

**EFFECTS OF CREDIT RISK MANAGEMENT PRACTICES ON NON-  
PERFORMING LOANS IN COMMERCIAL BANKS IN KENYA**

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## DECLARATION

I hereby certify that this research project is my original work and has not been presented for examination in any institution of higher learning.

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## **DEDICATION**

The research project is dedicated to my lovely husband and children.

## **ACKNOWLEDGEMENT**

I wish recognize a number of individuals who contributed to the successful completion of this research project. I would like to take the opportunity to acknowledge the support and help of all who have assisted me in the research. Without their contribution and advice, I would have never been able to progress with the work in the thesis.

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Finally I would like to thank my family for their support, love, and care during my study.

To all of you kindly accept my appreciation for your great support.

## **ABSTRACT**

Risk management is an integral part of good management practice. Poor credit risk management practices leads to rising non-performing loans which compresses profit margins, of commercial banks hence bringing about more challenging environment for banks. Lending has been and still is the mainstay of financial institutions and this is more true to emerging economies of developing countries where capital markets are not yet well developed. To most of the transition economies, lending activities has been a controversial and difficult matter. This study sought to determine the effects of credit risk management practices on non-performing loans in commercial banks in Kenya.

The study used descriptive research design and the target population for this study was 44 banking institutions transacting business in Kenya as at December 2012 whereby the study carried out census. the study used both primary and secondary data whereby the dat was analyzed using Statistical Package for Social Sciences (SPSS). Data presentation was done by the use Frequency tables and graphs and percentages.

The study findings established that Risk identification affected the level of nonperforming loans in their banks to a great extent and that risk rating and collateral, credit scoring, credit worthiness analysis affects the the level of nonperforming loans the banks to a great extent. The study findings established that risk analysis and appraisal affected the level of nonperforming loans their bank to a great extent and that measurement, risk estimation and determining risk reduction measures affect the performance of the bank to a great extent. This study recommends that clear established process for approving new credits and extending the existing credits need to established in banks as it is very important while managing credit risks in banks. the study further recommends that credits to related parties should be closely analyzed and monitored so that no senior individual in the institution is able to override the established credit granting process and that monitoring of borrowers should be keenly executed by banks.

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## **LIST OF ABBREVIATION**

CBK            Central Bank of Kenya

NPL           Nonperforming Loans

MFI's         Micro-Finance Institutions

MPT           Modern Portfolio Theory

VaR           Value at Risk

SPSS          Statistical package for Social Sciences

# CHAPTER ONE : INTRODUCTION

## 1.1 Background of the Study

Risk management refers to the systematic application of management policies, procedures and practices to the tasks of identifying, analyzing, assessing, treating and monitoring risk (Freeman, 2006). Financial institutions are exposed to various risks in pursuit of their business objectives; the nature and complexity of which has changed rapidly over time. The failure to adequately manage these risks exposes financial institutions not only hampering the profitability as their earnings are converting into bad debts but also increasing interest rate. While banks have faced difficulties over the years for a multitude of reasons, the major cause of serious banking problems continues to be directly related to lax credit standards for borrowers, poor portfolio risk management, or a lack of attention to changes in economic circumstances. This experience is common especially in emerging economies (Basel, 1999).

Credit risk is the possibility that the actual return on an investment or loan extended will deviate from that, which was expected (Conford, 2000). The goal of credit risk management is to maximize a bank's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. Banks should consider the relationship between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization (Sinkey, 1992)

Many credit problems reveal basic weakness in the credit granting and monitoring processes. Many credit problems would have been avoided or mitigated by a strong internal credit process. Many banks find carrying out a thorough credit assessment (or basic due diligence) as a substantial challenge. For traditional bank lending, competitive pressures and the desire for growth create time constraints that interfere with basic due diligence. Globalisation of credit markets increases the need for financial information based on sound accounting standard and timely macroeconomic and flow of funds data. When this information is not available or reliable, banks may dispense with financial and economic analysis and support credit decisions with simple indicators of quality, especially if they perceive a need to gain a competitive foothold in a rapidly growing market. Finally, banks may need new types of information, such as risk measurements, and more frequent information (Greuning & Bratanovic, 1999)

### **1.1.1 Credit Risk Management Practices**

Credit risk is the risk of loss due to a debtor's non-payment of a loan or other line of credit (either the principal or interest (coupon) or both). Risk management is the practice of creating economic value in a firm by using financial instruments to manage exposure to risk, particularly credit risk and market risk. The Royal Society Study Group (1992) considers that risk management is the making of decisions concerning risks and their subsequent implementation, and flows from risk estimation and risk evaluation. Similar to general risk management, financial risk management requires identifying its sources, measuring it, and plans to address them (Fuser and Meier, 1997).

According to Fuser and Meier (1997), banks use various credit risk management methods such as credit limits, taking collateral, diversification, loan selling, syndicated loans, credit insurance, and securitization and credit derivatives. Credit risk management practices employed by a bank have an importance place. It is important for staff of banking institutions to understand the aspect of risk in the banking operations and the risks that are inherent and exposed in their business operations. Better understanding of risk management is also necessary especially in the financial intermediation activities where managing risk is one its important activities.

### **1.1.2 Non-Performing Loans**

A Non-performing loan is a loan that is in [default](#) or close to being in default. Many loans become non-performing after being in default for more than 90 days although this may vary depending on the contract terms governing the loan agreement (Al-Tamimi, 2002). A loan is nonperforming when payments of interest and principal are past due by 90 days or more, or at least 90 days of interest payments have been capitalized, refinanced or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons to doubt that payments will be made in full. Nonperforming loans represent [debts](#) that are probably not going to be repaid, thus posing [cash](#) problems to their lenders (Al-Tamimi and Al-Mazrooei, 2007). Additionally, banks that have too many nonperforming loans may come under heavy scrutiny from the [regulators](#), which provides significant incentive to [restructure](#) or renegotiate nonperforming loans before they're too far gone to recover any [money](#) at all.

Non-performing loans are loans do not generate income (Baldoni, 1998). The non-performing loans portfolio is an indications of the quality of the total portfolio and ultimately of a bank's lending decision. Another such indicator is the Banks collection ratio. The analysis of non-performing loan portfolio should cover a number of aspects including: aging of past due loans by 30, 90, 180 and 360 days (Harrington and Niehaus, 1999). These classifications can be broken down by type of customer and the branch of economic activity to determine overall trends and whether or not all customers are affected equally.

### **1.1.3 Relationship between Credit Risk Management Practices and Non-Performing Loans**

Risk management is recognized in today's business world as an integral part of good management practice. Commitment to credit risk management is an essential component of a comprehensive technique to risk management and critical to the long-term success to all banking institutions. Poor credit risk management practices leads to rising non-performing loans which compresses profit margins, of commercial banks hence bringing about more challenging environment for banks. According to Kamau (2012), there is a negative relationship between Credit Risk Management and Non performing loans implying that the level of nonperforming loans is inversely affected by credit risk management practices adopted by commercial banks. Financial institutions should adopt appropriate credit risk management practices to maximize Shareholder value by enhancing the value of the firm. Value enhancement can arise from minimization of the costs of financial distress, minimization of taxes and minimization of the possibility that

the bank may be forced to forego positive net present value projects because it lacks the cash because of increased in the level of nonperforming loans.

Credit management is essential to optimizing the performance of financial institutions. Lending has been, and still is, the mainstay of financial institution, and this is more true to emerging economies of developing countries where capital markets are not yet well developed. To most of the transition economies lending activities have been controversial and a difficult matter. This is because business firms on one hand are complaining about lack of credits and the excessively high standards set by financial institutions, while financial institutions on the other hand have suffered large losses on bad loans (Richard, E. 2006). It has been found out that in order to minimize loan losses thus the credit risk, it is essential for financial institutions to have an effective credit risk management system in place ([Basel, 1999](#)). Given the asymmetric information that exists between lenders and borrowers, financial institutions must have a mechanism to ensure that they not only evaluate default risk that is unknown to them ex ante in order to avoid adverse selection, but also that can evolve ex post in order to avoid moral hazards. Weak credit risk management is the primary cause of many commercial banks' failures. Mc Menamin (1999) carried out studies of national banks that failed in the mid 1980s in the U.S.A and found out that the consistent element in the failures was the inadequacy of the bank's credit risk management system in the controlling of loan quality.

