EFFECT OF CREDIT RISK MANAGEMENT PRACTICES ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY

KAUNA KAIMURI EVELYN

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE, UNIVERSITY OF NAIROBI

NOVEMBER 2016

DECLARATION

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

Signature _____ Date _____

Kauna Kaimuri Evelyn

D63/72604/2014

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

Signature_____

Date _____

Dr. Mirie Mwangi

Senior Lecturer, Department of Finance and Accounting

School of Business

University of Nairobi

ACKNOWLEDGEMENTS

I take this opportunity to give thanks to the Almighty God for seeing me through the completion of this project. The work of carrying out this study needed adequate preparation and therefore called for collective responsibility of many personalities. The production of this research document has been made possible by invaluable support of many people. While it is not possible to name all of them, recognition has been given to a few. I am greatly indebted to my supervisor for his professional guidance, advice and unlimited patience in reading through my drafts and suggesting workable alternatives, my profound appreciation to you.

The dedicated staff in the Banking Industry, cannot pass without my special acknowledgement for taking time off their busy schedule to provide me with all the information I needed in the course of the research. Without their immense cooperation I would not have reached this far. I would also wish to extend my sincere gratitude to all the MSC students, staff, lecturers and the entire University of Nairobi fraternity for changing me from what I was to what I am. Thank you all. May the Almighty God bless you abundantly

DEDICATION

I dedicate this work to my husband Dennis Muthoka and all those who supported me in the completion of this project.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

APT	-	Arbitrage Pricing Theory
CAPM	-	Capital Asset Pricing Model
ERM	-	Enterprise Risk Management
EVA	-	Economic Value Added
IMF	-	International Monetary Fund
MPT	-	Modern Portfolio Theory
NSE	-	Nairobi Securities Exchange
ROA	-	Return on Assets
ROE	-	Return on Equity
SACCO's	-	Savings and Credit Cooperative Societies
SPSS	-	Statistical Package for Social Studies
VAIC	-	Value Added Intellectual Coefficient

ABSTRACT

Lending by commercial banks is vital to an economy since it can finance many if not all sub- sectors of financial arena, these sectors may include commercial, agriculture, industrial activities and so on. However, the harmonious stream of collapse, discredits and failures in the banking and financial services industry has served as a catalyst for concern about credit risk. The study therefore seeks to assess effect of management of credit risk practices on performance of the Kenyan banks especial commercial ones. The study used a descriptive research design. The census of 43 Kenyan banks was undertaken however; only data from 39 commercial banks was obtained. Both primary and secondary data were used in the study. Primary data on credit risk management practices was collected using a questionnaire while secondary data on the banks performance in financial perspective was obtained from various bank's published financial statements for 5 years from 2011-2015. Collected data was summarized by descriptive statistics like the standard deviation and the mean and then analyzed using regression analysis and correlation. The study found a significant positive relationship between credit risk identification and credit risk monitoring and the financial performance of commercial banks. The study found a positive insignificant relationship between credit risk appraisal and financial performance of commercial banks. The study also found a negative insignificant relationship between credit risk control financial performance of commercial banks in Kenya. The study concluded that that credit risk identification and credit risk monitoring significantly and positively affects financial performance of commercial banks in Kenya. The study also concluded that there is direct relation between credit risk appraisal and an inverse relationship between credit risk control financial performance of commercial banks in Kenya. The study recommended that the management of the Kenyan banks to put more emphasis on credit risk identification since proper identification of risk would help to develop the basis for the other stages of management of credit risk.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

One of the vital risks, which many commercial banks face, is credit risk, especially now that granting loans to bank borrowers is commercial bank's main sources of income (Li & Zou, 2014). In banking industry, credit risk is caused by moral hazards and an adverse selection due to asymmetry in information. Profitability of Banks is greatly affected by the bank's credit risk since a huge amount of banks revenue is from the loans given out on which interest is derived. Nonetheless, the performance of the banks is highly threatened by credit risk. As such, credit risk need to be properly managed (Bhattarai, 2016). As per the past studies, management of credit risk as a predictor of bank`s performance as far as its financial is concerned. For instance, non-performing loans (NPLs) which is an indicator of credit risk has the potential of destabilize the commercial bank's general credit system and reduce the bank's value (Afriyie & Akotey, 2012).

Credit risk management is an approach that is well structured to manage any uncertainty through risk evaluation, strategies development with an aim of managing and mitigating risk using the available resources to managers (Afriyie & Akotey, 2012). Management of credit risk is vital to commercial banks since it is a crucial part of a loan process. According to Kagoyire & Shukla (2016), a well developed credit management system is an important requirement for stability of any financial organization and for continued profitability. A deteriorating credit management system is one of the main causes of poor or low firm's financial performance. A well developed credit risk management system is vital for

commercial banks to improve their profitability hence a guaranteed long time survival (Bhattarai, 2016).

Efficient management of credit risk is vital for the long- term survival and success of a banking institution (Kwaku, 2015). Effective management of credit risk usually involves an establishment of an ample credit risk environment. That is working under a good loan issue process, having a credit management system that can monitor all the firm's processes and which can effectively a control credit risk (Kimoi, Ayuma & Kirui, 2016). Effective credit risk management is vital to survival as well as the growth of any financial organization/institution (Afriyie & Akotey, 2012).

1.1.1 Credit Risk Management Practices

Credit risk management is defined as the systems, controls and procedures, which are set by companies to ensure efficient payment collection from clients thereby minimizing potential of non- payment (Kalui & Kiawa, 2015). Credit risk Management policies include decision-making structures that are meant to reduce exposures on the credit asset classification and provisioning of loan losses (Tanui, Wanyoike & Ngahu, 2015). Credit risk management is a great issue that many financial organizations are concerned about. As such, the need to develop well improved systems and processes that can deliver better future performance visibility is highly required by thes financial organizations (Gakure, Ngugi, Ndwiga & Waithaka, 2012). Credit risk management involves identifying, measuring, mitigating, monitoring and controlling of all exposures of credit risk (Raad, 2015).

The first stage of credit risk management process is risk identification (Ngwa, 2010). The process of identifying hazardous or dangerous situations and trying to characterize it is the process of risk identification. It is a procedure to deliberately examine, review and anticipate possible risks (Kimotho & Gekara, 2016). Identification of risk identification is all about analysis of the present and the future risks of a firm in a more comprehensive manner in all areas of a business such as asset management operations and so on (Ngwa, 2010). To effectively manage credit risks, commercial bank's manager's need to know the kind of risks that are likely to face the bank. Most importantly, the managers should ensure that they do not miss any risk during risk identification stage and this can be done through establishing an appropriate credit risk environment (Mutua, 2015).

Credit risk analysis involves examining the creditworthiness of a member-borrower. This comprises an analysis or examination of sources of repayment as well as credit history of the member-borrower (Lagat, Mugo & Otuya, 2013). Credit appraisal and analysis is about client screening so as to ensure that not only have ability but also the willingness to repay a loan on time (Kurui & Kalio, 2014). Credit risk analysis provides a greater understanding of risk and is important to the organization as it helps in making risk-based and assists organizations to make a comparison of risks, which in the long run help organizations to make prioritize on risk events (Kimoi, Ayuma & Kirui, 2016). The aim of credit risk analysis is to identify and weigh all the events that may prevent the repayment of a credit in the future and by implication the capacity of the borrower to repay the facility (Ngwa, 2010).

Risk control or mitigation entails established systems and procedures that are used to reduce and inhibit the existence of credit risk associated with loan exposures. Risk control

gives protection to an exposure, which the bank continues to hold (Lagat, Mugo & Otuya, 2013). Risk control or mitigation is about using the physical standards, tools, training staff, techniques to either prevent or reduce or eliminate the perceived consequences or threat of risks (Ngwa, 2010).

The last stage of a risk management process is monitoring. Credit risk monitoring involves defining the guidelines for recognizing and reporting probable shortcomings of credits and other transactions to ensure that they are closely monitored, corrected and provisioned (Makori, 2015). Monitoring involves creation of a constant contact with clients. This is meant to color the bank as a trusted adviser and problem solver (Mutua, 2015).

1.1.2 Financial Performance

Financial performance is firm's ability to generate new resources, from its daily procedures, for a certain time period. Financial performance may also refer to the firm's ability to make good use their resources in an effective and efficient manner for achievement of the firm's objectives and goals (Warsame, 2016). According to Kagoyire and Shukla, (2016) financial performance is the firm's ability to efficiently operate, be more profitable, to grow and survive for a long period of time. All organizations strive to utilize it resources effectively to achieve a high performance level especially in financial terms. Thus, financial performance is the outcome of any of many different activities undertaken by an organization (Fujo & Ali, 2016).

