and the performance conforms to the theory of liquidity preference. The results indicate that if a shilling was left idle for one year performance would reduce by 10.2 cents.

Credit risk which was measured by the NPLs was also found to be contributing negatively to the profits of banks. Every shilling that is classified as nonperforming reduces the return on investment by 6.1 cents. However an increase in core assets was found to have a positive association with the performance. This could be attributable to improved confidence leading to more businesses. In general the fitness of the

model was also found to be statistically significant at 95% confidence level. The independent variables contributed to 61.5 % of the variations in the performance of banks.

5.3 Conclusions

Credit risk control was found to have a negative statistically significant relationship with the performance of commercial banks. Every shilling classified as NPL leads to a reduction in the performance of banks by 6.1 %. Management should therefore pay more attention to the assessment of credit risk since it impairs the profitability of companies. Management can also increase their monitoring on non performing portfolios and take remedial action in good time to protect their profits. These remedial actions include outsourcing of collection services to manage the existing bad book. They can also foreclose on the securities in an orderly manner given that defaults have already occurred.

5.4 Policy Recommendation

Given the outcome of the research, it is recommended that policy makers, credit risk professionals and regulators should focus on the quality of the bank asset. Non-performing loans were found to have a negative relationship which was significant at 95% confidence interval. This focus will become increasingly important for the periods beginning 2018 when IFRS 9 will become operative. Focus on liquidity management is equally advised because the research has proved that any idle shilling reduces earnings by 2.2 cents. Capital adequacy has proved to have a positive relationship with performance. It is therefore important for banks to be adequately capitalized because this seems to have a positive return. The markets associate this

will stability and as such banks can increase their market share and consequently profits.

5.5 Limitation of the Study

The research was limited to study the banking sector because of lack of complete and consistent data from other industry players such as SACCOs, MFIs and DFIs .This is because the financial statements of other industry players are usually private and difficult to get. The research also assumed the absence of errors in the financial statements as presented. However the near collapse of chase bank revealed that financial malpractices could be perpetrated in the full glare of regulators and auditors and as such published financial information are not necessarily accurate.

5.6 Suggestion for Further Studies

The study sought to find the effect of credit risk control on the financial performance of commercial banks in Kenya and recommend that a similar research should be done but with a specific focus on East Africa. This is because of the inter trade among the countries it would be important to know how the trade relationships affect the performance of commercial banks in East Africa. Moreover a research can be carried to investigate the effects of credit risk control on specific bank products such as business loans, trade finance facilities and consumer loans. This will lead to more accurate results because the study would have focused on specific bank assets. Nkusu (2011) recommend the study of bank specific assets, her study claimed that independent variables affect each class of bank assets differently. To this extent it is important to study the specific bank assets as opposed to the performance of entire group.

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APPENDICES

Appendix I: List of Commercial Banks in Kenya

- 1) African Banking Corporation Limited
- 2) Bank of Africa Kenya Limited
- 3) Bank of Baroda (K) Limited
- 4) Bank of India
- 5) Barclays Bank of Kenya Limited
- 6) CfCStanbic Bank Limited
- 7) Charterhouse Bank Limited
- 8) Chase Bank (K) Limited
- 9) Citibank N.A Kenya
- 10) Commercial Bank of Africa Limited
- 11) Consolidated Bank of Kenya Limited
- 12) Co-operative Bank of Kenya Limited
- 13) Credit Bank Limited
- 14) Development Bank of Kenya Limited
- 15) Diamond Trust Bank Kenya Limited
- 16) Ecobank Kenya Limited
- 17) Equatorial Commercial Bank Limited
- 18) Equity Bank Limited
- 19) Family Bank Limited
- 20) Fidelity Commercial Bank Limited
- 21) Guaranty Trust Bank (K) Ltd
- 22) First Community Bank Limited
- 23) Giro Commercial Bank Limited