#### **1.1.4 Commercial Banking Industry in Kenya**

The Banking industry in Kenya is governed by the Companies Act, the Banking Act, the Central Bank of Kenya Act and the various prudential guidelines issued by the Central

Bank of Kenya (CBK). The banking sector was liberalised in 1995 and exchange controls lifted. The CBK, which falls under the Minister for Finance docket, is responsible for formulating and implementing monetary policy and fostering the liquidity, solvency and proper functioning of the financial system. Kenya currently has 43 licensed commercial banks and one mortgage finance company. Of these 44 institutions, 31 are locally owned and 13 are foreign owned. Citibank, Habib Bank and Barclays Bank are among the foreign-owned financial institutions in Kenya. The government of Kenya has a substantial stake in three of Kenya's commercial banks. The remaining local commercial banks are largely family owned.

Kenya's commercial banks play a crucial role in ensuring Kenya's economic progress. In 1986, Kenya's financial sector experienced a crisis that resulted in 37 failed banks. Loans in default were at the center of the financial crisis. To protect Kenya's commercial banks from undergoing a similar crisis, the Parliament passed a series of regulations to govern the banking industry, and the Central Bank of Kenya strengthened its regulatory role. Banks perform important role in economic development by mobilizing funds from savers and lending them to borrowers in an efficient manner. The loan market in Kenya has faced high competition as commercial banks seek to maximize their returns. The industry Gross Loans stood at Ksh. 914,910 millions in 2010 which grew to Ksh. 1,190,985 Millions by 2012. However the numbers of banks are many hence bringing in competition.



## **1.2 Research Problem**

Risk management is an integral part of good management practice. Poor credit risk management practices leads to rising non-performing loans which compresses profit margins, of commercial banks hence bringing about more challenging environment for banks. There is a negative relationship between Credit Risk Management and Non performing loans implying that the level of nonperforming loans is inversely affected by credit risk management practices adopted by commercial banks (Kamau, 2012). Lending has been and still is the mainstay of financial institutions and this is more true to emerging economies of developing countries where capital markets are not yet well developed. To most of the transition economies, lending activities has been a controversial and difficult matter. This is because business firms on one hand are complaining about lack of credit and the excessively high standards set by financial institutions while financial institutions on the other hand have suffered large losses on bad loans (Richard, 2006). It has been found out that in order to minimize loan losses thus credit risk, it is essential for financial institutions to have an effective credit risk management system in place (Basel, 2010).

Several studies have been done globally on the relationship between credit risk management practices and nonperforming loans. For instance, Greuning and Bratanovic (2003) studied the basis of a sound credit risk management system including guidelines that clearly outline the scope and allocation of bank credit facilities and the manner in which the credit portfolio is managed. This study reviewed how loans are originated, appraised, supervised and collected. Derban, Binner and Mullineux (2005) studied credit risk management practices among commercial banks in Jordan and recommended that

borrowers attributes be assessed through qualitative models and be assigned numbers with the sum of the values compared to a threshold. This technique minimizes processing costs, reduces subjective judgments and possible biases. The rating systems will be important if it indicates changes in expected level of credit loan loss. Nkusu (2011) did a study on nonperforming Loans and macro financial vulnerabilities in advanced economies and established that a sharp increase in NPL triggers long-lived tailwinds that cripple macroeconomic performance from several fronts.

In Kenya, Talel (2010) did a study on the risk management practices adopted by banking institutions in Kenya. The study reveals that risk management in Kenya is considered a vital factor for organizations to meet their desired goals and objectives. Ogol (2011) reviewed the liquidity risk management practices in micro-finance institutions in Kenya And revealed that MFIs had in place liquidity risk management practices. Oretha (2012) did a study on the relationship between credit risk management practices and financial performance of commercial banks in Liberia where it showed a positive relationship between the credit risk management practices and financial performance. From the above studies discussed, it is evident that no known study has focused on the relationship between credit risk management practices and non performing loans in Kenya. This study therefore sought to fill this research gap by seeking answers to one research question: What are the effects of credit risk management practices on non-performing loans in commercial banks in Kenya?

### **1.3 Research Objective**

To determine the effects of credit risk management practices on non-performing loans in commercial banks in Kenya

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

The findings of this study would be important to several stakeholders:

The findings of this study would be important to future researchers and academicians as it would act as a source of reference material besides suggesting areas for further research where the scholars can further knowledge in this area on.

The findings of this study would also be valuable to policy makers in government especially the Central Bank of Kenya in the formulation of policies and regulations governing the administration of credit facilities and the assessment of credit worthiness of borrowers.

The findings of this study would also be valuable to managers in commercial banks especially the staff attached to credit administration departments. Through the findings of this study, they would understand with certainty the effects of their credit assessment on the levels of nonperforming loans recorded by their commercial banks.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter reviews the literature by other scholars and research on the subjects of credit risk management practices and non performing loans among commercial banks. The specific areas covered in this chapter are: the theoretical review, empirical review and summary of the literature review.

### **2.2 Theoretical Review**

#### **2.2.1 Financial Intermediation Theory**

Financial intermediation is a process which involves surplus units depositing funds with financial institutions who then lend to deficit units. Bisignano (1998) and Leland and Pyle (1977) identify that financial intermediaries can be distinguished by four criteria: first their main categories of liabilities (deposits) are specified for a fixed sum which is not related to the performance of a portfolio. Second the deposits are typically short-term and of a much shorter term than their assets. Third a high proportion of their liabilities are chequeable (can be withdrawn on demand).And fourth their liabilities and assets are largely not transferable. The most important contribution of intermediaries is a steady flow of funds from surplus to deficit units.

According to Scholtens and van Wensveen (2003), the role of the financial intermediary is essentially seen as that of creating specialized financial commodities. These are created whenever an intermediary finds that it can sell them for prices which are expected to cover all costs of their production, both direct costs and opportunity costs. Financial intermediaries exist due to market imperfections. As such, in a 'perfect' market situation,

with no transaction or information costs, financial intermediaries would not exist. Numerous markets are characterized by informational differences between buyers and sellers. In financial markets, information asymmetries are particularly pronounced. Borrowers typically know their collateral, industriousness, and moral integrity better than do lenders. On the other hand, entrepreneurs possess inside information about their own projects for which they seek financing (Leland and Pyle, 1977). Moral hazard hampers the transfer of information between market participants, which is an important factor for projects of good quality to be financed

### **2.2.2 Modern Economics Theory**

Modern economics has gone far in discovering the various pathways through which millions of expectations of, and decisions by, individuals can give rise to emergent features of communities and societies (rate of inflation, productivity gains, level of national income, prices, stocks of various types of capital, cultural values, and social norms). Two factors make economic theory particularly difficult (Hannagan, 1998). First, individual decisions at any moment are themselves influenced by these emergent features, by past decisions (e.g., learning, practice, and habit), and by future expectations. Second, the emergent features that can be well handled by existing economic theory and policy concern only fast-moving variables. The more slowly emergent properties that affect attitudes, culture, and institutional arrangements are recognized, but are poorly incorporated.

According to William (1991), economists know that success in achieving financial return from fast dynamics leads to slowly emergent, nearly hidden, changes in deeper and

slower structures, changes that can ultimately trigger sudden crisis and surprise. But the complexities that arise are such that most modern economists are frustrated in their attempts to understand the interactions between fast- and slow-moving emergent features.

### **2.2.3 Modern Portfolio Theory**

Modern Portfolio Theory (MPT) proposes how rational investors should use diversification in order to optimize their portfolios. It also discusses how a risky asset should be priced. This does not mean that the early economists ignored financial markets. Fisher (1930) had already outlined the basic functions of credit markets for economic activity, specifically as a way of allocating resources over time and had recognized the importance of risk in the process. In developing their theories of money, John Maynard Keynes (1936), Hicks (1934, 1935, 1939), Kaldor (1939) and Marschak (1938) had already conceived of portfolio selection theory in which uncertainty played an important role.

