

**EFFECT OF CREDIT INFORMATION SHARING ON CURBING NON-
PERFORMING LOANS IN COMMERCIAL BANKS**

A CASE OF SELECTED COMMERCIAL BANKS IN NAIROBI, KENYA

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE
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DECLARATION

I declare that this dissertation is my original work and has not been previously published or presented elsewhere for the award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author fully acknowledged.

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I do hereby confirm that I have examined the master's dissertation of KCA University and have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed.

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ABSTRACT

The purpose of this study was to establish the effect of credit information sharing on curbing non-performing loans in commercial banks in Kenya. The specific objectives guiding the study included: to establish the effect of reputation collateral building through CRBs credit evaluation processes, information management and credit policies of the CRBs on curbing non-performing loans of commercial banks. It adopted the descriptive research design and the population of the study included one operations manager and two credit management officers in 43 registered commercial banks in Nairobi County, Kenya. Simple random sampling method was employed at 30% on the 129 targeted respondents to get the study sample of 39 respondents. The selected respondents were considered to be key informants in the study area. Data was collected from primary sources using a structured questionnaire. Reliability and validity was tested through piloting. Ethics in research was observed and responses handled with utmost confidentiality, while the study ensured fair gender representation of respondents. Data was analyzed by the aid of Statistical Package for Social Studies (SPSS) computer software through frequencies, means, percentages, correlation coefficient as well as regression method. It was presented through tables and graphs. The study found that credit information sharing enabled borrowers' profiling for lending decisions by the banks. The credit evaluation methods were found to be effective in mitigating banks' credit default while credit scoring enabling the banks to ascertain loan delinquency and act appropriately. The influence of CRBs managerial capacity and infrastructure to manage information supplied by the commercial banks was not significant. Though the CRBs credit information sharing policies were aligned to those of the banking sector, the effect of CRBs credit policies in enhancing credit management by the banks was not high. In conclusion, there was a significant influence of credit evaluation processes, information management and reputation collateral building. The study recommends that the CRBs should review

their policies to ensure that they contribute to mitigating credit risks for financial sector players including the commercial banks. Adopting a collaborative approach, the CRBs will greatly gain from the input of the commercial banks in enhancing strategies for information sharing in curbing nonperforming loans.

DEFINITION OF TERMS

Capacity Development: Training and enhancing staff skills in credit management financial standards compliance(Waweru&Kalani, 2009)

Credit information sharing:The voluntary sharing of client information by banks and financial intermediaries to regulated private or public credit bureaus (Japelli & Pagano, 2003).

Effectiveness: Refers to the degree of success of activities with indicators such as number of staff, financial position, stock levels and number of sale outlets (Neil & Lewis, 1983)

Interest rates:Interest rate is the price a borrower pays for the use of money they borrow from a lender/financial institutions or fee paid on borrowed assets, (Collins and Wanjau, 2011)

Performance: The accomplishment of a given task measured against preset known standards of accuracy, completeness, cost, and speed. In a this study, performance is deemed to be the fulfillment of an obligation, in a manner that releases the performer from all liabilities under the contract, (Kwambai&Wandera, 2013)

Non-performing loans: accounts whose principal and interest remains unpaid for a specific period of time (Waweru&Kalani, 2009)

Serial Defaulters: Borrowers who consistently default in loan repayment (CBK, 2015)

LIST OF ABBREVIATIONS/ ACCRONYMS

CBK	Central Bank of Kenya
CIS	Credit Information Sharing
CRBs	Credit Reference Bureaus
IMF	International Monetary Fund
NPA s	Non-performing assets
NPL	Non Performing Loans
SPSS	Statistical Package for Social Studies
US	United States of America

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The financial sector in any country is an important sector in the development of a country. Kwambai and Wandera (2013) contend that the sector serves as a mechanism that allows borrowers and lenders to consolidate and provides effective and efficient financial claims and with an agreement put in place. Commercial banks globally play a pivotal role in the economy in the intermediation process by mobilizing deposits from surplus units to deficit units. The surplus is channeled to deficit units through lending, (Bessis, 2010).

Gande (2008) contends that majority of the banks that are commercial in nature provide fresh loans to their customers so that they can make investment and asset activities. In turn a bank is affected by the risks associated to credit transactions and non-payment risks whenever it has granted credit to potential customers. Koch and McDonald (2000) opine that loans are relatively illiquid and exhibit the highest credit risk. However, since they constitute the largest proportion of assets held by commercial banks, priority should be allotted to loan portfolio management and policy formulation.