- 24) Guardian Bank Limited**
- 25) Gulf African Bank Limited**
- 26) Habib Bank A.G Zurich**
- 27) Habib Bank Limited**
- 28) Imperial Bank Limited**
- 29) I & M Bank Limited**
- 30) Jamii Bora Bank Limited**
- 31) Kenya Commercial Bank Limited**
- 32) Sidian Bank Limited (Formerly K-Rep Bank)**
- 33) Middle East Bank (K) Limited**
- 34) National Bank of Kenya Limited**
- 35) NIC Bank Limited**
- 36) Oriental Commercial Bank Limited**
- 37) Paramount Universal Bank Limited**
- 38) Prime Bank Limited**
- 39) Standard Chartered Bank Kenya Limited**
- 40) Transnational Bank Limited**
- 41) UBA Kenya Bank Limited**
- 42) Victoria Commercial Bank Limited**

Appendix II: Data Collection Table

Commercial Bank	NPA	Total Loans	Total Capital	Liquid Assets	Total assets	STL	TRWA
1							
2							
3							
4							
5							
"							
"							
"							
42							

APPENDIX III: DATA COLLECTION SCHEDULE

	Bank Name	Year	Financial Performance	Liquidity	Capital Adequacy	Credit Risk	Size
1	African Banking Corporation Ltd	2012	0.029206649	0.425	0.13618677	0.023499397	4.2803735
2	Bank of Africa (K) Ltd	2012	0.012990727	0.256	0.1032626	0.010337759	4.6898237
3	Bank of Baroda Ltd	2012	0.024400048	0.558	0.225922809	0.026628506	4.395798
4	Bank of India	2012	0.070339597	0.659	0.395106973	0.015775729	5.2674111
5	Barclays Bank of Kenya Ltd	2012	0.036130738	0.468	0.226922461	0.041221422	4.6640588
6	CFC Stanbic Bank Ltd	2012	0.035328165	0.464	0.20491537	0.010977077	5.1250842
7	Citibank N.A.	2012	0.103894797	0.82	0.411026413	0.017954186	4.8424844
8	Commercial Bank of Africa Ltd	2012	0.039798519	0.476	0.155123946	0.2	5.0019759
9	Consolidated Bank of Kenya Ltd	2012	0.009777235	0.474	0.114043631	0.080702343	4.2552966
10	Cooperative Bank of Kenya Ltd	2012	0.047950797	0.358	0.202593896	0.04	5.3002976
11	Credit Bank Ltd	2012	0.012642422	0.489	0.303525805	0.124442378	3.8066547
12	Development Bank of Kenya Ltd	2012	0.00775136	0.459	0.209210125	0.163366717	4.1276554
13	Diamond Trust Bank Ltd	2012	0.049411715	0.323	0.176626924	0.01003794	4.975487
14	Equatorial Commercial Bank Ltd (ECB)	2012	-0.046495145	0.357	0.05734617	0.545073757	4.1494962
15	Equity Bank Ltd	2012	0.07441076	0.46	0.198607561	0.031781999	5.3341098
16	Family Bank Ltd	2012	0.027206713	0.39	0.21895146	0.136880962	4.4911515
17	Guaranty Trust Bank Ltd (FINA)	2012	0.020291545	0.44	0.14723637	0.000578481	4.2342641
18	First Community Bank Ltd	2012	0.029521036	0.401	0.157573863	0.137401476	3.9982157
19	Guardian Commercial Bank Ltd	2012	0.018986803	0.386	0.172956867	0.2	4.069853
20	Gulf African Bank (K) Ltd	2012	0.027577054	0.29	0.137770754	0.113168	4.1323237
21	I&M Bank Ltd	2012	0.05159528	0.355	0.169825908	0.009632256	4.961516
22	Jamii Bora Bank Ltd	2012	0.015229885	0.332	0.828125	0.07580326	3.5415792