However, for many economists during this early period, financial markets were still regarded as mere casinos rather than markets properly speaking. In their view, asset prices were determined largely by expectations and counter-expectations of capital gains and thus they were held up by their own bootstraps as it were. John Maynard Keynes's beauty contest analogy is representative of this attitude.

As such, a good amount of ink was spent on the topic of speculative activity (i.e. the purchase/temporary sale of goods or assets for later resale). For instance, in their pioneering work on futures markets, Keynes (1923, 1930) and Hicks (1939) argued that the price of a futures contract for delivery of a commodity will be generally below the

expected spot price of that commodity (what Keynes called normal backwardation). This, Keynes and Hicks argued, was largely because hedgers shifted their price risk onto speculators in return for a risk premium. Kaldor (1939) went on to analyze the question of whether speculation was successful in stabilizing prices and, in so doing, expanded Keynes's theory of liquidity preference considerably.

In later years, Holbrook Working (1962) would dispute this, arguing that there was, in fact, no difference between the motivations of hedgers and speculators. This led to an early empirical race Houthakker (1969) finding evidence in favor of normal backwardation and Telser (1958, 1981) finding evidence against it.)

Williams (1938) was among the first to challenge the casino view economists held of financial markets and questions of asset pricing. He argued that asset prices of financial assets reflected the intrinsic value of an asset, which can be measured by the discounted stream of future expected dividends from the asset. This fundamentalist notion fit well with Fisher's (1907, 1930) theory, and the value-investing approach of practitioners such as Benjamin Graham.

Markowitz (1959) realized that as the fundamentalist notion relied on expectations of the future, then the element of risk must come into play and thus profitable use could be made of the newly developed expected utility theory of von Neumann and Morgenstern (1944). Markowitz formulated the theory of optimal portfolio selection in the context of trade-offs between risk and return, focusing on the idea of portfolio diversification as a method of reducing risk -- and thus began what has become known as Modern Portfolio Theory or simply MPT.

As noted, the idea of an optimal portfolio allocation had already been considered by Keynes, Hicks and Kaldor in their theories of money, and thus it was a logical step for Tobin (1958) to add money to Markowitz's story and thus obtain the famous two-fund separation theorem. Effectively, Tobin argued that agents would diversify their savings between a risk-free asset (money) and a single portfolio of risky assets (which would be the same for everyone). Different attitudes towards risk, Tobin contended, would merely result in different combinations of money and that unique portfolio of risky assets.

### **2.3 Relationship between Credit Risk Management and Non-Performing Loans**

Most of studies reviewed established that there is a negative relationship between the level of non-performing loans and credit risk management practices in banks. Subjective decision-making by the management of banks may lead to extending credit to business enterprises they own or with which they are affiliated, to personal friends, to persons with a reputation for non-financial acumen or to meet a personal agenda, such as cultivating special relationship with celebrities or well-connected individuals. A solution to this may be the use of tested lending techniques and especially quantitative ones, which filter out subjectivity (Griffith and Persuad, 2002).

Banks have credit policies that guide them in the process of awarding credit. Credit control policy is the general guideline governing the process of giving credit to bank customers. The policy sets the rules on who should access credit, when and why one should obtain the credit including repayment arrangements and necessary collaterals. The method of assessment and evaluation of risk of each prospective applicant are part of a credit control policy (Payle, 1997).



This minimizes costs and losses from bad debts but might reduce revenue earning from loans, profitability and cash flow (Bonin and Huang, 2001). Fisher (1997), Early (1996) and Greuning and Bratanovic (1999) observe that the lending policy should be in line with the overall bank strategy and the factors considered in designing a lending policy should include; the existing credit policy, industry norms, general economic condition and the prevailing economic climate.

The guiding principle in credit appraisal is to ensure that only those borrowers who require credit and are able to meet repayment obligations can access credit. Lenders may refuse to make loans even though borrowers are willing to pay a higher interest rate, or, make loans but restrict the size of loans to less than the borrowers would like to borrow (Mishkin, 1997). The argument is that credit should be made available according to repayment capability based on current performance. Seppala *et al* (2001) argue that a sound credit policy would help improve prudential oversight of asset quality, establish a set of minimum standards, and to apply a common language and methodology (assessment of risk, pricing, documentation, securities, authorization, and ethics), for measurement and reporting of non-performing assets, loan classification and provisioning. The credit policy should set out the bank's lending philosophy and specific procedures and means of monitoring the lending activity (Polizatto, 1990; Popiel, 1990).

According to (Simonson et al 1986), sound credit policy would help improve prudential oversight of asset quality, establish a set of minimum standards, and to apply a common language and methodology (assessment of risk, pricing, documentation, securities, authorization, and ethics), for measurement and reporting of non-performing assets, loan classification and provisioning. The credit policy should set out the bank's lending

philosophy and specific procedures and means of monitoring the lending activity. The guiding principle in credit appraisal is to ensure that only those borrowers who require credit and are able to meet disclosure to encourage safe and sound banking practices. The obvious benefit of these pillars is to provide consistency among banks around the world, thus enhancing the stability of the financial markets (Conford, 2000).

## **2.4 Empirical Review**

Haneef, Riaz, Ramzan, Mansoor, Ishaq and Karim (2012) examined the impact of risk management on non-performing loans and profitability of banking sector of Pakistan. The study used sampling technique where it selected five commercial banks for inclusion in the study. The result of this study revealed that there was no proper mechanism for risk management in banking sector of Pakistan. Study also concluded that non-performing loans were increasing due to lack of risk management which threatened the profitability of banks.

Talel (2010) did a survey of risk management practices adopted by banking institutions in Kenya. The main objective of the study was to conduct a survey of risk management practices adopted by commercial banks in Kenya, identify the types of risks faced and establish the various tools applied by institutions to identify and mitigate against business risks. The population comprised of all the 45 commercial banks operating in Kenya as at 31<sup>st</sup> December 2009 and the study was based on descriptive research design where a combination of quantitative and qualitative data was obtained using self-administered questionnaires. The study revealed that risk management in Kenya was considered a vital factor for organizations to meet their desired goals and objectives. Many of the

institutions sampled strongly agreed that effective risk management could improve achievement of organizational goals and mirrors the Central Bank of Kenya (CBK) Annual report (2008) which observed that risk management had taken an increasingly pivotal role in the banking sector in view of enhanced customer expectations, technological advancements, improved regulatory framework and regional expansion by banks. Despite the critical importance of risk management in determining the overall success of organizations, risk management was still evolving in Kenya and the major challenges faced by banking institutions included inadequate capital resources, staff competencies and system limitations.

Ogol (2011) did study liquidity risk management practices in micro-finance institutions in Kenya. Emphasis was on; understanding the process of liquidity risk identification by MFIs, the extent to which MFIs were classified, monitor liquidity risks, liquidity risk exposure of MFIs and to identify the various practices that the MFIs adopted in managing the liquidity risks. Primary data was collected through questionnaires distributed to MFIs operating in Nairobi City. Results indicated that MFIs had in place liquidity risk management practices. This was the case when it involved understanding the liquidity risk, identification, analysis/assessment and monitoring. The population of interest in this study consisted of all 41 MFIs listed by the CBK 2002 to which the questionnaires were sent. A total of 30 questionnaires; representing 71% were administered and analyzed.

Oretha (2012) examined the relationship between credit risk management practices and financial performance of commercial banks in Liberia. Quantitative research design was employed under the quantitative research design survey method. The data were collected

by cross sectional survey method. The conclusion of this study shows a positive relationship between the credit risk management practices and financial performance. Commercial banks during the pre-liberalization period were not effective in managing their credit risk in contrast to the post-liberalization period. Variations in the credit policies by seven of the nine commercial banks reflected monetary and fiscal policy actions, where expansionary fiscal policy partly increased inflationary pressure and the monetary authority. During the post-liberalization period, most banks used the services of consultants to formulate their credit risk management policies which reduced the risk posed by defaulting on loans.