Financial performance is measured by use of many ratios and models like the return on investment, profit margin, efficiency ratios, liquidity ratios etc. (Fujo & Ali, 2016). A firm's overall and comprehensive performance is measured by the use of ROA from an

accounting perspective. ROA basically the ratio of Income of the firm to the firm's total asset (Kimotho & Gekara, 2016),

1.1.3 Credit Risk Management Practices and Financial Performance

Credit risk is vital and more expensive risk of a financial institution. This risk has a significant impact compared to other risks faced by the banking sector since it is the firm's a direct solvency threat (Sufi & Qaisar, 2015). Loans issued to lenders are subject to a default risk but the lenders still lend on understanding that the borrowers will gladly honor their repayment obligations without any default and not to become non- performing loans (Bhattarai, 2016). Non-performing loans can hugely reduce the bank's profits. This may mean that banks do not have in place a good measure to that can effectively deal with management of credit risk (Afriyie & Akotey, 2012).

A study by Bizuayehu (2016), assessed effect of the management of credit risk on profitability of Ethiopian banks. This study established that, credit risk which is measured by NPL ratio, which indicated a significant inverse impact on financial performance of Ethiopians commercial banks. Sufi and Qaisar (2015) carried out a study on importance of management practices of credit risk on the performance of loan when the credit terms are taken and policy, appraisal of clients and control of credit risk in Pakistan. The study established that credit terms and appraisal of clients has a positive and a significant impact on performance of loan, whereas credit policy and control of credit risk has insignificant but positive effect on loan performance.

Mutua (2015) examined impact of credit risk mitigation to commercial bank's performance and established a significant relation between the banks performance and the management

of credit risk in terms of risk identification, monitoring and credit sanctions and conclude that better management of credit risk results in a more better commercial bank performance. Aduda and Gitonga (2011) explored a relation between the management of credit risk and the banks' lending profitability and concluded that management of credit risk has a great impact on commercial banks profitability. The effects of management of credit risk practices on profitability of SACCOs that are allowed to take deposits was investigated by (Makori, 2015). The study established that credit appraisal procedures, credit monitoring, debt collection procedures, credit risk governance systems had a notable and positive effect on the financial profitability of SACCOs.

1.1.4 Commercial Banks in Kenya

According, CBK's directory there is forty-three commercial banks in the country some of which are internationally based. The headquarters of these banks are in Nairobi and they serve both retail and corporate customers. The banks in the country perform the following function: creation of money, community savings, ensure smooth support of payment mechanisms, ensure smooth flow of international transactions, storage of valuable goods and provision of credit services. The Central Banks of Kenya falls under Treasury docket, is accountable for the formulation and execution of monetary policy and foster of liquidity and proper operations of Kenyan commercial banks. This policy formulation and implementation also include commercial banks financial risk management and financial performance (Central bank of Kenya, 2015).

The Kenyan banking sector has undergone many regulatory and financial reforms in the past. Such reforms have brought in so important changes to the banking sector as well as

inspiring foreign banks to enter the Kenyan market (Irungu, 2013). The banking sector is governed by the Banking Act and so on including Prudential Guidelines.

Commercial banks in Kenya are required by CBK to submit audited annual reports, which include their financial performance and in addition disclose various financial risks in the reports including liquidity risk, credit risk and so on, as well as management of credit risk. Effective management of credit risk practices involve reporting, reviewing to ensure credit risks well identified, assessed, controlled and informed responses are well in place by commercial banks. When the loan is issued after being approved by the bank's officials, the loan is usually monitored on a continuous basis so as to keep track on all the compliance issues/terms of credit by the borrower (CBK, 2015).

1.2 Research Problem

Commercial banks' Lending is vital to an economy since it can finance many if not all sub-sectors of financial arena, these sectors may include commercial, agriculture, industrial activities and so on (Sumon & Shilpi, 2007). However, the harmonious stream of collapse, discredits and failures in the banking and financial services industry has served as a catalyst for concern about risk (Kimotho & Gekara, 2016). Like many financial organizations, commercial banks experience default risks, adverse selection and so on (Kibor, Ngahu & Kwasira, 2015). Loans are the main credit risk source many commercial banks and credit risk is one of expensive risks for financial organizations since it has a potential of a direct solvency threat to any financial institution (Warsame, 2016).

Financial industry in Kenya is one of the fast growing industries around the globe. In the last five years, profitability and general performance of the Kenyan banking sector has

tremendously improved. Notwithstanding, the critical analysis which shows that all commercial banks are not are profitable (Irungu, 2013) with some of the commercial banks like chase and imperial bank being put under CBK statutory management. The banking sector has also witnessed the growth of nonperforming loan with most commercial banks recording a gross increase in the ratio of nonperforming loans. The high non-performing loans level is one of the main hurdles to Kenyan commercial banks. This is enough evidence that shows credit risk as the main risk that affect the profitability and the banks performance (Kibor, Ngahu & Kwasira, 2015).

A study by Sabeza, Shukla and Bajpai (2015) assessed the relations between management of credit risk and banks' profitability and established the existence of a direct correlation between management of credit risk and the bank's profitability in Rwanda. A study by Sujeewa (2015), assessed impact of management of credit risk on banks' performance and established that the NPLs and the provisions for the same has an adverse effect on commercial banks profitability in Sri Lanka but the studies dealt with management of credit risk and not management of credit risk practices.

The study on the effect of management of credit risk on the financial performance of Kenyan Microfinance organizations that take deposits by Korir (2012) in Baringo County and revealed a positive relation between credit risk management and performance in financial perspective of the microfinance organizations that take deposits but the study was on microfinance's. In another study by Kurui & Kalio (2014) investigated impact of management of credit risk on the loan performance of MFIs. The study established that management of credit risk practices has influence on loan performance of MFIs but the study was on loan performance and not financial performance. Most studies have dealt with

management of credit risk measured in terms of non-performing loans (NPLs) and not on management of credit risk practices of the banks. Thus, the question; what are the effects of management of credit risk practices on performance in financial perspective of the Kenyan banks?

1.3 Research Objective

To study effect of management of credit risk practices on the financial performance of the commercial banks in Kenya.

1.4 Value of the Study

The study will benefit credit risk officers, risk and compliance personnel, and management of various banks. This will offer a guiding platform in credit risk management practices and developing risk management policies while still conforming to CBK regulations to enhance profitability. The study will also be useful in enhancing shareholder's confidence in the firm's strategies on credit risk management.

The findings of the study will be of a high significance to various policy makers, including the government of Kenya, CBK and monetary policy committees who are involved in generating policies used by Commercial Banks in Kenya. It will assist policy makers in determination of whether they need to amend the existing policies or develop new policies to strengthen commercial banks performance for better policy requirements and prudential guidelines.

Academicians will benefit from the research findings, which they will add to the existing literature available on management of credit risk practices and the kenyan banks' financial performance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter 2 presents theoretical review, determinants of commercial banks financial performance and finally a summary of reviewed literature.

2.2 Theoretical Review

This part will focus on credit management theory, the theory of information asymmetry and the adverse selection theory as the underlying theories for the study.

2.2.1 Credit Management Theory

Woolcock (2000) proposed the Credit management theory which states that the markets for credit or loans are highly shaped by the banks (who are lenders) strategies for potential borrowers screening and by addressing the opportunistic behavior which is encouraged by the nature of loan contracts. Accordingly, lenders usually increase credit pricing to a level that they expect returns to be maximized. This often excludes small, risky and costly borrowers.

The consumption of credit tends to be inversely related to both the interest rates and the required collateral. Commercial banks tend to apply the credit management theory taking advantage of the opportunistic behavior presented by potential borrowers. Consumption of credit is collated to the collateral requirements and a variable interest rate pricing policy might be utilized by individual banks (Tanui, Wanyoike & Ngahu, 2015).

2.2.2 Theory of Information Asymmetry

Information asymmetry theory was proposed by Akerlof in 1970. Akerlof's (1970) argued that in markets, buyer usually use market statistic to determine the goods value. Therefore, the clients only see an average of an entire market whereas the seller uses a more intimate knowledge of a particular item. The argument put across by Akerlof is that information asymmetry gives the seller a great opportunity to sell his/her products or services of less than the average market quality (Parrenas, 2005). The average quality of a product or a service in a market will then decrease and so will the size of the market. There is available information for each agent. However, there is a strong information asymmetry between the managers and the investors of the firm (Akkizidis & Khandelwal, 2008).

This theory explains a condition where all parties in an undertaking are not aware of the available relevant information (Eppy, 2005). Stiglitz (2001) indicates competitive behavior in such markets involves intertemporal linkages. The theory points out two problems associated with the perceived information asymmetry for to financial institution. That is the adverse selection and moral hazard. The theory affirms that, if commercial banks can exchange their client's information especially on clients' creditworthiness, which can lower loan repayment rate (Weinberg, 2006). A reduction in information asymmetry between clients and lenders, credit reference bureaus will be able to develop credit risk management practices such credit rating and thus banks extend loans to creditworthy borrowers resulting in higher aggregate lending and low default rates.

2.2.3 The Adverse Selection Theory

The adverse selection theory emanated from Stiglitz and Weiss (1981). Karlan and Zinman, (2004) notes that the adverse selection occurs when client's or borrowers of the bank have features or characteristics which are not observable by the bank when lending and these unobservable features have the potential of leading loan repayment default hence affecting the bank's profitability negatively. The theory assumes that: lenders will be unable to distinguish between banks loan clients of different risk degrees and that all the contracts of the bank loans offered to borrowers are all subject to a limited liability (Berhanu, 2005).