23	Kenya Commercial Bank Ltd	2012	0.05180986	0.359	0.213038729	0.069687426	5.4830336
24	K-Rep Bank Ltd (Sidian)	2012	0.032055311	0.279	0.204791456	0.14201162	3.9798214
25	Middle East Bank (K) Ltd	2012	0.008006814	0.409	0.393651952	0.2	3.7686381
26	National Bank of Kenya Ltd	2012	0.01707989	0.3	0.272732426	0.106460138	4.8270784
27	NIC Bank Ltd	2012	0.042359392	0.32	0.156010675	0.044856388	5.0076283
28	Oriental Commercial Bank	2012	0.018327974	0.45	0.289159685	0.072306198	3.7937904
29	Paramount Universal Bank Ltd	2012	0.012405238	0.343	0.462761506	0.293579787	3.8606374
30	Prime Bank Ltd	2012	0.026712376	0.475	0.170265929	0.036687031	4.6381197
31	Standard Chartered Bank (K) ITD	2012	0.058922826	0.39	0.163005458	0.019352972	5.2911312
32	Trans-National Bank Ltd	2012	0.036586752	0.604	0.37939805	0.2	3.944532
33	UBA Bank (K) Ltd	2012	-0.135752394	1.128	0.724076281	0.025702587	3.4659774
34	Victoria Commercial Bank Ltd	2012	0.047563693	0.384	0.244490191	0.383999909	4.0138059
35	African Banking Corporation Ltd	2013	0.029431234	0.38	0.150695953	0.059796478	4.2931194
36	Bank of Africa (K) Ltd	2013	0.019512936	0.345	0.127199873	0.032454602	4.7216705
37	Bank of Baroda (K) Ltd	2013	0.048152705	0.606	0.21611484	0.025377463	4.716187
38	Bank of India	2013	0.040786433	0.752	0.415239656	0.010064696	4.4874353
39	Barclays Bank of Kenya Ltd	2013	0.05758659	0.42	0.173084549	0.041221422	5.3159913
40	CFC Stanbic Bank (K) Ltd	2013	0.041030657	0.679	0.21000326	0.010095198	5.2322997
41	Citibank N.A. Kenya	2013	0.06995775	0.63	0.353946188	0.017954199	4.8527422
42	Commercial Bank of Africa Ltd	2013	0.035745744	0.411	0.134801382	0.025	5.0964998
43	Consolidated Bank of Kenya Ltd	2013	-0.00846296	0.275	0.108139328	0.105903261	4.2247661
44	Co-operative Bank of Kenya Ltd	2013	0.04677246	0.326	0.210551201	0.04	5.3595965
45	Credit Bank Ltd	2013	0.009850869	0.367	0.266158084	0.079672511	3.863858
46	Development Bank of Kenya Ltd	2013	0.017585521	0.368	0.236175115	0.146751661	4.1925953
47	Diamond Trust Bank (K) Ltd	2013	0.048766384	0.326	0.210483164	0.007935432	5.0574226
48	Ecobank Kenya Ltd	2013	-0.033354106	0.318	0.305555556	0.118810692	4.5671087
49	Equatorial Commercial Bank Ltd	2013	0.009767382	0.346	0.122504537	0.616067782	4.1920654
50	Equity Bank Ltd	2013	0.076546848	0.34	0.23566556	0.053957971	5.3769308
51	Family Bank Ltd	2013	0.040412864	0.37	0.189417547	0.072063846	4.6384992
52	First Community Bank Ltd	2013	0.017691287	0.287	0.148013503	0.075243666	4.0532706
53	Guaranty Trust Bank Ltd (FINA)	2013	0.016108901	0.65	0.337651257	0.00032903	4.4088841
54	Gulf African Bank Ltd	2013	0.027033761	0.338	0.181437449	0.071699858	4.2055833
55	I&M Bank Ltd	2013	0.054933101	0.34	0.190174928	0.005341171	5.0426385
56	Jamii Bora Bank Ltd	2013	0.012838802	0.42	0.258392857	0.064308013	3.845718