Kabiru (2010) examined the effect of risk management practices on the financial performance of commercial banks in Kenya. The objectives of this study were to analyze the risk management practices undertaken by Commercial Banks in Kenya and to determine and assess the effect of these risk management practices on their financial performance. The risks facing financial institutions were mainly classified into; strategic, operational, credit and market risks. In managing these risks, the risk management approach adopted by the owners and/or management was influenced by the organizational culture and support, whether or not risk management was integrated in the setting of organizational objectives, whether there was a documented risk management policy or framework, how the risk identification process is conducted, the risk analysis process, evaluation and treatment of risk; risk monitoring and review; and last but not least ensuring that there is effective risk management. This has been influenced to a large extent by guidelines put forward by the Central Bank of Kenya and also the nature of the

banking industry. In most cases banks had adopted a proactive and enterprise wide approach to their risk management practices by have a risk department with a manager, and had a documented risk management policy which was fairly well communicated through out all levels of the organization from the Board to Staff. From the research conducted it was evident that risk management and the related practices are considered significantly important to the operations and financial performance of these commercial banking institutions. The study also found that some risk management practices did not have significant effect on financial performance more than others for example: the existence of a risk management policy and the integration of risk management in setting of organizational objectives were considered to be the key risk management practices that had a direct effect on financial performance. This meant that although there were other determinants of performance not included in the study, the banks could improve their performance by focusing on developing strong risk management policies and integrating risk management in the process of setting achievable organizational objectives

Kimeu (2008) did a survey of credit risk management techniques of unsecured bank loans of commercial banks in Kenya. The objective of the study was to assess the credit risk management techniques adopted by Commercial Banks in Kenya to assess unsecured bank loans. The population of the study consisted of 47 Commercial Banks and a census study was adopted. Data was collected from primary sources through a semi-structured questionnaire, administered to the Credit Officers of the various Commercial Banks. The results were analyzed and presented in the form of frequency tables and percentages. The findings revealed that a majority of the Commercial Banks in Kenya were involved in un-

secured loan services. Most of the Commercial Banks had both minimum and maximum loan limits. Formulation of unsecured loan policies was undertaken by their Top Management. Majority of the Commercial Banks had distinctive separate departments where un-secured loans activities were organized. It was revealed that Statistical Method of credit assessment was the mostly used in assessing/screening loan applications. A majority of the Commercial Banks maintained a certain Debt Ratio. Quality appraisal of loan portfolios was found to be the mostly considered measure able to improve loan serviceability/ reduce credit risk. Irregular credit turnover/ salary and declining turnover/ salary are the trends greatly affecting customers' credit worthiness. A loanee was considered a defaulter after three late repayments in most of the Commercial Banks. Further, the study established that Credit risk and Liquidity risk are the most important risks for Commercial Banks. Improved credit appraisals was the most considered factor responsible for banks improved financial performance. Capacity and Character of the borrower were the most considered of the 6 Cs when appraising customers credit worthiness.

Mwirigi (2006) using survey approach examined the credit risk management techniques adopted by microfinance institutions in Kenya. The study revealed that, a significant number i.e 92 percent of the respondents used credit management policies as basis of objective credit risk appraisal. 67.5 per cent had distinct departments where activities are organized. 67.5 per cent involved their institutions in developing of credit risk management policies and that 87.5 per cent used pres-set credit risk levels as a means of

managing credit risk. In conclusion she identifies credit risk as the most important risk with 80 per cent of the respondents ranking it as the most important among other risks.

Mathara (2007) in a study of the response of National Bank of Kenya Ltd. to challenges of non-performing loans identified the following factors to have led to high levels of non-performing loans in the bank, lack of adequate credit policy guidelines, poor credit risk management practices, use of qualitative methods of loan assessment and poor monitoring and evaluation systems. In conclusion their study indicates that the absence of regularly update credit policy and in adequate monitoring of loans to have led to rising portfolio of non- performing loans and the failure by the banks to notice the increasing default rate of the borrowers. Further the study concludes that the reliance of the bank on qualitative credit analysis methods that entails such factors as character of the borrower, reputation of the borrowed and the historical financial capability of the borrower as opposed to the used of quantitative techniques that emphasized on the borrowers projected cash flows and analysis of audited financial books of accounts have contributed to immensely to the non-performing loan portfolio.

Lepus (2004) in a survey of the best practices in strategic credit risk management in USA, observes that, sixty three (63%) per cent out of the eight banks interviewed employed Monte Carlo methods of credit risk measurement, while sixty three (63%) per cent , fifty (50%) and thirteen (13) per employed VaR, and expected and unexpected models of measuring credit risk. Despite innovation in the financial services sector, credit risk is still the major single cause of bank failures. The reason is that more than 80% of a

bank's balance sheet generally relates to this aspect of risk management (Greuning et al 1999) Because of the potentially dire effects of credit risk, it is important to perform a comprehensive evaluation of a bank's capacity to assess, administer, supervise, control, enforce and recover loans, advances, guarantees, and other credit instruments.

## **2.5 Summary of the Literature Review**

The studies explored in the empirical review reviewed credit risk management practices from an adoption and application point of view. For example, Talel (2010) did a survey of risk management practices adopted by banking institutions in Kenya. Ogol (2011) did study liquidity risk management practices in micro-finance institutions in Kenya. Oretha (2012) examined the relationship between credit risk management practices and financial performance of commercial banks in Liberia. Kabiru (2010) examined the effect of risk management practices on the financial performance of commercial banks in Kenya while Kimeu (2008) did a survey of credit risk management techniques of unsecured bank loans of commercial banks in Kenya. From their discussion, it was evident that no known study has examined the effects of credit risk management practices on non-performing loans in commercial banks in Kenya. This study therefore seeks to fill this research gap.



## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.0 Introduction**

This chapter sets out various stages that were followed in completing the study. It specifically covers the research design, population, data collection instruments, and data analysis.

### **3.1 Research design**

The study used descriptive research design. Descriptive research is the investigation in which quality data is collected and analysed in order to describe the specific phenomenon in its current trends, current events and linkages between different factors at the current time. Descriptive research design was chosen because it enables the researcher to generalise the findings to a larger population. This study therefore was able to generalise the findings to all the commercial banks in Kenya.

### **3.2 Population and sample**

Population in statistics is the specific population about which information is desired. According to Ngechu (2004), a population is a well defined or set of people, services, elements, events, group of things or households that are being investigated. The target population for this study was 44 banking institutions transacting business in Kenya as at December 2012. These banking institutions were selected because of their involvement in the credit market which exposes them to credit risk which call for proper management practices. All the 44 targeted financial institutions have a representative office in Nairobi which makes them more accessible. Due to ease of accessibility to these firms and their

small number, this study included all the institutions in the study hence a census hence no sampling.

### **3.3 Data Collection**

The study used both primary and secondary data. Primary data was collected using a semi structure questionnaire. The questionnaire is designed to include open and closed ended questions. Open ended question were used to elicit more thinking from the respondents while closed ended questions were used to standardize responses and save on respondents time taken to fill. As much as possible, a 5-point likert scale was used to determine the relationship between credit risk management practices on non performing loans among commercial banks in Kenya.

The closed ended questions enabled the researcher to collect quantitative data while open-ended questions enabled the researcher to collect qualitative data. The questionnaire were divided into two sections. Section one is concerned with the general information about respondents and the Banks. Section two deals with the effects of credit credit risk management practices on non performance loans of commercial banks. Secondary data was collected by use of desk search techniques from published reports and other documents at the Central Bank of Kenya. Secondary data includes the banks publications, journals, and periodicals.

### **3.4 Data Analysis**

The collected data was thoroughly examined and checked for completeness and comprehensibility. The data was then be summarized, coded and tabulated. Descriptive

statistics such as means, standard deviation and frequency distribution were used to analyze the data. Data was coded and entered into the Statistical Package for Social Sciences (SPSS) for analysis. SPSS was used to perform the analysis as it aided in organizing and summarizing the data by the use of descriptive statistics such as tables.

Data presentation was done by the use of pie charts, Frequency tables and graphs and percentages. This ensured that the gathered information was clearly understood.

In order to determine the effects of credit risk management practices on the levels of nonperforming loans among commercial banks in Kenya, the researcher conducted a regression analysis using the following regression model

The regression equation is:

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

Where Y is the dependent variable (Non Performing Loans),  $\beta_0$  is the regression coefficient,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$  and  $\beta_5$  are the slopes of the regression equation and the independent variables are;

Y = Non Performing Loans

$X_1$  = Risk Identification,

$X_2$  = Risk Analysis and Assessment,

$X_3$  = Risk Monitoring and

$X_4$  = Credit-approval/Sanctions

$\beta_0$  = Constant

$\alpha$  = error term (normally distributed about a mean of 0 and for purpose of computation, the  $\alpha$  is assumed to be 0). The equation was solved by the use of statistical model where SPSS was applied.