The adverse selection theory describes the situation of a bank that cannot distinguish the safe borrowers from risky. In this theory, the bank which is the lender in this case has inadequate information about the loan customers. Riskier loan clients ought to be charged a higher rate of interest so as to act as a compensation for an increased default risk than the safer loan clients whose changes of defaulting are very low. Accordingly, safer loan clients ought to be charged a little bit less provided they can be identified accurately from the rest of loan clients or borrowers. Since banks as the lender does not have complete borrowers risk profile information, as such, high average interest rates are normally passed on to all loan clients without considering differences in their risk profile (Armendariz & Morduch, 2010). To mitigate adverse selection problems, credit providers take their loan applicants through an elaborate screening procedure before granting a loan however, this has been able to reduce loan default in commercial banks.

2.3 Determinants of the Financial Performance of Commercial Banks

This section will assess credit risk, capital adequacy and liquidity as the main determinants that influence the Kenyan banks' financial performance.

2.3.1 Credit Risk

Credit risk is possibility that a commercial bank loan client may fail in meeting his/her obligations as stipulated in the loan contract. Credit risk occurs whenever a lender (which in this case is the bank) is more exposed if the borrower or the counterparty fails to diligently honour his/ her loan repayment obligation (Warsame, 2016). Credit risk leads to a financial failure if the borrower fails to honor his/her commitments under the contract and the failure has adverse impact on bank's financial performance (Bhattarai, 2016).

Credit or default risk, is a major source of bank loss, especially when customer's failure, to honour their obligations of servicing the loan or debt (Kwaku, 2015). The credit risk position of a banking organization can be aggravated by insufficient institutional competence, ineffective credit strategies, inefficient management, low capital adequacy ratios and liquidity and also poor credit supervision by the central bank (Afriyie and Akotey, 2012).

2.3.2 Capital Adequacy

Capital adequacy refers to a measurement of commercial bank`s ability or strength in financial terms. It shows the bank's willingness and ability to tolerate with abnormal and operational losses. It indicates the firm's ability to undertake an additional business. It also measures the commercial banks ability to effectively absorb risk and solvency. Therefore,

the ratio is utilized in protecting the bank's fund depositors as well as promoting efficiency and stability of financial systems (Bizuayehu. 2015).

Capital adequacy also refers to financial capability of a commercial bank to meet its financial obligations (Ngwa, 2010). Capital adequacy involves different kinds of financial capital that are well-thought-out as liquid and reliable. Commercial banks with a better ratio of capital adequacy are more profitability (Afriyie & Akotey, 2012).

2.3.3 Liquidity

Liquidity refers to available funds that can be easily used for an investment and or expenditure. It is also an indicator of the ability of the firm meet its obligations when they fall due (Alkhatib, 2012). Liquidity is a firm's ability to fulfill both expected and unexpected demands of cash on an ongoing basis. In order for a firm to sustain its activities and remain in existence for a long time, it must be liquid and able to meet its obligations at any time (Kumar and Agarwal, 2012).

Liquidity is forms of working capital management, which is crucial to any successful business. With poor management of working capital, the firm's funds are likely to be tied up in idle assets. This may reduce the firm's liquidity and the firm will not be able to invest in more profitable projects that may arise (Bashar & Islam, 2014). Liquid assets constitute a significant portion of a firm's total asset. Financial managers pay due attention to the measurement and management of corporate liquidity failure to which may lead to severe shortage of liquidity leading to inability to meet its short and medium term obligations as and when they become due hence financial distress (Harvey & Roper, 2004).

2.4 Empirical Review

Bhattarai (2016) examined effect of credit risk on Naples commercial banks' performance. A causal-comparative and descriptive research designs was used. The data was obtained from 14 banks for period between the years 2010 - 2015. The study established that NPL loan ratio had adverse effect on performance of banks while the cost of a loan asset had a positive effect on the overall performance of the banks. It was found that indicators of credit risk, size of the bank had a positive impact on the banks' performance. The study established that the ratio of capital adequacy and cash reserve had no influence on bank performance hence a conclusion of a significant relation between performance of the bank and credit risk indicators. However, this study focused on effect of the credit risk on banks performance and not management of credit risk practices and the financial performance.

Alshatti (2015) assessed effect of credit risk management on Jordan commercial banks performance in financial perspective. The study sampled thirteen banks for the years 2005 – 2013 and established that management of credit risk impacts the banks' financial performance. From this study, it was resolved that management of credit risk indicators has a significant effect on banks' financial performance. The study recommended that banks should develop or adopt a credit risk management system to help them to improve or enhance their profits. The study focused on credit risk indicators including non-performing loans, leverage and loss provision on facilities and not on the risk management practices like credit risk identification, appraisal, control and monitoring.

Kalui and Kiawa (2015) studied credit risk management procedures and processes adopted on performance of Kenyan microfinance organizations. A descriptive design was

employed in the study. Population of the survey comprised of credit managers and officers of the 54 Microfinance Institutions in Nairobi County. It was found that the sampled organizations considered risk identification, risks monitoring, risk assessment, risk analysis as a process in credit risk management. The study also established that these procedures were important as they ensured that the function of risk management was established in all institution. However, the study solely focused on microfinance institutions in Kenya and not commercial banks.

Kibor, Ngahu and Kwasira (2015) assessed effect of the management of credit risk practices on loan performance of all Nakuru Town banks using a descriptive and correlation research design. The study carried out a census of the 37 commercial banks' branches in Nakuru town and collected data using a questionnaire. The study established an existence of a moderate positive and useful relation between the 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) examined the effect 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 association between the credit scoring and the performance in financial perspective of the SACCOs and found that credit administration in deposit-taking SACCOs had a strong relationship with performance in financial perspective. The study recommended that SACCO's should improve on their

credit scoring and credit administration as credit management practices to improve on their financial performance but the study focused on SACCOs and not commercial banks in Kenya.

Li and Zou (2014) examined the relation between management of credit risk and European banks' profitability. The data of 47 European banks for a 5 years period from 2007 -2012 was used and established that management of credit risk had a positive effect on profitability of European banks. It was found that management of credit risk, measured using NPLR had a significant impact on both ROA and ROE whereas CAR had insignificant impact on ROE and ROA. The study further found that from the year 2007 to the year 2012, the relation between all the proxies were fluctuating but the study focus was on credit risk indicators evaluate using NPLR and not credit risk management indicators like risk identification, appraisal, control and monitoring.

Idowu and Awoyemi (2014) investigated effect of management of credit risk on performance of Nigerian banks. The study obtained financial reports data of the seven banking firms form the year 2005 to 2011. The study applied the panel regression model to analyze collected data. The ROE and ROA were examined in measuring performance in financial perspective whereas the NPLs and ratio of capital adequacy were used as indicators of the management of credit risk. The findings of the study established that the management of credit risk had a significant impact on banks profitability but the study did not examine the relation between the credit risk management indicators like risk identification, appraisal, control and monitoring.

A study by Kimari (2013) examined impact of management of credit risk on performance in financial perspective of Kenyan Savings and Credit Co-operative Societies that take deposits. The study population comprised of the heads of credit risk management function of the 215 total number of all deposit-taking SACCOs that are under supervision by SASRA. Using Pearson correlation analysis and a multiple regression model, the study concluded that management of credit risk affects the SACCOs financial performance. Management should carefully consider the Capital Adequacy, Earnings, Liquidity and so on as they all positively correlate with the Return on Equity of the SACCOs. However, the context of the study was SACCOs and not commercial banks whose operations and scope are different.

Using correlation and regression analysis, Poudel (2012) explored parameters that are related to the management of credit risk as it affects the banks performance in financial perspective. The parameters included cost per loan assets, default rate and the ratio of capital adequacy. The study used secondary data from 31 for eleven years (2001-2011). The study revealed that cost per loan assets, rate of default and ratio of capital adequacy had inverse relationship on the banks' performance in financial perspective; however, the rate of default is the main bank' performance in financial perspective predictor. It was recommended that banks to formulate or design strategies that will enhance the bank's profitability as well as minimizing the credit risk exposure. However, credit risk management indicators were not among the parameters that were assessed. Credit risk management indicators like risk identification, appraisal, control and monitoring are vital to commercial banks.

2.5 Conceptual Framework

The study sought to examine effect of management of credit risk practices on banks performance in financial perspective. Independent variables will be risk identification, risk appraisal, risk control and risk monitoring while the dependent variable will be financial performance.