57	K - Rep Bank Ltd (Sidian)	2013	0.042200167	0.311	0.214005084	0.101334595	4.120541
58	Kenya Commercial Bank Ltd	2013	0.054888158	0.333	0.224529929	0.103909494	5.5096218
59	Middle East Bank (K) Ltd	2013	0.014047867	0.23	0.362702366	0.2	3.7608746
60	National Bank of Kenya Ltd	2013	0.019233888	0.42	0.241501776	0.106460138	4.9661089
61	NIC Bank Ltd	2013	0.046237502	0.285	0.148162151	0.079017262	5.0527593
62	Oriental Commercial Bank Ltd	2013	0.025403168	0.444	0.30421286	0.064863141	3.8455321
63	Paramount Universal Bank Ltd	2013	0.012330303	0.426	0.418668497	0.289357892	3.9046615
64	Prime Bank Ltd	2013	0.038272578	0.424	0.183956305	0.026329286	4.6942629
65	Standard Chartered Bank (K) Ltd	2013	0.06038345	0.38	0.208021289	0.026591553	5.3434559
66	Trans - National Bank Ltd	2013	0.023296749	0.496	0.313801209	0.2	3.9848872
67	UBA Kenya Ltd	2013	-0.074932615	0.966	0.468999114	0.014333099	3.5693739
68	Victoria Commercial Bank Ltd	2013	0.042949282	0.308	0.198080134	0.307999974	4.1349417
69	African Banking Corporation Ltd	2014	0.014879425	0.306	0.172262518	0.065492489	4.3312045
70	Bank of Africa (K) Ltd	2014	0.00327911	0.283	0.159208976	0.061474156	4.7938742
71	Bank of Baroda (K) Ltd	2014	0.043506336	0.605	0.24180901	0.036721605	4.7920063
72	Bank of India	2014	0.037358161	0.742	0.394162967	0.005708313	4.5361795
73	Barclays Bank of Kenya Ltd	2014	0.054387882	0.422	0.186675801	0.035521513	5.3541911
74	CfC Stanbic Bank (K) Ltd	2014	0.043134692	0.414	0.220052618	0.037529093	5.2338765
75	Chase Bank Ltd	2014	0.030827545	0.4932	0.15270501	0.057238032	5.0298381
76	Citibank N.A. Kenya	2014	0.052205345	0.798	0.273028305	0.035899108	4.8998096
77	Co - operative Bank of Kenya Ltd	2014	0.044271266	0.338	0.216497538	0.040683307	5.4513089
78	Commercial Bank of Africa Ltd	2014	0.025721095	0.34	0.179113715	0.261099758	5.2450411
79	Consolidated Bank of Kenya Ltd	2014	-0.018173377	0.361	0.109901819	0.044009483	4.1783149
80	Credit Bank Ltd	2014	-0.010152284	0.322	0.188358933	0.099541362	3.9476787
81	Development Bank of Kenya Ltd	2014	0.018756636	0.338	0.296460177	0.141663095	4.2292722
82	Diamond Trust Bank (K) Ltd	2014	0.044674732	0.356	0.189493022	0.012586869	5.1497609
83	Dubai Bank Ltd	2014	0.001998858	0.4932	0.218120805	0.549904943	3.5443161
84	Ecobank Kenya Ltd	2014	-0.010863413	0.399	0.198076865	0.102048433	4.6621343
85	Equatorial Commercial Bank Ltd	2014	-0.027789499	0.278	0.107156127	0.26205106	4.2198202
86	Equity Bank Ltd.	2014	0.072576105	0.32	0.177090549	0.038704897	5.4426616