Gitahi (2013) contends that Credit Information Sharing (CIS) is a process where credit providers (such as banks, microfinance institutions and Saccos) exchange information on their outstanding loans and advances through licensed Credit Reference Bureaus (CRBs). Participating financial institutions that are subscribers to these credit reporting agencies may request for credit reports with scores of an

applicant or borrower directly from the credit reporting agencies to facilitate their lending decisions. The CRBs are licensed by the Central Bank of Kenya. Migwi(2013) further contends that through CIS, lenders accesses reports from the CRB which informs them about the repayment patterns of a borrower. In other markets, CIS is also referred to as Credit Referencing or Credit Reporting, among other terms.

In Kenya, as per the Credit Reference Bureau Regulations 2013, commercial and microfinance banks are mandated to share information on their entire loan books, meaning both up to date and late (overdue) repayment details of a borrower are shared. This data is submitted electronically on a monthly basis to the CRBs,(Migwi, 2013). The credit information sharing association has been established with the vision of facilitating the generation and use of accurate credit information for the benefit of all participants in the credit market.

Further the report states cumulatively, a total of 2.3 million and 28,733 credit reports had been requested by banks and customers respectively from the two licensed CRBs as at 31st December 2012. The credit reports requested by banks stabilized during the year ended 31st December 2012 at 1,015,327 in comparison to 1,021,717 reports in the year ended 31st December 2011. On the other hand, credit report requests by customers increased by 305% from 5,607 in the year 2011 to 22,692 in the year 2012. The increased subsequently offer competitive terms of borrowing to customers with a good credit track record (CBK, 2012).

1.1.1 Non-performing Loans

Non-performing loans refer to accounts whose principal and interest remains unpaid 90 days and more after due. According to CBK supervision reports, the level of nonperforming loans has been increasing steadily in Kenya (Waweru and Kalani,

(2009). Most failures in the financial sector have been caused by non-performing loans or bad debts which remain a major concern for both international and local regulators Kozner (2002); Boudriga et al, (2009). These non-performing loans are caused by bad borrowers who are not credit-worthy. Financial institutions therefore must find mechanisms that can collect and store information concerning borrowers who are not only credit-worthy but also who have good credit histories.

Though the Global Financial Crisis of 2007 originated in the United States of America due to the housing bubble, it ensued into a domino effect to the economies of the rest of the world. Throughout 2008, increasing losses and write – downs were announced by various financial firms and worldwide losses had reached \$ 685 billion through end of October 2008 (Wanjira,2010). In Asian countries such as Pakistan, according to the study by Ahmad (2013) the decrease in exports resulting from the recession and liquidity crunch in the global financial market led to the withdrawal of foreign investment and depreciation of the local currency. Additionally, other pressures on the economy such as increase in global oil prices, energy crisis, high per unit cost, circular debts among others translated in the inability of households and firms to repay their debts (Ahmad, 2013). Consequently, the growth of NPLs increased and when loans become non – performing, banks liquidity and their earnings were adversely affected (Kipyego&Wandera, 2013) which ultimately results in a banking crisis.

The Kenyan banking sector was saddled with a momentous Non-Performing Loans (NPL) portfolio in the 80's and 90's which led to the collapse of some banks(CBK, 2015). The problem was as a result of “Serial Defaulters” who borrowed from various banks with no intention of repaying the loans relying on the information asymmetry existent between lenders and borrowers. In order to reduce these effects from

information asymmetry, the Central Bank of Kenya and Kenya Bankers Association came together to introduce Credit Information Sharing in Kenya as a remedial strategy to reduce the exploitation by the serial defaulters, (Nyangweso, 2013).

To overcome the challenge of NPLs, an institution is required to monitor the behavior of credit consumers (Gaitho, 2013). Prior credit information about prospective borrowers can also help curb the occurrences of bad debts. Nonetheless, this information is not readily available; therefore banks have to establish long – standing relationships with their borrowers in order to evaluate their creditworthiness. Monitoring of borrowers is a costly affair to the bank and the information gathered from the long term relation with a borrower provides competitive advantage to the bank (Karapetyan&Stacescu, 2009).

1.1.2 Credit Information Sharing

Credit information sharing is a process where banks and other lenders submit information about their borrowers to a credit reference bureau so that it can be shared with other credit providers (Kipyego&Wandera,2013).Credit Information Sharing (CIS) continues to gain global recognition as a crucial component of any sound financial infrastructure. Credit histories not only provide necessary input for credit underwriting, but also allow borrowers to take their credit history from one financial institution to another, thereby making lending markets more competitive and, in the end, more affordable.