In order to test the significance of the model in measuring the effects of credit risk management practices on non-performing loans in commercial banks in Kenya, this study will conduct an Analysis of Variance (ANOVA). On extracting the ANOVA statistics, the researcher looked at the significance value. The study was tested at 95% confidence level and 5% significant level. If the significance number found is less than the critical value ( $\alpha$ ) set 2.4, then the conclusion was that the model is significant in explaining the relationship.

## CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION

### 4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research methodology. 44 respondents who were managers were targeted by this study of which 29 filled in and returned the questionnaires making a response rate of 65.91%. This response rates was good and representative and conform to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

### 4.2 Demographics

#### 4.2.1 Ownership of Banks

The study sought to establish the distribution in the bank ownership. The findings are presented in the table below.

**Table 4. 1: Ownership of Banks**

	Frequency	Percent
Foreign	8	27.6%
Local Private	13	44.8%
Local Public	4	13.8%
Government	4	13.8%
Total	29	100.0%

From the findings, 44.8% of the respondents indicated that there banks were local private, 27.6% indicated that there banks were foreign, while 13.8% of the respondents indicated that their banks were government owned as well as local public. This implied that all the banks were captured in the study and therefore the findings could be generalized across all banks.

#### 4.2.2 Formal Written Credit Policy Manual

The study asked the respondents' whether their banks had a formal written credit policy manual. The findings are presented in the table below.

**Table 4. 2: Formal Written Credit Policy Manual**

	Frequency	Percent
Yes	29	100.0%
Total	29	100.0%

From the data findings, all (100.0%) of the respondents indicated that their banks had a formal written credit policy manual. This implied that their banks had a formal written credit policy manual.

#### 4.2.3 Formal Written Credit Policy Manual Review

The study further asked the respondents on how often the formal written credit policy manual was reviewed. The findings are presented in the table below.

**Table 4.3: Formal Written Credit Policy Manual Review**

	Frequency	Percent
Annually	8	27.6%
Others	21	72.4%
Total	29	100.0%

From the data findings, 72.4% of the respondents indicated that their formal written credit policy manual was reviewed on other period of times while 27.6% of the respondents indicated that their formal written credit policy manual were reviewed annually. This implied that need arises, either to capture a specific market or to respond to changes in the general market.

### 4.3 Credit Risk Management Practices

#### 4.3.1 Risk Identification

The study sought to establish the extent to which risk identification affected the level of nonperforming loans in the banks. The findings are presented in the table below.

**Table 4.4: Credit Risk Management Practices**

	Frequency	Percent
Little extent	1	3.4%
Moderate extent	4	13.8%
Great extent	16	55.2%
Very great extent	8	27.6%
Total	29	100.0%

From the study findings, majority (55.2%) of the respondents indicated that risk identification affected the level of nonperforming loans in their banks to a great extent, 27.6% to a very great extent, 13.8% to a moderate extent while 3.4% indicated to a little extent.

#### 4.3.2 Facets of Risk Identification

The study sought to establish the respondents rating on the extent to which the following facets of risk identification affected the level of nonperforming loans in their banks. The findings were presented in the table below.

**Table 4.5: Facets of Risk Identification**

	Mean	Std. dev.
Inspection by branch managers	3.364	1.0541
Financial statement analysis	3.246	1.0948
Establishing standards	3.109	0.856
Credit scoring	3.657	1.0072
Risk rating and collateral	3.861	0.9081
Credit worthiness analysis	3.563	1.098

From the data findings, the respondents indicated Risk rating and collateral affected the the level of nonperforming loans in their banks to a great extent as shown by mean of 3.861, Credit scoring affected the the level of nonperforming loans in their banks to a great extent as shown by mean of 3.657. Credit worthiness analysis affected the the level of nonperforming loans in their banks to a great extent as shown by mean of 3.563. Inspection by branch managers affected the the level of nonperforming loans in their banks to a moderate extent as shown by mean of 3.364. Financial statement analysis affected the the level of nonperforming loans in their banks to a moderate extent as shown by mean of 3.246 while establishing standards affected the level of nonperforming loans in their banks to a moderate extent as shown by mean of 3.109.

#### **4.3.3 Effect of Employee Welfare Programs**

The study findings sought to establish the respondents' level of agreement with the following statements that relate to the effect of employee welfare programs on their work.

The table below presents the data findings.

**Table 4. 6: Effect of Employee Welfare Programs**

	Mean	Std. dev.
The credit manager establish the crucial observation areas inside and outside the bank	3.894	1.0792
The departments and the employees are assigned with responsibilities to identify specific risks	3.3478	0.8478
Risk identification is positively significant to influence risk management practices.	3.9139	0.9479

From the study findings, the respondents agreed that the credit manager established the crucial observation areas inside and outside the bank as shown by mean of 3.894. The respondents agreed that risk identification was positively significant to influence risk



management practices as show by mean of 3.9139. The respondents agreed that the departments and the employees were assigned with responsibilities to identify specific risks as shown by mean of 3.3478.

#### **4.4 Risk Analysis and Appraisals**

##### **4.4.1 Extent of Risk Analysis and Appraisal Effect**

The study sought to find out the extent to which risk analysis and appraisal affected the level of nonperforming loans the bank. The findings are presented in the table below.

**Table 4.7: Risk Analysis and Appraisals**

	Frequency	Percent
Little extent	3	10.3%
Moderate extent	7	24.1%
Great extent	14	48.3%
Very great extent	5	17.2%
Total	29	100.0%

From the study findings, majority (48.3%) of the respondents indicated that risk analysis and appraisal affected the level of nonperforming loans their bank to a great extent, 24.1% to a moderate extent 17.2% to a great extent while 10.3% indicated to a little extent.

##### **4.4.2 Aspects of Risk Analysis and Appraisal**

The study sought to establish the extent to which the following aspects of risk analysis and appraisal affected the performance of the bank. The data findings are presented in the table below

**Table 4. 8: Aspects of Risk Analysis and Appraisal**

	Mean	Std. dev.
Measurement	3.961	1.051
Classification	3.246	0.637
Risk evaluation	4.113	0.983
Risk estimation	3.621	1.007
Determine risk reduction measures	3.238	1.043

From the study finding the respondents indicated that risk evaluation affected the performance of the bank to a great extent as indicated by mean of 4.113. Measurement affected the performance of the bank to a great extent as shown by mean of 3.961. Risk estimation affected the performance of the bank to a great extent as shown by mean of 3.621. Determining risk reduction measures affected the performance of the bank to a moderate extent as shown by mean of 3.238 while classification affected the performance of the bank to a moderate extent as shown by mean of 3.246.

#### **4.4.3 Risk Analysis and Assessment in Credit Risk Management**

The study sought to find out the respondents level of agreement with the following statement about risk analysis and assessment in credit risk management. The table below presents the data findings.

**Table 4.9: Risk Analysis and Assessment in Credit Risk Management**

<b>Risk analysis and assessment in credit risk management</b>	Mean	Std. dev.
Risk analysis and assessment comprises identification of the outcomes	3.934	0.9302
Risk analysis and assessment comprises estimation the magnitude of the consequences	3.501	1.213
Risk analysis and assessment comprises the probability of those outcomes	3.594	0.983
Other, please specify	3.061	1.139

From the results tabulated above, the respondent agreed that Risk analysis and assessment comprised identification of the outcomes as shown by mean of 3.934. The

respondent agreed that risk analysis and assessment comprised the probability of those outcomes as shown by mean of 3.594. The respondent agreed that risk analysis and assessment comprised estimation the magnitude of the consequences as shown by mean of 3.501 while the respondents were moderate that risk analysis and assessment comprised other aims as shown by mean of 3.061.

#### **4.4 Risk Monitoring**

##### **4.4.1 Risk Monitoring**

The study sought to find out the extent to which risk monitoring affected the performance of the bank. The findings are presented in the table below.