87	Family Bank Ltd.	2014	0.04235355	0.41	0.202642749	0.071747184	4.7910798
88	Fidelity Commercial Bank Ltd	2014	0.018044202	0.4932	0.16402737	0.077481609	4.2178786
89	First Community Bank Ltd	2014	0.006676267	0.296	0.11463788	0.151951952	4.1840665
90	Giro Commercial Bank Ltd	2014	0.031295584	0.4932	0.237777341	0.032108913	4.1784589
91	Guaranty Trust Bank Ltd (FINA)	2014	0.02082323	0.493	0.259306667	0.036728659	4.5184086
92	Guardian Bank Ltd	2014	0.025941939	0.344	0.165566038	0.076444876	4.1634894
93	Gulf African Bank Ltd	2014	0.031132935	0.287	0.135151385	0.073429059	4.295655
94	Habib Bank A.G. Zurich	2014	0.052934881	0.4932	0.371603711	0.024397328	4.084469
95	Habib Bank Ltd	2014	0.056302254	0.4932	0.327819041	0.072657744	3.9753858
96	I&M Bank Ltd	2014	0.056438867	0.305	0.188545275	0.020984391	5.1376674
97	Imperial Bank Ltd	2014	0.047509673	0.4932	0.153497304	0.063468125	4.7528088
98	Jamii Bora Bank Ltd	2014	0.007318189	0.494	0.260994374	0.093131188	4.1178676
99	K - Rep Bank Ltd (Sidian)	2014	0.046142161	0.368	0.20558244	0.051934934	4.1986296
100	Kenya Commercial Bank Ltd	2014	0.059320528	0.313	0.210135241	0.069199215	5.5763056
101	Middle East Bank (K) Ltd	2014	0.012801078	0.21	0.336995331	0.300080667	3.773567
102	National Bank of Kenya Ltd	2014	0.018980182	0.315	0.139320925	0.106281116	5.0894282
103	NIC Bank Ltd	2014	0.044358692	0.331	0.208630623	0.060918109	5.1369963
104	Oriental Commercial Bank Ltd	2014	0.010689743	0.426	0.256229016	0.108704214	3.895312
105	Paramount Universal Bank Ltd	2014	0.013170544	0.343	0.254626203	0.197253665	4.0171168
106	Prime Bank Ltd	2014	0.041844204	0.375	0.167630923	0.018996007	4.7397147
107	Standard Chartered Bank (K) Ltd	2014	0.064230403	0.46	0.198181371	0.083499006	5.3475954
108	Trans - National Bank Ltd	2014	0.018652344	0.404	0.217021759	0.080042366	4.0103
109	UBA Kenya Ltd	2014	-0.069596299	0.993	0.586206897	0.066242038	3.6772418
110	Victoria Commercial Bank Ltd	2014	0.036824403	0.326	0.191708403	0.002914655	4.236638
111	African Banking Corporation Ltd	2015	0.016093934	0.214	0.164554196	0.172287296	4.3435661
112	Bank of Africa (K) Ltd	2015	-0.020698614	0.415	0.163912994	0.237224589	4.8406079
113	Bank of Baroda (K) Ltd	2015	0.036463375	0.615	0.271445027	0.073272789	4.8336443
114	Bank of India	2015	0.034864692	0.565	0.422997217	0.020252601	4.6249315
115	Barclays Bank of Kenya Ltd	2015	0.050067799	0.341	0.183927432	0.035849133	5.3822927
116	CfC Stanbic Bank (K) Ltd	2015	0.035638389	0.74	0.187023983	0.046921331	5.2979311