Figure 2.1 shows the conceptual framework

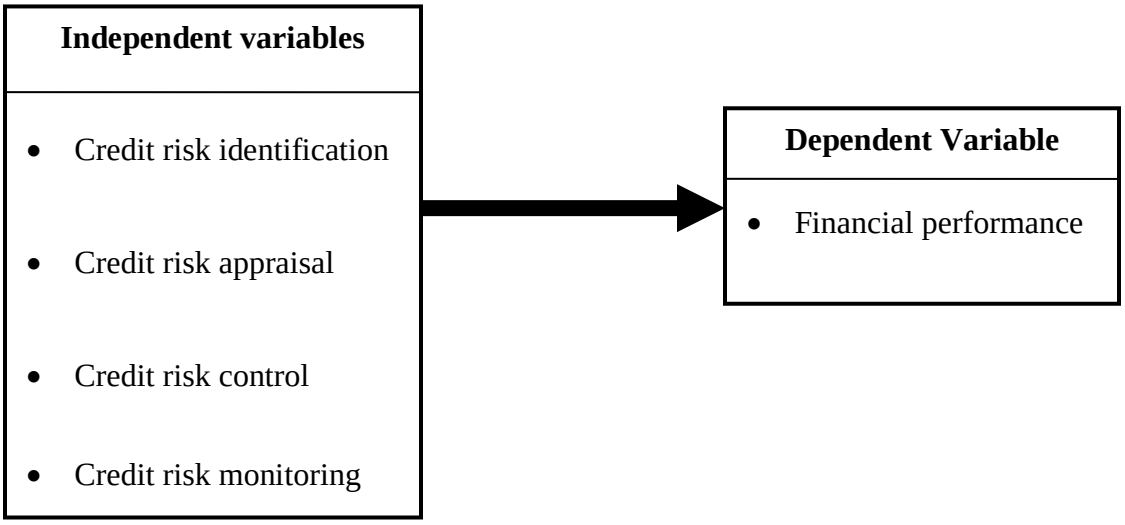

Figure 2.1 Conceptual Framework

2.6 Summary of the Literature Review

The section reviewed various studies on management of credit risk and management of credit risk. A good number of studies have established that credit risk management forms a key part of a company's risk management strategy and affects the performance of various financial institutions. A study by Bhattarai (2016) for example evaluated credit risk and the commercial banks performance. Studies by Alshatti (2015), Li and Zou (2014), Idowu and

Awoyemi (2014), Poudel (2012) & Sumon and Shilpi (2007) examined impact of management of credit risk on banks' performance.

In Kenya, several other studies by Kalui and Kiawa (2015), Gatuhu (2013) & Tanui, Wanyoike and Ngahu (2015, Kimari (2013) in Kenya documented credit risk management in micro finances and SACCOs respectively while Kibor, Ngahu and Kwasira (2015) examined management of credit risk and loan performance of Kenyan banks. From reviewed studies over the years, it is evident that little studies have been done to assess impact of management of credit risk practices on the banks' performance as far as its financial is concerned.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Chapter three focuses on the study research design, study population, the sample design, data collection techniques and techniques of analysis.

3.2 Research Design

Research design refers to plan that guide a researcher on how to organize the research activities (Bryman & Bell 2003). A research design presents a framework or arrangement of action for a study. Descriptive research design which offers a comprehensive picture of a circumstance or a situation was adopted. It is normally done in order to determine and be in a position where one can describe features or characteristics of the given variable of interest for a certain situation (Cooper & Schindler, 2008).

3.3 Population of the study

Population refers to all people or items with the similar characteristics that one wishes to study (Zikmund et al., 2011). Population is a set of people or items with similar characteristics that a researcher intends to study and to draw statistical inferences or conclusions (Gall et al., 2006). Population of this study comprised of all the 43 kenyan registered commercial banks.

3.4 Data Collection

Questionnaires were utilized in collection of primary data. The questionnaire collected data on credit risk management practices, which comprised of that identification of credit risk, credit risk appraisal, the credit risk control and the credit risk monitoring practicess. The questionnaires contained structured questions, which in the form of a Likert scale of 1-5. The questionnaires were administered to credit managers of the forty-three commercial banks. Secondary data on the banks financial performance was obtained from bank's published financial statements for 5 years (2011-2015).

3.5 Data Analysis

Collected data was summarized by the help of the descriptive statistics like the standard deviation and the mean and then analyzed using correlation and regression analysis.

3.5.1 Analytical Model

The regression equation was generated as follows

$$ROA = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where: ROA = Return on assets, which is the ratio of net income to total assets

α = Constant term

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

X_1 = Credit risk identification

X_2 = Credit risk appraisal

X_3 = Credit risk control

X_4 = Credit risk monitoring

μ = Probable error

3.5.2 Test of Significance

The p values were used to establish the significance variables at 5% level of significance where a p- value greater than 5% was considered insignificant (0.05>P) while a p- value of less than 5% (P<0.05) was considered significant.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

Chapter 4 presents results of analyzed data, which are presented, inform 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 Response Rate

A census of the 43 commercial banks in Kenya was done but obtained full data from only 39 commercial banks. This represents a response rate of 90.69%, which was appropriate for the study.

4.3 Data Reliability

The study used Cronbach alpha coefficient in determination of reliability of research instrument. Table 4.1 shows the results obtained.

Table 4.1 Data Reliability

Variable	**Cronbach's Alpha**	**N of Items**
Credit Risk Identification	.720	5
Credit Risk Appraisal	.883	5
Credit Risk Control	.825	6
Credit Risk Monitoring	.749	6

Source: Research Findings

Table 4.1 shows that credit risk identification, appraisal, control and monitoring yielded alpha coefficients of 0.720, 0.883, 0.825 and 0.749 respectively. This indicates that the questionnaire was reliable since all the alpha values were above 0.7 as recommended by Bryman & Bell (2007) that the Cronbach alpha coefficient of 0.7 and above is a clear indication of reliability.

4.4 Descriptive Statistics

Table 4.2 presents the summary of descriptive statistics of study, which comprises of minimum, the maximum, the standard deviation and the mean.

Table 4.2 Descriptive Statistics

	Mean	Std. Deviation	Kurtosis	
	Statistic	Statistic	Statistic	Std. Error
ROA (Ratio)	.03127	.039343	13.066	.741
Credit risk identification (Descriptives)	2.03590	.449261	.088	.741
Credit risk appraisal (Descriptives)	2.26667	.390232	-.519	.741
Credit risk control (Descriptives)	2.14359	.417886	.089	.741
Credit risk monitoring (Descriptives)	2.09744	.456236	-.801	.741

Source: Research Findings

Table 4.2 results shows that, average ROA of the banking sector in Kenya is 0.031 with a a standard deviation of 0.039 respectively. The results also show that mean usage of credit risk identification, credit risk appraisal, credit risk control and monitoring practices is 2.04, 2.27, 2.14 and 2.10 respectively. The means value correspond to the scale value of 2 in the likert scale of the questionnaire which indicates that commercial banks in Kenya use credit risk management practices to a great extent.

4.5 Correlation Analysis

This section presents correlation results of management of credit risk practices and commercial banks financial performance in Kenya. Table 4.3 shows the results obtained in form of a correlation matrix.

Table 4.3 Correlation Matrix

	ROA	**Credit Risk Identification**	**Credit Risk Appraisal**	**Credit Risk Control**	**Credit Risk Monitoring**
ROA	1				
Credit Risk Identification	.367*	1			
Credit Risk Appraisal	.013	-.302	1		
Credit Risk Control	.046	.056	-.060	1	
Credit Risk Monitoring	.126	.013	-.156	.168	1

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

Source: Research Findings

Table 4.3 shows that there is a positive correlation between the financial performance as measured using ROA and the credit risk identification, credit risk appraisal, credit risk control and monitoring practices. This shows the existence of a positive correlation between financial performance and management of credit risk practices.

4.6 Regression Analysis

Results on regression comprise of the model summary, Analysis of variance (ANOVA) and a summary of the regression coefficients.

4.6.1 Model Summary

Table 4.4 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.521[a]	.271	.186	.200176

a. Predictors: (Constant), Credit Risk Monitoring, Credit Risk Identification, Credit Risk Control, Credit Risk Appraisal

Source: Research Findings

Table 4.4 shows that, coefficient of determination (R-square) is 0.271, that indicates that credit risk identification, credit risk appraisal, credit risk control and monitoring explain only 27.1% of the variation of financial performance of Kenyan commercial banks.

Therefore, 72.9% of the variation in financial performance is explained by other factors and the error term.

4.6.2 Analysis of Variance

Table 4.5 below indicates the results obtained by the ANOVA.

Table 4.5 ANOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.507	4	.127	3.165	.026[b]
	Residual	1.362	34	.040		
	Total	1.870	38			

a. Dependent Variable: ROA

b. Predictors: (Constant), Credit Risk Monitoring, Credit Risk Identification, Credit Risk Control, Credit Risk Appraisal

Source: Research Findings

ANOVA results on table 4.5 indicates that, the relation between management of credit risk practices and the banks financial performance is significant since calculated P-value is 0.026, which is less as compared to significance value of 0.05.