**Table 4.10: Risk monitoring**

	Frequency	Percent
Little extent	2	6.9%
Moderate extent	5	17.2%
Great extent	16	55.2%
Very great extent	6	20.7
Total	29	100.0%

From the study findings, 55.2% of the respondents indicated that risk monitoring affected the performance of the banks to a great extent, 20.7% to a very extent 17.2% to a great moderate extent while 6.9% indicated to a little extent.

##### **4.4.2 Credit Risk Monitoring**

The study sought to establish the extent to which the following facets of credit risk monitoring affected the performance of the banks. The findings are presented in the table below.

**Table 4.11: Credit Risk Monitoring**

	Mean	Std. dev.
Controls in place	3.836	1.021

Responses in place	3.217	0.862
Reporting and review	3.106	1.126
Internal control	3.919	1.262

From the data findings, the respondents indicated that controls in place affected the performance of the banks to a great extent as indicated by mean of 3.836. Internal control affected the performance of the banks to a great extent as shown by mean of 3.919. Responses in place affected the performance of the banks to a moderate extent as indicated by mean of 3.217. Reporting and review affected the performance of the banks to a moderate extent as indicated by mean of 3.106.

#### 4.4.3 Risk Monitoring Practices

The study sought to establish the extent to which the following risk monitoring practices affected the performance of the banks. The findings are presented in the table below.

**Table 4.12: Risk Monitoring Practices**

	Mean	Std. dev.
Frequent contact with borrowers, creating an environment that the bank can be seen as a solver of problems and trusted adviser	3.761	0.872
Developing the culture of being supportive to borrowers whenever they are recognized to be in difficulties and are striving to deal with the situation	3.452	1.102
Monitoring the flow of borrower's business through the bank's account	2.906	1.253
Regular review of the borrower's reports as well as an on-site visit	3.614	1.361
Updating borrowers credit files	3.159	0.831
Periodically reviewing the borrowers rating assigned at the time the credit was granted.	4.031	1.037

From the study findings, the respondents agreed that periodically reviewing the borrowers rating assigned at the time the credit was granted affected the performance of the banks as shown by mean of 4.031. Respondents agreed that frequent contact with borrowers, creating an environment that the bank can be seen as a solver of problems and

trusted adviser affected the performance of the banks as shown by mean of 3.761. The respondents agreed that regular review of the borrower's reports as well as an on-site visit affected the affected the performance of the banks as shown by mean of 3.614. The respondents were moderate that developing the culture of being supportive to borrowers whenever they were recognized to be in difficulties and were striving to deal with the situation affected the performance of the banks as shown by mean of 3.452. The respondents were moderate that monitoring the flow of borrower's business through the bank's account affected the performance of the banks as shown by mean of 2.906 while the respondents were moderate that updating borrowers' credit files affected the performance of the banks as shown by mean of 3.159.

#### **4.5 Credit Approval/Sanctions**

##### **4.5.1 Extent of Effects of Facets of credit-approval/sanctions**

The study sought to establish the extent to which the following facets of credit-approval/sanctions affect the performance of the bank. The table below presents the data findings.

**Table 4. 13: Extent of Effects of Facets of credit-approval/sanctions**

	Mean	Std. dev.
Clear established process	3.617	0.981
Credit approval guidelines	3.961	1.015
Monitoring of borrowers	4.072	0.836

From the results tabulated above, the respondents indicated that monitoring of borrowers affected the performance of the bank to a great extent as shown by mean of 4.072. Credit approval guidelines affected the performance of the bank to a great extent as shown by

mean of 3.961 while clear established process affected the performance of the banks to a great extent as shown by mean of 3.617.

#### 4.5.2 Statements on Credit-Approval/Sanctions

The study sought to establish the respondents' level of agreement with the following statements that relate to the effect of credit-approval/sanctions on the performance of the bank. The findings are presented in the table below.

**Table 4.14: Statements on Credit-Approval/Sanctions**

	Mean	Std. dev.
Clear established process for approving new credits and extending the existing credits has been observed to be very important while managing Credit Risks in banks	4.216	0.715
Monitoring of borrowers is very important as current and potential exposures change with both the passage of time and the movements in the underlying variables	3.974	1.003
Banks must have in place written guidelines on the credit approval process and the approval authorities of individuals or committees as well as the basis of those decisions.	3.471	0.994
Prudent credit practice requires that persons empowered with the credit approval authority should not also have the customer relationship responsibility.	3.694	1.287
Some approval authorities will be reserved for the credit committee in view of the size and complexity of the credit transaction	3.238	1.061
Credits to related parties should be closely analyzed and monitored so that no senior individual in the institution is able to override the established credit granting process.	4.002	0.892

From the study findings, the respondents agreed that clear established process for approving new credits and extending the existing credits has been observed to be very important while managing Credit Risks in banks as shown by mean of 4.216. The respondents agreed that credits to related parties should be closely analyzed and monitored so that no senior individual in the institution is able to override the established credit granting process as shown by mean of 4.002. The respondents agreed that

monitoring of borrowers was very important as current and potential exposures change with both the passage of time and the movements in the underlying variables as shown by mean of 3.974. On whether prudent credit practice required that persons empowered with the credit approval authority should not also have the customer relationship responsibility, the respondents agreed as shown by mean of 3.694. the respondents were moderate that banks must have in place written guidelines on the credit approval process and the approval authorities of individuals or committees as well as the basis of those decisions as shown by mean of 3.471 while the respondents were moderate that some approval authorities will be reserved for the credit committee in view of the size and complexity of the credit transaction 3.238.

#### 4.6 Regression Analysis

In order to determine the effects of credit risk management practices on the levels of nonperforming loans among commercial banks in Kenya, the researcher conducted a regression analysis. The study conducted a multiple regression analysis. The findings were as shown in the table 4.1 below:

**Table 4.15: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.867 <sup>a</sup>	.782	.625	1.76421E5
a. Predictors: (Constant), Risk Identification, Risk Analysis and Assessment, Risk Monitoring, Credit-approval/Sanctions				

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable that is explained by the independent variables.

From the analysis, the independent variable studied here had a strong relationship with balance of payment as explained by adjusted  $R^2$  of 0.782. Therefore it can be deduced that the relationship between Non Performing Loans and the independent variables (Risk Identification, Risk Analysis and Assessment, Risk Monitoring, Credit-approval/Sanctions) is strong.

In order to test the significance of the model the, the study conducted an Analysis of Variance. The findings were as shown below:

**Table 4. 16: ANOVA**

<b>ANOVA<sup>b</sup></b>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.712E11	4	1.352E11	4.591	.008 <sup>a</sup>
	Residual	1.582E11	5	3.126E10		
	Total	7.296E11	9			
a. Predictors: (Constant), Risk Identification, Risk Analysis and Assessment, Risk Monitoring, Credit-approval/Sanctions						
b. Dependent Variable: Non Performing Loans						

From the ANOVAs results, the probability value of 0.008 was obtained which indicates that the regression model was significant in predicting the relationship between non performing loans and the predictor variables.

**Table 4. 17: Coefficients of determination**



Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	124.348	229.172		-.057	.045
	Risk Identification,	5.638	3.546	-.766	-1.674	.032
	Risk Analysis and Assessment,	7.046	13.496	-1.000	-3.486	.038
	Risk Monitoring	2.648	35.129	.002	.009	.027
	Credit-approval/Sanctions	16.308	22.671	.272	.644	.036

a. Dependent Variable: Non Performing Loans

The researcher conducted a regression analysis so as to determine the relationship between Non Performing Loans and the predictor variable which included Risk Identification, Risk Analysis and Assessment, Risk Monitoring, Credit-approval/Sanctions. The following regression equation was obtained:

$$Y = 124.348 + 5.638X_1 + 7.046X_2 - 2.648X_3 + 16.308X_4 + \varepsilon$$

From the regression model obtained above, holding all the other factors constant, Non Performing Loans will be 124.348. A unit change in Risk identification holding the other factors constant will change Non Performing Loans by 5.638; A unit change in Risk Analysis and Assessment holding the other factors constant will change Non Performing Loans 7.046, a unit change in risk monitoring holding bthe other factors constant will change Non Performing Loans by -2.648 while a unit change in Credit-approval/Sanctions holding the other factors constant will change Non Performing Loans by 16.308. This implied that Credit-approval/Sanctions had the highest influence on Non Performing Loans followed by Risk Analysis and Assessment, then Risk Analysis and Assessment and finally Risk Monitoring

The analysis was undertaken at 5% significance level. The criteria for comparing whether the predictor variables were significant in the model was through comparing the obtained probability value and  $\alpha=0.05$ . If the probability value was less than  $\alpha$ , then the predictor variable was significant otherwise it wasn't. All the predictor variables in this study were significant in the model as their probability values were less than  $\alpha=0.05$ .