117	Citibank N.A. Kenya	2015	0.063269311	0.761	0.283250538	0.06386591	4.9452075
118	Co - operative Bank of Kenya Ltd	2015	0.041446032	0.316	0.212559998	0.038498244	5.5309037
119	Commercial Bank of Africa Ltd	2015	0.031372806	0.393	0.179233877	0.043860219	5.2977255
120	Consolidated Bank of Kenya Ltd	2015	0.003466327	0.328	0.09388865	0.192811423	4.1503265
121	Credit Bank Ltd	2015	-0.017400603	0.165	0.156514949	0.069707634	4.0122887
122	Development Bank of Kenya Ltd	2015	0.010505814	0.431	0.272923992	0.205630086	4.2289903
123	Diamond Trust Bank (K) Ltd	2015	0.036947232	0.39	0.176896445	0.028503267	5.2809151
124	Ecobank Kenya Ltd	2015	0.001773895	0.4	0.249565327	0.079088732	4.719555
125	Equatorial Commercial Bank Ltd	2015	-0.045266068	0.275	0.174521418	0.325769231	4.1604685
126	Equity Bank Ltd.	2015	0.065590676	0.322	0.16248725	0.029782819	5.5331732
127	Family Bank Ltd.	2015	0.035509299	0.144	0.188625927	0.060629582	4.9095025
128	Fidelity Commercial Bank Ltd	2015	-0.01843594	0.492	0.165434021	0.159808708	4.1768145
129	First Community Bank Ltd	2015	0.000752754	0.224	0.152766247	0.240808186	4.1647394
130	Giro Commercial Bank Ltd	2015	0.03029728	0.492	0.240641711	0.019703909	4.1989319
131	Guaranty Trust Bank Ltd (FINA)	2015	0.018621911	0.569	0.277363651	0.044440979	4.4679631
132	Guardian Bank Ltd	2015	0.022520364	0.374	0.176261549	0.103667137	4.1646205
133	Gulf African Bank Ltd	2015	0.044225945	0.358	0.157646485	0.088124054	4.392943
134	Habib Bank A.G. Zurich	2015	0.03531856	0.44825	0.268664509	0.021767686	4.1595672
135	Habib Bank Ltd	2015	0.04740958	0.437	0.371710526	0.101615547	4.0098756
136	I&M Bank Ltd	2015	0.056592671	0.34	0.192098655	0.048628022	5.1698096
137	Jamii Bora Bank Ltd	2015	0.002145156	0.231	0.162532683	0.072257825	4.2248437
138	Kenya Commercial Bank Ltd	2015	0.050123893	0.483	0.153644117	0.059481996	5.6700054
139	Middle East Bank (K) Ltd	2015	0.007573089	0.326	0.331399947	0.272636568	3.7541954
140	National Bank of Kenya Ltd	2015	-0.013440281	0.307	0.139917094	0.161472777	5.0979337
141	NIC Bank Ltd	2015	0.039933147	0.292	0.204760684	0.118568373	5.1952408
142	Oriental Commercial Bank Ltd	2015	0.004943503	0.431	0.34154245	0.148871372	3.9292145
143	Paramount Universal Bank Ltd	2015	0.016055482	0.42	0.241297842	0.125674634	4.0222634
144	Prime Bank Ltd	2015	0.039891694	0.374	0.17283414	0.023764327	4.81292
145	Sidian Bank Ltd	2015	0.027215157	0.322	0.246740548	0.120747916	4.2811925
146	Standard Chartered Bank (K) Ltd	2015	0.03832897	0.537	0.211581738	0.1195883	5.3694589
147	Trans - national Bank Ltd	2015	0.023924808	0.339	0.214609944	0.099877367	4.0225521
148	UBA Kenya Ltd	2015	-0.039069528	0.521	0.237882653	0.02078853	3.8910354
149	Victoria Commercial Bank Ltd	2015	0.033816184	0.271	0.193012664	0.001142944	4.3014641
150	African Banking Corporation Limited	2016	0.00990099	0.271	0.160226659	0.189056051	4.3506743
151	Bank of Africa Kenya Limited	2016	-0.000285735	0.422	0.161636471	0.287993597	4.748157
152	Bank of Baroda (K) Limited	2016	0.046751179	0.674	0.305348842	0.089054583	4.9185912
153	Bank of India	2016	0.045696957	0.61	0.457354066	0.014053942	4.6795642
154	Barclays Bank of Kenya Limited	2016	0.040231524	0.283	0.178630082	0.065052821	5.414134
155	Citibank N.A Kenya	2016	0.058389145	0.948	0.263652346	0.028503647	5.0142012
156	Commercial Bank of Africa Limited	2016	0.036006601	0.451	0.184496568	0.046699393	5.3240313
157	Consolidated Bank of Kenya Limited	2016	-0.019902285	0.258	0.079011761	0.070897014	4.1435768
158	Co-operative Bank of Kenya Limited	2016	0.051497437	0.332	0.227680178	0.197538044	5.5440656
159	Credit Bank Limited	2016	0.012948697	0.327	0.228497361	0.080851573	4.086431
160	Development Bank of Kenya Limited	2016	0.005786332	0.017	0.250900957	0.257264703	4.2153203
161	Diamond Trust Bank Kenya Limited	2016	0.036358572	0.502	0.185042271	0.03895499	5.3876105
162	Ecobank Kenya Limited	2016	-0.061306341	0.335	0.194432373	0.195633921	4.6732421
163	Equity Bank (Kenya) Limited	2016	0.059981725	0.476	0.15472299	0.069928836	5.5794966
164	Family Bank Limited	2016	0.009116834	0.308	0.207812006	0.131158269	4.8415597
165	First Community Bank Limited	2016	-0.002740275	0.242	0.139933196	0.323075633	4.1749897
166	Giro Commercial Bank Limited	2016	0.036975514	0.3173	0.25805099	0.02110477	4.2109603
167	Guaranty Trust Bank (K) Limited (FINA)	2016	0.022249232	0.535	0.270886936	0.074079595	4.4715704
168	Guardian Bank Limited	2016	0.020537232	0.407	0.196226081	0.081945023	4.167465
169	Gulf African Bank Limited	2016	0.027765503	0.41	0.187203791	0.096907587	4.4338658
170	Habib Bank A.G Zurich	2016	0.036517349	0.4173	0.323019937	0.029472113	4.2312911
171	Habib Bank Limited	2016	0.039414775	0.3308	0.453436807	0.188061765	4.0971879
172	HFC Limited	2016	0.021223471	0.3308	0.176880043	0.109058571	4.8330514
173	I & M Bank Limited	2016	0.052712715	0.373	0.181478836	0.048628022	5.2151509
174	Jamii Bora Bank Limited	2016	-0.031162554	0.202	0.200820853	0.203963037	4.196563
175	KCB Bank Kenya Limited	2016	0.056424805	0.375	0.198893322	0.075953473	5.7031004