4.6.3 Regression Coefficients

Table 4.6 indicates results of the summary of the coefficient of regression

Table 4.6 Regression Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.694	.371		-1.871	.070
	Credit risk identification	.185	.076	.375	2.435	.020
	Credit risk appraisal	.042	.088	.074	.478	.636
	Credit risk control	-.034	.079	-.065	-.430	.665
	Credit risk monitoring	.191	.073	.392	2.616	.013

a. Dependent Variable: ROA

Source: Research Findings

Table 4.6 shows the existence of a positive (B = 0.185) and significant relation between credit risk identification and the banks' performance in financial perspective. The results also show the existence of a positive (B =0.042) but insignificant relation between credit risk appraisal and financial performance of commercial banks. The findings also indicate that there is a negative (B = -0.034) insignificant relationship between credit risk control financial performance of commercial banks in Kenya. Finally, the study indicates there is a significant positive (B=0.191) relationship between credit risk monitoring and the banks financial performance. Thus, from the study the following regression equation was obtained

$$ROA = -0.694 + 0.185X_1 + 0.042X_2 - 0.034X_3 + 0.191X_4 + \mu$$

4.7 Interpretation of the Findings

The study found a significant positive relationship between credit risk identification and the financial performance of commercial banks. This means that a unit increase in credit risk identification increases commercial banks financial performance by 0.185 units thus there is a direct relationship between credit risk identification and financial performance of commercial banks in Kenya.

The study found a positive relationship between credit risk appraisal and financial performance of commercial banks. This means that increase in credit risk appraisal increases financial performance of commercial banks by 0.042 units thus credit risk appraisal positively affects financial performance of commercial banks in Kenya.

The study also found a negative insignificant relationship between credit risk control financial performance of commercial banks in Kenya. This means the usage of credit risk control practices negatively affects financial performance of commercial banks by 0.034 units thus there is an inverse relationship between credit risk control financial performance of commercial banks in Kenya

The study found a significant positive relationship between credit risk monitoring and the financial performance of commercial banks. This means that a unit increase in credit risk monitoring increases commercial banks financial performance by 0.191 units thus there is a direct relationship between credit risk monitoring and financial performance of commercial banks in Kenya.

The above findings conform to the finding by Makori (2015) who established that credit appraisal procedures, credit monitoring, debt collection procedures credit risk governance systems had a positive effect on the financial profitability. Kibor, Ngahu and Kwasira (2015) established a moderately useful and positive relation between management of credit risk practices and the loan performance. Gatuhu (2013) also found a strong relation between the MFIs financial performance and credit risk control, appraisal of clients and collection policy.

The findings are also similar to those of Sufi and Qaisar (2015) who found a positive significant effect on performance of the loan, whereas the credit policy and the control of credit risk have insignificant but positive effect on the loan performance. Mutua (2015) also found a significant relation between bank's performance and management of credit risk in terms of risk identification, monitoring and credit sanctions and concluded that better management of credit risk leads to a great performance of the bank. Kibor, Ngahu and Kwasira (2015) established an existence of a moderate positive and useful relation between the 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.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Chapter five presents the summary of findings of this research, conclusions, recommendations, limitations of the study and suggestion of areas which may require further consideration as far as future research is concerned.

5.2 Summary

This study aimed at assessing impact of credit risk management practices on banks' financial performance. Identification of credit risk, credit risk appraisal, the credit risk control and the credit risk monitoring were used as independent variables and financial performance as dependent variable. The study conducted a census of the 43 commercial banks in Kenya but obtained data from 39 commercial banks and used a questionnaire to collected primary data. The Cronbach alpha coefficient established that the questionnaire was reliable since all the alpha values were above 0.7 as recommended.

The results of descriptive statistics established that mean usage of identification of credit risk, credit risk appraisal, the credit risk control and the credit risk monitoring practices was 2.04, 2.27, 2.14 and 2.10 respectively. All the calculated mean values corresponded to the scale value of 2 in the likert scale of the questionnaire which indicated that commercial banks in Kenya use credit risk management practices to a great extent. Correlation analysis results established a positive correlation between financial performance and the

identification of credit risk, credit risk appraisal, the credit risk control and the credit risk monitoring practices.

The findings of the regression analysis established that identification of credit risk, credit risk appraisal, the credit risk control and the credit risk monitoring practices explain only 27.1% of the variation of commercial banks financial performance. It was also found that F- statistic value was 3.165 and P- value 0.026 was significant an indication of a significant relation between the credit risk management practices and banks performance in financial perspective. The study found a significant positive relationship between credit risk identification and credit risk monitoring and the financial performance of commercial banks. The study found a positive insignificant relationship between credit risk appraisal and financial performance of commercial banks. The study also found a negative insignificant relationship between credit risk control financial performance of commercial banks in Kenya.

5.3 Conclusions

The findings of the study revealed a significant positive relationship between credit risk identification and credit risk monitoring and the financial performance of commercial banks. The study therefore concludes that that credit risk identification and credit risk monitoring significantly and positively affects financial performance of commercial banks in Kenya.

The study found a positive and insignificant relationship between credit risk appraisal and financial performance of commercial banks. However, the study recommends that credit

risk has direct relationship with financial performance of commercial banks in Kenya, thus effective credit appraisal strategies enhances commercial banks financial performance.

The study also found a negative insignificant relationship between credit risk control financial performance of commercial banks in Kenya. The study concludes that the usage of credit risk control practices negatively affects financial performance of commercial banks thus there is an inverse relationship between credit risk control financial performance of commercial banks in Kenya.

5.4 Recommendations

This study concluded that that credit risk identification significant influences the Kenyan banks financial performance. Thus, the study recommends the management of the Kenyan banks to put more emphasis on credit risk identification since proper identification of risk would help to develop the basis for the other stages of management of credit risk.

This study also emphasized on use of management of credit risk practices increases or improves Kenyan commercial banks financial performance. This study therefore encourages the policymaking entities and regulatory authorities in Kenya should develop effective prudential guidelines and polices to strengthen the management of credit risk.

This study established that the usage of management of credit risk practices by Kenyan commercial banks was to great extent. Thus, this study recommends that commercial banks should regularly revise the credit management practices to ensure they do not use redundant management of credit risk practices.

5.5 Limitations of the Study

This study explored management of credit risk practices and the effects it has on the Kenyan commercial banks performance in financial perspective. Therefore, the findings of the study are limited to commercial banks and not to other financial institutions like SACCOS and Microfinance institutions, which deal with lending as they apply different credit risk management strategies and also lend under different terms and conditions.

This study obtained data using a structured likert like questionnaire where the respondents only respondent to specified and structured questions. Therefore, the qualitative views of the respondents on management of credit risk practices and the banks performance in financial perspective were not obtained. The study findings are also generalizable to all 43 commercial banks in Kenya and not a specific commercial bank in Kenya

5.6 Suggestions for Further Research

This study concentrated on management of credit risk practices in Kenyan commercial banks and not the whole financial sector. The study thus recommends further research on management of credit risk on performance of Microfinance banks since they accept deposits and their lending mechanism are almost similar to those of commercial banks.

The study also recommends additional research on effect of management of credit risk on loan default of banks in Kenya. Further, this study recommends an evaluation of management of credit risk practices using qualitative views obtained through interviews to establish an in-depth effect of credit risk management practices on banks performance in financial perspective.

REFERENCES

Aduda, J. & Gitonga, J. (2011). The Relationship between Credit Risk Management and Profitability among the Commercial Banks in Kenya. *Journal of Modern Accounting and Auditing,* 7(9), 934-946

Afriyie, H. O. & Akotey, J. O. (2012). Credit Risk Management and Profitability of Selected Rural Banks in Ghana. Catholic University College of Ghana

Akerlof, G. A. (1970). The Market for Lemons: Quality Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*, 84 (3), 488-500.

Akkizidis, I. & Khandelwal, S. K. (2008). Financial Risk Management for Private Hospitals and Finance. Palgrave Macmillan

Alshatti, A. S. (2015). The Effect of Credit Risk Management on Financial Performance of the Jordanian Commercial Banks. *Investment Management and Financial Innovations,* 12(1), 338 – 345

Armendariz, A, B. & Morduch, J. (2010). *The Economics of Microfinance*. 2nd Ed. The MIT Press Cambridge.

Auronen, L. (2003). Asymmetric Information: Theory and Applications. Paper Presented at the Seminar of Strategy and International Business, Helsinki University of technology. Helsinki.