#### **4.7 Discussions and Interpretation of Findings**

The study findings established that all banks had a formal written credit policy manual and that they were reviewed on various times with other being reviewed annually. These findings are consistent with the findings of Haneef, Riaz, Ramzan, Mansoor, Ishaq and Karim (2012) examined the impact of risk management on non-performing loans and profitability of banking sector of Pakistan. Their study revealed that there was no proper mechanism for risk management in banking sector of Pakistan. The study also established that risk identification affected the level of nonperforming loans in their banks to a great extent.

Risk rating and collateral, Credit scoring, Credit worthiness analysis affected the the level of nonperforming loans in their banks to a great extent. These were some of the risk management practices adopted by commercial banks in Kenya. These findings are consistent with those of Talel (2010) who did a survey of risk management practices adopted by banking institutions in Kenya that revealed that risk management in Kenya was considered a vital factor for organizations to meet their desired goals and objectives. Risk analysis and appraisal affected the level of nonperforming loans their bank to a great extent. Risk evaluation, Measurement, Risk estimation and Determining risk reduction

measures affected the performance. Despite the critical importance of risk management in determining the overall success of organizations, risk management was still evolving in Kenya and the major challenges faced by banking institutions included inadequate capital resources, staff competencies and system limitations (Talel, 2010).

Risk analysis and assessment comprised identification of the outcomes risk analysis and assessment comprised the probability of those outcomes, risk analysis and assessment comprised estimation the magnitude of the consequences. Risk monitoring, affected the performance of the banks to a great extent. Periodically reviewing the borrowers rating assigned at the time the credit was granted, frequent contact with borrowers, creating an environment that the bank can be seen as a solver of problems and trusted adviser, regular review of the borrower's reports as well as an on-site visit affected the performance of the banks affected the performance of the banks to a great extent. Monitoring of borrowers, Credit approval guidelines and clear established process affected the level of non-performing loans among commercial banks in Kenya. These findings are consistent with those of Kabiru (2010) who examined the effect of risk management practices on the financial performance of commercial banks in Kenya. In most cases banks had adopted a proactive and enterprise wide approach to their risk management practices by have a risk department with a manager, and had a documented risk management policy which was fairly well communicated through out all levels of the organization from the Board to Staff. From the research conducted it was evident that risk management and the related practices are considered significantly important to the operations and financial performance of these commercial banking institutions.

## **CHAPTER FIVE: DISCUSSION, CONCLUSION AND RECOMMENDATION**

### **5.1 Introduction**

This study sought to determine the effects of credit risk management practices on non-performing loans in commercial banks in Kenya. The findings, discussions, conclusion and recommendations are presented below.

### **5.2 Summary**

The study findings established that all banks had a formal written credit policy manual and that they were reviewed on various times with other being reviewed annually. Risk identification affected the level of nonperforming loans in their banks to a great extent as indicated by 55.2% of the respondents. The study findings established that Risk rating and collateral, Credit scoring, Credit worthiness analysis affected the the level of nonperforming loans in their banks to a great extent as shown by means of 3.861, 3.657 and 3.563 while the effect of inspection by branch managers financial statement analysis and establishing standards was moderate. The data findings further established that the respondents were in agreement that credit manager established the crucial observation areas inside and outside the bank, risk identification was positively significant to influence risk management practices as show by means of 3.894 and 3.9139.

The study findings established that risk analysis and appraisal affected the level of nonperforming loans their bank to a great extent as indicated by 48.3% of the respondents. Further, the study findings established that risk evaluation, Measurement, Risk estimation and Determining risk reduction measures affected the performance of the bank to a great extent as indicated by means of 4.113, 3.961, 3.621 and 3.238

respectively while classification affected to a moderate extent. The study findings established that the respondents agreed that Risk analysis and assessment comprised identification of the outcomes risk analysis and assessment comprised the probability of those outcomes, risk analysis and assessment comprised estimation the magnitude of the consequences as shown by means of 3.934, 3.594 and 3.501 respectively while the level of agreement on the statement that risk analysis and assessment comprised other aims was moderate.

With regard to risk monitoring, the study findings established that risk monitoring affected the performance of the banks to a great extent. the study findings further established that controls in place and Internal control affected the performance of the banks to a great extent as indicated by means of 3.836 and 3.919 respectively while Responses in place and Reporting and review affected to a moderate extent.

The study findings established that the respondents were in agreement that periodically reviewing the borrowers rating assigned at the time the credit was granted, frequent contact with borrowers, creating an environment that the bank can be seen as a solver of problems and trusted adviser, regular review of the borrower's reports as well as an on-site visit affected the performance of the banks as shown by means of 4.031, 3.761 and 3.614 respectively. the respondents were moderate that developing the culture of being supportive to borrowers whenever they were recognized to be in difficulties and were striving to deal with the situation and monitoring the flow of borrower's business through the bank's account affected the performance of the banks as shown by mean of 2.906 while the respondents were moderate that updating borrowers' credit files affected the performance of the banks

Credit Approvals/Sanctions, the study findings established that monitoring of borrowers, Credit approval guidelines and clear established process and affected the performance of the banks to a great extent as shown by means of 3.617, 4.072 and 3.961 respectively. the study findings further established that the respondents agreed that clear established process for approving new credits and extending the existing credits has been observed to be very important while managing Credit Risks in banks, credits to related parties should be closely analyzed and monitored so that no senior individual in the institution is able to override the established credit granting process, monitoring of borrowers was very important as current and potential exposures change with both the passage of time and the movements in the underlying variables and prudent credit practice required that persons empowered with the credit approval authority should not also have the customer relationship responsibility as shown by means of 4.216, 4.002 and 3.974 respectively.

### **5.3 Conclusion**

The study concludes that banks have formal written credit policy manual which are reviewed over time. The study further concludes that Risk identification affects the level of nonperforming loans in their banks to a great extent and that Risk rating and collateral, Credit scoring, Credit worthiness analysis affects the the level of nonperforming loans the banks to a great extent with inspection by branch managers financial statement analysis and establishing standards being moderate. In addition the study concludes that credit manager established the crucial observation areas inside and outside the bank and risk identification is positively significant to influence risk management practices.

The study concludes that risk analysis and appraisal affect the level of nonperforming loans their bank to a great extent and that measurement, risk estimation and determining risk reduction measures affect the performance of the bank to a great extent. The study further concludes that risk analysis and assessment comprise identification of the outcomes risk analysis and assessment comprised the probability of those outcomes, risk analysis and assessment comprised estimation the magnitude of the consequences.

The study concludes that risk monitoring affects the performance of the banks to a great extent. In addition the study concludes that controls in place and internal control affects the performance of the banks to a great extent with responses in place and reporting and review affecting to a moderate extent. The study further concludes that

Periodically reviewing the borrowers rating assigned at the time the credit was granted, frequent contact with borrowers, creating an environment that the bank can be seen as a solver of problems and trusted adviser, regular review of the borrower's reports as well as an on-site visit affect the performance of the banks. The study concludes that monitoring of borrowers, Credit approval guidelines and clear established process and affects the performance of the banks to a great extent.

#### **5.4 Limitations of the Study**

A limitation was defined as any situation present and hindered the attainment of research objectives. Several limitations were experienced in this study. First, the respondents were reluctant and suspicious in the provision of data required for the study. To overcome this challenge, the researcher carried along an introduction letter from the University of Nairobi confirming that the data requested would be used for academic purposes only.

The study also faced a limitation of time whereby the time allowed for completing the study was not enough hence the researcher had to work extra hard in getting the responses and compiling them to make up this study.