176	Middle East Bank (K) Limited	2016	-0.019296905	0.311	0.316351027	0.120410747	3.7188337
177	M-Oriental Bank Limited	2016	0.003629032	0.393	0.386846122	0.297135741	3.9965117
178	National Bank of Kenya Limited	2016	0.001407301	0.297	0.118890461	0.43702635	5.0611281
179	NIC Bank Limited	2016	0.036614828	0.387	0.2162747	0.11243545	5.2091047
180	Paramount Bank Limited	2016	0.01113822	0.43	0.273958856	0.124619574	3.9743735
181	Prime Bank Limited	2016	0.035752548	0.395	0.221611495	0.04617874	4.8151658
182	Sidian Bank Limited	2016	0.00297006	0.255	0.232460414	0.16972667	4.3196265
183	Spire Bank Limited (ECB)	2016	-0.070134763	0.227	0.162716813	0.158913331	4.139942
184	Stanbic Bank (Kenya) Limited	2016	0.033724591	0.546	0.182897453	0.059189926	5.3115314
185	Standard Chartered Bank Kenya Limited	2016	0.051000104	0.569	0.209138639	0.113496909	5.3984157
186	Transnational Bank Limited	2016	0.015289059	0.366	0.207840385	0.126814688	4.0197392
187	UBA Kenya Bank Limited	2016	0.008926977	0.344	0.386753294	0.022065878	3.7482656
188	Victoria Commercial Bank Limited	2016	0.035530956	0.314	0.254502781	0.000784673	4.3503062