Berhanu, A. (2005). Determinants of Formal Source of Credit Loan Repayment Performance of Smallholder Farmers: The Case of North Western Ethiopia, North Gondar. *Unpublished MSc. Thesis.* Alemaya University, Ethiopia

Bhattarai, Y. R. (2016). Effect of Credit Risk on the Performance of Nepalese Commercial Banks. *NRB Economic Review,* Tribhuvan University

Bizuayehu, M. (2015). The Impact of Credit Risk on Financial Performance of Banks in Ethiopia. *Unpublished Thesis.* Addis Ababa University

Bofondi, M. & Gobbi, G. (2003). Bad Loans and Entry in Local Credit Markets. Bank of Itally Research Department, Rome

Bryman, A. & Bell E. (2007). *Business Research Methods.* (2nd Ed.). Oxford University Press

Cooper, R. D. & Schindler, S. P. (2008). *Business Research Methods.* (10th Ed.). New York, McGraw Hill

Eppy, I. (2005). Perceived Information Asymmetry, Bank lending Approaches and Bank Credit Accessibility by SMEs in Uganda *Unpublished PHD Thesis*, Makerere University

Fujo, K. G. & Ali, A. I. (2016). Factors Affecting Financial Performance of Savings and Credit Societies in Kilifi County- A Case Study of Imarika Sacco. *The International Journal of Business & Management*, 4(2), 448-469

Gakure, R. W., Ngugi, J. K., Ndwiga, P. M. & Waithaka, S. M. (2012). Effect of Credit Risk Management Techniques on the Performance of Unsecured Bank Loans Employed Commercial Banks in Kenya. *International Journal of Business and Social Research*, 2(4), 221-236

Gall, M.D., Gall, J. P. & Borge, W. R. (2006). *Educational Research*. 8th Ed. New York; Pearson

Gatuhu, R. N. (2013). The Effect of Credit Management on the Financial Performance of Microfinance Institutions in Kenya. *Unpublished MBA Project*. University of Nairobi

Harvey, R., Lins, V. & Roper, H. (2004). The effect of Credit Risk on Corporate liquidity. *Journal of Financial Economics*, 74, 3-30

Idowu, A. & Awoyemi, S. O. (2014). The Impact of Credit Risk Management on the Commercial Banks Performance in Nigeria. *International Journal of Management and Sustainability*, 3(5), 295-306

Irungu, P. (2013). Effect of Financial Performance Indicators on Market Price of Shares in Commercial Banks of Kenya. *International Journal of Management & Business Studies*, 3(3), 72 – 77

Kagoyire, A. & Shukla, J. (2016). Effect of Credit Management on Performance of Commercial Banks in Rwanda (A Case Study of Equity Bank Rwanda Ltd). *International Journal of Business and Management Review*, 4(4), 1-12

Kalui, F. M. & Kiawa, E. (2015). Effects of Credit Risk Management Procedures on Financial Performance among Microfinance Institutions (MFIs) In Kenya: A Case of MFIs in Nairobi County. *International Journal of Humanities Social Sciences and Education*, 2(3), 81-103

Kariuki, F. (2015). Sustainability in the Financial Sector in Kenya. *Working Paper Series 01/15*. Kenya Bankers Association

Karlan, D. & Zinman, J. (2004). *Observing Unobservable: Identifying Information Asymmetries with a Consumer Credit Field Experiment.* Princeton Economics Department working Paper.

Kibor, A.M., Ngahu, S.T. & Kwasira, J. (2015). Influence of Credit Risk Management on Loan Performance in Commercial Banks in Nakuru Town, Kenya. *International Journal of Economics, Commerce and Management*, 3(10), 884 – 902

Kimari, F. N. (2013). Effect of Credit Risk Management on Financial Performance of Deposit Taking Savings and Credit Cooperative Societies in Kenya. *Unpublished MBA Project*. University of Nairobi

Kimoi, A., Ayuma, C. & Kirui, K. (2016). Assessment of Credit Risk Management Practices on Organizational Performance: A survey of Savings and Credit Co-operative Societies in Eldoret Town Kenya. *International Journal of Scientific & Engineering Research*, 7(5), 416-425

Kimotho, D. N. & Gekara, M. (2016). Effects of Credit Risk Management Practices on Financial Performance of Commercial*: International Journal of Economics & Finance*, 2 (3), 161-189

Korir, M. K. (2012). Effects of Credit Risk Management Practices on Financial Performance of Deposit Taking Microfinance Institutions in Kenya. *Unpublished MBA Project*. University of Nairobi

Kurui, S. K. & Kalio, A. M. (2014). Influence of Credit Risk Management Practices on

Loan Performance of Microfinance Institutions in Baringo County, Kenya. *International Journal of Science and Research,* 3(10), 2260-2267

Kwaku, D. K. (2015). Assessing Credit Risk Management Practices in the Banking Industry of Ghana: Processes and Challenges. *Global Journal of Management and Business Research,* 15 (6), 1-11

Lagat, F.K., Mugo, R. & Otuya, R. (2013). Effect of Credit Risk Management Practices on Lending Portfolio among Savings and Credit Cooperatives in Kenya. *European Journal of Business and Management*, 5(19), 93 – 105

Li, F. & Zou, Y. (2014). The Impact of Credit Risk Management on Profitability of Commercial Banks: A Study of Europe. *Unpublished Project*. Umeå School of Business and Economics

Makori, O. G. (2015). Effects of Credit Risk Management Practices on Profitability of Deposit Taking Sacco's in Nairobi County. *Unpublished MBA Project*. Management University of Africa, Kenya

Megeid, N. S. (2013). The Impact of Effective Credit Risk Management on Commercial Banks Liquidity Performance: Case of Egypt. 2(2), 13-22

Mutua, J. M. (2015). Effect of Mitigating Credit Risk on Performance of Commercial Banks in Kenya: A Case of Chuka Town. *European Journal of Business and Social Sciences*, 4(7), 113 – 125

Ngwa, E. (2010). Credit Risk Management in Banks as Participants in Financial Markets. A Qualitative Study of the Perception of Bank Managers in Sweden. Umeå School of Business

Parrenas, J. C. (2005). Risk Monitoring Procedures used by Commercial Banks: A Survey of Commercial Banks in Four Asian Emerging Market

Poudel, R. V. (2012). The Impact of Credit Risk Management on Financial Performance of Commercial Banks in Nepal. *International Journal of Arts and Commerce*, 1(5), 9 – 15

Raad, M. L. (2015). Credit Risk Management (CRM) Practices in Commercial Banks of

Bangladesh: A Study on Basic Bank Ltd. *International Journal of Economics, Finance and Management Sciences*. 3(2), 78-90.

Sabeza, F., Shukla, J. & Bajpai, G. (2015). Assessing Credit Risk Management Practices and Performance of Commercial Banks in Rwanda: (Case Study of Banque Populaire Rwanda 2011-2013*). International Journal of Social Science and Humanities Research*, 3(1), 323-333

Soyemi, K. A., Ogunleye, J. O. & Ashogbon, F. O. (2014). Risk Management Practices and Financial Performance: Evidence from the Nigerian Deposit Money Banks. *The Business & Management Review,* 4(4), 345 - 354

Stiglitz, J. (2001). Principles of Financial Regulation: A Dynamic Portfolio Approach. *The World Bank Research Observer,* 16(1), 1-18.

Sufi, F. A. & Qaisar, A. M. (2015). Credit Risk Management and Loan Performance: Empirical Investigation of Micro Finance Banks of Pakistan. *International Journal of Economics and Financial Issues,* 5(2), 574-579.

Sujeewa, K. (2015). Impact of Credit Risk Management on the Performance of Commercial Banks in Sri Lanka. *International Journal of Scientific Research and Innovative Technology*, 2 (7), 24 – 29

Sumon, D. & Shilpi, D. (2007). Credit Risk Management Practices –An Evaluation of Commercial Banks in Bangladesh. Accessed online on 28/7/2016 from https://www.researchgate.net/publication/228205841

Tanui, J. K., Wanyoike, D. M. & Ngahu, S. (2015). Assessment of Credit Risk Management Practices on Financial Performance among Deposit Taking SACCOs in Nakuru East Sub County, Kenya. *International Journal in Management and Social Science*, 3(5), 602-610

Uwalomwa, U., Uwuigbe, O. R. & Oyewo, B. (2015). Credit Management and Bank Performance of Listed Banks in Nigeria. *Journal of Economics and Sustainable Development*, 6(2), 27 – 32

Uyemura, D. G. & Deventer, D. R. (1993). Risk Management in Banking: Theory and Applications of Assets and Liability Management, Banking Publication,

Kamakura.

Warsame, M. (2016). Credit Risk Management Practices and Its Impact on Banks' Financial Performance: An Empirical Study of Islamic and Conventional Banks in Kenya. Proceedings of Business and Social Sciences Research Conference 11 - 13 April 2016, University of London, London, UK

Weinberg, J. A. (2006). Borrowing by U.S. Households. Federal Reserve Bank of Richmond. *Economic Quarterly*, 92(3), 3-6

Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2010). *Business research methods*. 8th Edition. Mason Cengage Learning

APPENDICES

Appendix I: Questionnaire

Dear respondent,

This questionnaire aim at examining **effect of credit risk management practices on the financial performance of Kenyan commercial banks**. The research is purely academic in nature and any information obtained from this questionnaire will be confidential. We shall appreciate your cooperation and support.

Please **tick** and **fill** where appropriate

Section A: Background Information

1. Name of the Commercial bank.....……

Section B: Credit Risk Identification

2. To what extent does your organization undertake the below credit risk identification strategies to ensure that credit risk identification is well done to prevent it from failing in its obligations and meeting it objectives?

   1. To a very great extent 2. To a great extent 3. To a moderate extent 4. To a little extent 5. Not at all

	1	2	3	4	5
Comprehensive analysis of present and future risks					

Quantification of the organizations risk profile					
Identification of credit risk sources					
Reviewing of the credit risk environment					
Analysis of all business operations and support services					

Others (specify)

……

……

Section C: Credit Risk Appraisal

3. To what extent does your organization undertake the following credit risk analysis strategies to ensure that credit risk appraisal is properly done to prevent it from failing in its obligations and meeting it objectives?