The study also faced financial constraints where the finances required conducting the study were limited hence limiting the research to head offices within Nairobi. The researcher however designed an elaborate questionnaire which also touched on matters at the branch levels.

The study also faced limitations in terms of high fluctuations in the macroeconomic variables including inflation and interest rates which have caused the Central Bank of Kenya to use Central Bank Rate in regulating the interest rates. This may have influenced the findings.

## **5.5 Recommendations**

### **5.5.1 Policy Recommendations**

The study findings established that clear established process for approving new credits and extending the existing credits has been observed to be very important while managing credit risks in banks. This study therefore recommends that banks need to establish clear processes for approving new credits.

The study further recommends that credits to related parties should be closely analyzed and monitored so that no senior individual in the institution is able to override the established credit granting process.



The study established that monitoring of borrowers was necessary and therefore recommends that also recommends that monitoring of borrowers should be keenly executed by banks.

### **5.5.2 Suggestions for Further Studies**

This study concentrated on effects of credit risk management practices on non-performing loans in commercial banks. This study recommends that the study be extended to Microfinance institutions in Kenya based on the crucial role played by this sector in the Kenyan economy as they are involvement in the credit market which exposes them to credit risk which call for proper management practices.

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## **APPENDICES**

### **APPENDIX I: LETTER OF INTRODUCTION**

## APPENDIX II: RESEARCH QUESTIONNAIRE

### RELATIONSHIP BETWEEN CREDIT RISK MANAGEMENT PRACTICES AND THE LEVEL OF NON-PERFORMING LOANS IN COMMERCIAL BANKS IN KENYA

1. Please indicate the ownership of your Bank
  - (i) Foreign
  - (ii) Local Private
  - (iii) Local Public
  - (iv) Government
  
2. Does your bank have a formal written credit policy manual? And how often is it Reviewed?  
Yes  No.   
If yes explain how often it is reviewed.  
Monthly  Quarterly   
Semi –Annually  Annually   
Others (specify)  -----.

#### SECTION B: CREDIT RISK MANAGEMENT PRACTICES

##### Risk Identification

3. To what extent does risk identification affect the level of nonperforming loans in your bank?  
Not at all   
Little extent   
Moderate extent   
Great extent   
Very great extent

4. To what extent do the following facets of risk identification affect the level of nonperforming loans in your bank? Use a scale of 1-5 where 1= not at all and 5= very great extent

	Not at all	Little extent	Moderate extent	Great extent	Very great extent
Inspection by branch managers					
Financial statement analysis					
Establishing standards					
Credit scoring					
Risk rating and collateral					
Credit worthiness analysis					

5. What is your level of agreement with the following statements that relate to the effect of employee welfare programs on your work? Use a scale of 1-5 where 1= Strongly disagree and 5= strongly agree

	1	2	3	4	5
The credit manager establish the crucial observation areas inside and outside the bank					
The departments and the employees are assigned with responsibilities to identify specific risks					
Risk identification is positively significant to influence risk management practices.					

### **RISK ANALYSIS AND APPRAISAL**

6. To what extent does risk analysis and appraisal affect the level of nonperforming loans in your bank?

- Not at all [ ]  
 Little extent [ ]  
 Moderate extent [ ]  
 Great extent [ ]  
 Very great extent [ ]

7. To what extent do the following aspects of risk analysis and appraisal affect the performance of the bank? Use a scale of 1-5 where 1= not at all and 5= very great extent

	1	2	3	4	5
Measurement					
Classification					
Risk evaluation					
Risk estimation					
Determine risk reduction measures					

8. To what extent do you agree with the following statement about risk analysis and assessment in credit risk management? Rate using a scale of 1 to 5 where 1 is strongly disagree, and 5 is strongly agree.

<b>Risk analysis and assessment in credit risk management</b>	1	2	3	4	5
Risk analysis and assessment comprises identification of the outcomes					
Risk analysis and assessment comprises estimation the magnitude of the consequences					
Risk analysis and assessment comprises the probability of those outcomes					
Other, please specify					

### **RISK MONITORING**

9. What is the extent to which risk monitoring affect the performance of the bank?

Not at all [ ]

Little extent [ ]

Moderate extent [ ]

Great extent [ ]

Very great extent [ ]

10. To what extent do the following facets of credit risk monitoring affect the performance of the bank?

	Not	Little	Moderate	Great	Very great



	at all	extent	extent	extent	extent
Controls in place					
Responses in place					
Reporting and review					
Internal control					

11. To what extent do the following risk monitoring practices affect the performance of the bank? Use a scale of 1-5 where 1= strongly disagree and 5= strongly agree

	1	2	3	4	5
Frequent contact with borrowers, creating an environment that the bank can be seen as a solver of problems and trusted adviser					
Developing the culture of being supportive to borrowers whenever they are recognized to be in difficulties and are striving to deal with the situation					
Monitoring the flow of borrower's business through the bank's account					
Regular review of the borrower's reports as well as an on-site visit					
Updating borrowers credit files					
Periodically reviewing the borrowers rating assigned at the time the credit was granted.					

### **CREDIT-APPROVAL/SANCTIONS**

12. To what extent do the following facets of credit-approval/sanctions affect the performance of the bank?

	Not at all	Little extent	Moderate extent	Great extent	Very great extent
Clear established process					
Credit approval guidelines					
Monitoring of borrowers					

13. What is your level of agreement with the following statements that relate to the effect of credit-approval/sanctions on the performance of the bank? Use a scale of 1-5 where 1= strongly disagree and 5= strongly agree.

	1	2	3	4	5
Clear established process for approving new credits and extending the existing credits has been observed to be very important while managing Credit Risks in banks					
Monitoring of borrowers is very important as current and potential exposures change with both the passage of time and the movements in the underlying variables					
Banks must have in place written guidelines on the credit approval process and the approval authorities of individuals or committees as well as the basis of those decisions.					
Prudent credit practice requires that persons empowered with the credit approval authority should not also have the customer relationship responsibility.					
Some approval authorities will be reserved for the credit committee in view of the size and complexity of the credit transaction					
Credits to related parties should be closely analyzed and monitored so that no senior individual in the institution is able to override the established credit granting process.					

## APPENDIX II –LIST OF COMMERCIAL BANKS IN KENYA

### A: COMMERCIAL BANKS

- 1 African Banking Corporation Ltd.
- 2 Bank of Africa Kenya Ltd.
- 3 Bank of Baroda (K) Ltd
- 4 Bank of India
- 5 CFC Stanbic Bank Ltd
- 6 Charterhouse Bank Ltd. Under - Statutory Management
- 7 Chase Bank (K) Ltd
- 8 Citibank N.A Kenya
- 9 Commercial Bank of Africa Ltd
- 10 Consolidated Bank of Kenya Ltd
- 11 Barclays Bank of Kenya Ltd
- 12 Co-operative Bank of Kenya Ltd
- 13 Credit Bank Ltd
- 14 Development Bank of Kenya Ltd
- 15 Diamond Trust Bank Kenya Ltd
- 16 Dubai Bank Kenya Ltd
- 17 Ecobank Kenya Ltd
- 18 Equatorial Commercial Bank Ltd
- 19 Equity Bank Ltd
- 20 Family Bank Limited
- 21 Fidelity Commercial Bank Ltd
- 22 Fina Bank Ltd
- 23 First community Bank Limited
- 24 Guardian Bank Ltd
- 25 Giro Commercial Bank Ltd
- 26 Gulf African Bank Limited
- 27 Habib Bank A.G Zurich
- 28 Habib Bank Ltd
- 29 Imperial Bank Ltd
- 30 I & M Bank Ltd
- 31 Jamii Bora Bank Limited
- 32 Kenya Commercial Bank Ltd
- 33 K-Rep Bank Ltd
- 34 Middle East Bank (K) Ltd
- 35 National Bank of Kenya Ltd
- 36 NIC Bank Ltd
- 37 Oriental Commercial Bank Ltd
- 38 Paramount Universal Bank Ltd
- 39 Prime Bank Ltd
- 40 Standard Chartered Bank Kenya Ltd.
- 41 Trans-National Bank Ltd
- 42 UBA Kenya Bank Limited
- 43 Victoria Commercial Bank Ltd

44 Housing Finance Ltd.

**Source: (Central Bank of Kenya, 2013)**