   1. To a very great extent 2. To a great extent 3. To a moderate extent 4. To a little extent 5. Not at all

	1	2	3	4	5
Review of credit history of the member or borrower					
Analysis of credit risk based decisions					
Screening of clients before advancing credit					
Credit risk information sharing					

Weighing and prioritizing risk events and clients					

Others (specify)

……

……

Section D: Credit Risk Control

4. To what extent does your organization undertake the following credit risk control measures to ensure that credit risk control is well done to prevent it from failing in its obligations and meeting it objectives?

   1. To a very great extent 2. To a great extent 3. To a moderate extent 4. To a little extent 5. Not at all

	1	2	3	4	5
Training bank staff on risk control					
Ascertaining the value of collateral					
Secure loan banking system					
CRB listing upon default					
Penalties upon default					
Ensuring the loan is used for intended purpose					

Others (specify)

……

……

Section E: Credit Risk Monitoring

5. To what extent does your organization undertake the following credit risk monitoring measures to ensure that credit risk monitoring is properly done to prevent it from failing in its obligations and meeting it objectives?

   1. To a very great extent 2. To a great extent 3. To a moderate extent 4. To a little extent 5. Not at all

Credit Risk Monitoring	**1**	**2**	**3**	**4**	**5**
Continuous monitoring of cash flows of borrower					
Constant contact with borrowers					
Review of clients loan repayment pattern					
Supporting distressed borrowers and					
Frequent loan classification/provisioning					
Revising credit risk control and appraisal measures					

Others (Specify)

……

……

6. Apart from credit risk identification, appraisal, control and monitoring, what other risk management does your organisation use?

……

……

Thank you for your support

Appendix II: 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 Limited
5) Barclays Bank of Kenya Limited
6) CFC Stanbic Bank Limited
7) Charterhouse Bank Limited
8) Chase Bank (K) Limited
9) Citibank N.A Kenya Limited
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) Dubai Bank Kenya Limited
17) Ecobank Kenya Limited
18) Equatorial Commercial Bank Limited
19) Equity Bank Limited
20) Family Bank Limited
21) Fidelity Commercial Bank Limited
22) Fina Bank Limited
23) First community Bank Limited
24) Giro Commercial Bank Limited
25) Guardian Bank Limited
26) Gulf African Bank Limited
27) Habib Bank A.G Zurich Limited
28) Habib Bank Limited
29) I & M Bank Limited
30) Imperial Bank Limited
31) Jamii Bora Bank Limited
32) Kenya Commercial Bank Limited
33) K-Rep Bank Limited
34) Middle East Bank (K) Limited
35) National Bank of Kenya Limited
36) NIC Bank Limited
37) Oriental Commercial Bank Limited
38) Paramount Universal Bank Limited
39) Prime Bank Limited
40) Standard Chartered Bank Kenya Limited
41) Trans-National Bank Limited
42) UBA Kenya Bank Limited
43) Victoria Commercial Bank Limited

Appendix III: Financial Performance Data

Bank	Year	Net income	Total assets	ROA
Bank 1	2015	182,655.00	22,617,744.00	0.00808
	2014	145,493.00	22,073,123.00	0.00659
	2013	442,163.00	19,639,370.00	0.02251
	2012	380,643.00	19,070,779.00	0.01996
	2011	369,966.00	12,566,087.00	0.02944
Bank 2	2015	- 1,023,361.00	69,280,267.00	-0.01477
	2014	144,111.00	62,211,641.00	0.00232
	2013	436,028.00	52,683,299.00	0.00828
	2012	634,187.00	62,659,045.00	0.01012
	2011	577,069.00	55,287,650.00	0.01044
Bank 3	2015	2,026,117.00	68,177,548.00	0.02972
	2014	2,216,911.00	61,944,649.00	0.03579
	2013	2,039,696.00	52,021,524.00	0.03921
	2012	1,376,100.00	46,137,777.00	0.02983
	2011	1,363,881.00	36,700,797.00	0.03716
Bank 4	2015	1,107,937.00	44,162,947.00	0.02509
	2014	1,034,293.00	34,370,422.00	0.03009
	2013	1,023,458.00	30,721,440.00	0.03331
	2012	685,440.00	24,876,824.00	0.02755
	2011	765,862.00	21,352,157.00	0.03587
Bank 5	2015	8,401.00	241,152.00	0.03484
	2014	8,387.00	226,116.00	0.03709
	2013	7,623.00	206,739.00	0.03687
	2012	8,741.00	184,826.00	0.04729
	2011	8,113.00	167,029.00	0.04857
Bank 6	2015	4,905,734.00	208,451,915.00	0.02353
	2014	5,686,661.00	180,998,985.00	0.03142
	2013	512,756.00	180,511,797.00	0.00284

	2012	3,009,891.00	143,212,155.00	0.02102
	2011	1,838,992.00	150,171,015.00	0.01225
Bank 7	2015	1,588,521.00	115,826,138.00	0.01371
	2014	2,443,063.00	79,397,808.00	0.03077
	2013	2,998,586.00	71,242,659.00	0.04209
	2012	2,248,939.50	53,431,994.25	0.04209
	2011	1,686,704.63	40,073,995.69	0.04209
Bank 8	2015	3,592,324.00	215,625,182.00	0.01666
	2014	3,478,580.00	197,463,704.00	0.01762
	2013	3,740,700.00	145,998,378.00	0.02562
	2012	3,123,257.00	118,300,651.00	0.02640
	2011	1,671,824.00	94,771,471.00	0.01764
Bank 9	2015	44,422.00	14,135,528.00	0.00314
	2014	- 281,632.00	15,077,051.00	-0.01868
	2013	- 109,108.00	16,778,631.00	-0.00650
	2012	139,249.00	18,064,213.00	0.00771
	2011	149,824.00	15,318,148.00	0.00978
Bank 10	2015	11,706.00	342,500.00	0.03418
	2014	8,015.00	285,396.00	0.02808
	2013	9,108.00	231,215.00	0.03939
	2012	7,724.00	200,588.00	0.03851
	2011	5,366.00	168,312.00	0.03188
Bank 11	2015	3,219.60	9,764,534.00	0.00033
	2014	- 91,715.00	8,864,537.00	-0.01035
	2013	52,796.00	7,308,855.00	0.00722
	2012	69,669.00	6,407,485.00	0.01087
	2011	47,074.00	5,394,064.00	0.00873
Bank 12	2015	121,620.00	16,942,552.00	0.00718
	2014	220,592.00	16,944,142.00	0.01302
	2013	189,433.00	15,574,646.00	0.01216

	2012	73,779.00	13,411,458.00	0.00550
	2011	109,168.00	11,517,988.00	0.00948
Bank 13	2015	6,599,806.00	271,608,597.00	0.02430
	2014	5,708,430.00	211,539,412.00	0.02699
	2013	4,756,635.00	166,520,351.00	0.02856
	2012	3,627,766.00	135,461,412.00	0.02678
	2011	2,656,797.00	107,765,064.00	0.02465
Bank 14	2015	90,373.00	52,426,513.00	0.00172
	2014	320,212.00	45,934,458.00	0.00697
	2013	- 881,892.00	36,907,136.00	-0.02389
	2012	- 1,055,754.00	31,771,339.00	-0.03323
	2011	950,179.00	28,594,205.10	0.03323
Bank 15	2015	- 486,382.00	14,469,562.00	-0.03361
	2014	- 323,017.00	16,589,359.00	-0.01947
	2013	55,650.00	15,562,476.00	0.00358
	2012	- 481,940.00	14,108,996.00	-0.03416
	2011	72,341.00	12,926,902.00	0.00560
Bank 16	2015	17,303,438.00	428,062,514.00	0.04042
	2014	17,151,365.00	344,571,646.00	0.04978
	2013	13,277,796.00	277,728,818.00	0.04781
	2012	12,080,255.00	243,170,458.00	0.04968
	2011	10,325,157.00	196,293,896.00	0.05260
Bank 17	2015	1,982,946.00	81,281,366.00	0.02440
	2014	1,809,785.00	61,834,403.00	0.02927
	2013	1,245,385.00	43,513,903.00	0.02862
	2012	561,459.00	30,989,337.00	0.01812
	2011	354,604.00	26,001,753.00	0.01364
Bank 18	2015	145,425.00	4,089,082.00	0.03556
	2014	83,382.00	3,135,003.00	0.02660
	2013	43,868.00	1,691,611.00	0.02593

	2012	27,454.00	1,349,922.00	0.02034
	2011	9,956,496.00	1,030,836,833.00	0.00966
Bank 19	2015	99,436,881.00	2,524,593,709.00	0.03939
	2014	94,434,092.00	2,355,876,526.00	0.04008
	2013	90,023,977.00	2,102,846,415.00	0.04281
	2012	87,295,957.00	1,734,877,860.00	0.05032
	2011	4,988,624.00	1,611,879,579.00	0.00309
Bank 20	2015	- 12,114.00	15,646,310.00	-0.00077
	2014	50,437.00	15,280,260.00	0.00330
	2013	1,320,202.00	11,305,398.00	0.11678
	2012	293,761.00	9,958,767.00	0.02950
	2011	249,696.85	8,464,951.95	0.02950
Bank 21	2015	452,439.00	15,810,061.00	0.02862
	2014	395,589.00	15,082,199.00	0.02623
	2013	378,048.00	13,623,296.00	0.02775
	2012	226,360.00	12,279,809.00	0.01843
	2011	301,096.00	11,846,372.00	0.02542
Bank 22	2015	256,125.00	15,388,571.00	0.01664
	2014	261,251.00	14,572,873.00	0.01793
	2013	275,335.00	12,834,687.00	0.02145
	2012	153,610.00	11,745,363.00	0.01308
	2011	115,207.50	8,809,022.25	0.01308
Bank 23	2015	39,002.00	5,437,716.00	0.00717
	2014	35,460.00	5,330,878.00	0.00665
	2013	32,160.00	5,064,759.00	0.00635
	2012	30,887.00	4,397,417.00	0.00702
	2011	30,620.00	4,355,636.00	0.00703
Bank 24	2015	39,000,000.00	5,438,000,000.00	0.00717
	2014	163,000,000.00	5,331,000,000.00	0.03058
	2013	36,264,000.00	7,774,159,000.00	0.00466

	2012	40,379,000.00	7,850,422,000.00	0.00514
	2011	20,630,000.00	4,785,895,000.00	0.00431
Bank 25	2015	335,126.00	21,180,018.00	0.01582
	2014	300,576.00	17,802,177.00	0.01688
	2013	218,630.00	16,285,573.00	0.01342
	2012	216,394.00	15,290,582.00	0.01415
	2011	248,295.00	12,669,356.00	0.01960
Bank 26	2015	6,032,643.00	164,822,609.00	0.03660
	2014	5,234,548.00	154,060,579.00	0.03398
	2013	4,981,392.00	141,364,225.00	0.03524
	2012	4,119,559.00	119,276,046.00	0.03454
	2011	3,472,725.00	108,063,713.00	0.03214
Bank 27	2015	20,384.00	16,781,124.00	0.00121
	2014	19,686.00	13,117,892.00	0.00150
	2013	93,887.00	7,010,323.00	0.01339
	2012	61,026.55	6,219,906.00	0.00981
	2011	39,667.26	5,030,090.00	0.00789
Bank 28	2015	19,623,071.00	558,094,154.00	0.03516
	2014	16,848,863.00	490,338,324.00	0.03436
	2013	14,341,382.00	390,851,579.00	0.03669
	2012	12,203,531.00	367,379,285.00	0.03322
	2011	10,981,046.00	330,716,159.00	0.03320
Bank 29	2015	372,320.00	19,106,557.00	0.01949
	2014	514,043.00	15,801,431.00	0.03253
	2013	355,060.50	12,673,740.50	0.02802
	2012	196,078.00	9,546,050.00	0.02054
	2011	173,366.00	9,318,715.00	0.01860
Bank 30	2015	34,835.00	5,677,553.00	0.00614
	2014	68,627.00	5,936,601.00	0.01156
	2013	408,168.00	5,580,917.00	0.07314

	2012	265,309.20	3,627,596.05	0.07314
	2011	172,450.98	2,357,937.43	0.07314
Bank 31	2015	- 1,153,477.00	125,440,316.00	-0.00920
	2014	870,702.00	123,091,996.00	0.00707
	2013	1,112,803.00	92,555,717.00	0.01202
	2012	736,366.00	67,178,607.00	0.01096
	2011	1,546,113.00	68,664,516.00	0.02252
Bank 32	2015	4,485,125.00	165,788,238.00	0.02705
	2014	4,116,674.00	145,780,505.00	0.02824
	2013	3,237,301.00	121,062,739.00	0.02674
	2012	3,036,794.00	108,348,593.00	0.02803
	2011	2,707,137.00	78,984,005.00	0.03427
Bank 33	2015	42,902.00	8,496,350.00	0.00505
	2014	71,947.00	7,857,515.00	0.00916
	2013	139,969.00	7,006,528.00	0.01998
	2012	94,467.00	6,219,906.00	0.01519
	2011	152,004.00	5,030,090.00	0.03022
Bank 34	2015	158,025.00	10,525,709.00	0.01501
	2014	147,846.00	10,402,316.00	0.01421
	2013	94,658.00	8,028,876.00	0.01179
	2012	110,248.00	7,254,561.00	0.01520
	2011	71,661.20	4,715,464.65	0.01520
Bank 35	2015	2,023,189.00	65,001,313.00	0.03113
	2014	1,736,019.00	54,917,674.00	0.03161
	2013	1,440,772.00	49,460,889.00	0.02913
	2012	954,719.00	43,462,888.00	0.02197
	2011	834,424.00	35,184,677.00	0.02372
Bank 36	2015	6,342,427.00	233,965,447.00	0.02711
	2014	10,436,180.00	222,495,824.00	0.04691
	2013	962,921.00	220,391,180.00	0.00437

	2012	8,069,533.00	195,352,756.00	0.04131
	2011	5,836,821.00	164,046,624.00	0.03558
Bank 37	2015	168,030.00	10,452,691.00	0.01608
	2014	125,712.00	10,239,922.00	0.01228
	2013	158,118.00	9,657,867.00	0.01637
	2012	213,393.00	8,801,382.00	0.02425
	2011	202,580.00	7,286,906.00	0.02780
Bank 38	2015	59,654.00	2,752,622.00	0.02167
	2014	47,907.00	2,762,573.00	0.01734
	2013	46,601.00	2,642,296.00	0.01764
	2012	54,766.00	2,217,417.00	0.02470
	2011	- 9,647.00	1,942,793.00	-0.00497
Bank 39	2015	713,800.00	20,020,072.00	0.03565
	2014	464,345.00	17,244,092.00	0.02693
	2013	431,903.00	13,644,242.00	0.03165
	2012	350,532.00	10,322,819.00	0.03396
	2011	230,250.00	7,645,235.00	0.03012

Appendix IV: Regression Data

Bank	Credit Risk Identification	Credit Risk Appraisal	Credit Risk Control	Credit Risk Monitoring	Average ROA
Bank 1	3.00	2.00	2.20	1.40	0.02617
Bank 2	2.00	1.80	2.40	2.40	0.01588
Bank 3	2.00	2.40	2.00	1.80	0.04199
Bank 4	2.00	2.60	2.00	2.40	0.03583
Bank 5	2.00	2.40	2.20	2.00	0.06084
Bank 6	1.60	2.60	2.40	1.80	0.03549
Bank 7	2.00	2.00	2.60	2.00	0.07073
Bank 8	2.40	2.00	1.40	2.20	0.03369
Bank 9	2.00	1.80	1.60	2.20	0.01540
Bank 10	1.80	2.00	1.80	2.20	0.04344
Bank 11	2.40	1.60	2.40	2.60	0.01889
Bank 12	2.00	2.20	2.00	1.60	0.01365
Bank 13	1.60	2.40	1.80	2.20	0.04435
Bank 14	2.00	2.60	2.60	1.40	-0.01725
Bank 15	2.00	1.60	2.40	2.00	-0.02086
Bank 16	2.80	2.40	2.40	2.20	0.21425
Bank 17	1.20	2.60	1.80	1.80	0.03312
Bank 18	1.80	2.60	2.20	1.40	0.01219
Bank 19	2.00	2.00	1.80	1.40	0.01941
Bank 20	2.60	2.20	3.20	2.60	0.01348

Bank 21	1.80	2.00	2.60	2.00	0.02688
Bank 22	1.20	3.20	1.80	2.60	0.02332
Bank 23	2.80	2.40	1.40	1.40	0.02840
Bank 24	1.80	1.80	1.80	1.80	0.04057
Bank 25	2.00	2.80	2.40	2.00	0.05537
Bank 26	2.40	2.60	1.80	2.40	0.05131
Bank 27	2.00	3.00	1.80	2.40	0.00393
Bank 28	1.40	1.80	2.40	3.00	0.05320
Bank 29	2.60	2.00	2.20	2.80	0.03502
Bank 30	2.20	2.00	1.20	1.60	0.01247
Bank 31	1.40	2.80	2.40	2.00	0.01549
Bank 32	2.00	2.40	2.20	2.20	0.04371
Bank 33	2.20	1.80	2.60	2.80	0.01953
Bank 34	1.80	2.20	2.80	1.40	0.01556
Bank 35	2.40	2.80	2.60	1.80	0.03549
Bank 36	2.40	2.20	1.80	2.20	0.05442
Bank 37	2.40	2.20	2.40	2.80	0.02859
Bank 38	1.00	2.60	2.00	2.20	-0.07529
Bank 39	2.40	2.00	2.20	2.80	0.04086