Gaitho (2013) contends that credit bureaus assist in making credit accessible to more people, and enabling lenders and businesses reduce risk and fraud. Sharing of information between financial institutions in respect of customer credit behavior, therefore, has a positive economic impact.Dankwah (2012) asserts that the concept of

credit information sharing was born in the 1860s in the United States (US), when merchants needed to keep track of their customers, especially those of poor credit risk. Names were usually compiled in lists offered by the credit bureaus. With the advance of technology, methods of calculating various risks and further growth of commerce, companies that dealt with collecting credit data began to take shape, (Sullivan & Sheffrin, 2003).

In Africa, the concept of credit information sharing through Credit Reference Bureaus (CRBs) has had its practice in few selected countries by multilateral companies through private credit bureaus such as Compuscan which operates in Botswana, Namibia and Rwanda while CRB Africa Ltd and Kutz Univar, operate in Tanzania, Kenya and Uganda. Currently, the three licensed Credit Reference Bureaus by the Central Bank of Kenya are: Transunion Credit Reference Bureau Ltd; Metropol Credit Reference Bureau Ltd.; and Creditinfo Credit Reference Bureau Limited.

The gazettelement of the Credit Reference Bureau Regulations 2013 in late January 2014 further paved the way for the exchange of positive and negative credit information between commercial and reduced data retention period to five years from the previous seven years, significantly transforming Kenya's CIS landscape, (Getanga, 2015). Over the years, however, it has become increasingly apparent that credit information sharing indeed enhances bank's credit performance and overall profitability, (Gaitho, 2013). Credit reports that include both positive and negative information help build reputation collateral in much the same way as a pledge of physical collateral, which may improve credit access for the poorest borrowers. In the long run, a bigger credit market and lower default rates lead to lower interest rates, improved profitability and increased competitiveness.

Gaitho (2013) further contends that shared information allows a lender to better assess the risk profile of a potential borrower and introduce incentives to have a borrower pay on time in the form limiting a borrower's future ability to access credit from other credit suppliers. To take appropriate measures for these problems, knowing the factors associated with the problems is a precondition for a well stated is half solved.Reduced default rates are further achieved as borrowers seek to protect their reputation collateral by meeting their obligations in a timely manner. With the presence of a CRB, there is strong motivation for clients to repay their loans.

Experience has revealed that when financial institutions compete with each other for customers, multiple borrowing and over-indebtedness increases loan default unless the financial institutions have access to databases that capture relevant aspects of clients' borrowing behavior. The CRB contributes significantly to reduction in the costs of screening loan applications by enabling the lender to sort out prospective borrowers who have defaulted with other lenders. A CRB therefore, improves lenders' ability to predict default.

According to Kipyego&Wandera (2013), greater availability of information reduces default rates, improves access to credit. With limited access to inclusive data, lenders are also concerned that borrowers might accumulate many loans from multiple lenders-potentially resulting in their over-indebtedness and leaving lenders with an unacceptable large portfolio of non-performing loans. As a way of minimizing the risk of default lenders need information on the creditworthiness of such borrowers. Credit reporting service providers can therefore lead to reduction of information asymmetry, thus reducing default rate.

1.2 Statement of the Problem

Loans are important income generating products for commercial banks. Loans performance levels have a significant effect on the financial strength of the banks. Nonperforming loans thus have an adverse effect on the financial strength of the banks. In Kenya, the significant drop in NPLs of 10.7 % between 2006 was attributable to write-offs and recoveries (Central Bank of Kenya, 2007). The increase from 4.7 percent in December 2012 to 5.2 percent in December 2013 signaled an increase in credit risk which was largely attributable to the lag-effect of the high interest rates in the first half of 2012, and the slowdown in economic activities due to the general elections in March 2013 (Central Bank of Kenya, 2013). The ratio of gross non-performing loans to gross loans increased from 5.2 per cent in December 2013 to 5.6 per cent in December 2014,(Supervision Annual Report 2014).Similarly in 2015 an increase from 101.7b to 123.9 b representing 22% was reported, Bank Supervision Annual Report (2015).

This increase has been experienced despite of the presence of credit reference bureaus in the country which were introduced to enable credit information sharing on borrowers so that this could help cap the growth of non-performing loans. There is need for commercial banks to adopt appropriate credit and borrowers' appraisal techniques to minimize the possibility of loan defaults since defaults on loan repayments leads to adverse effects such as the depositors losing their money, loss of confidence in the banking system, and financial instability,(Gaitho, 2013).

In support of the role of extending financial services in the economy, credit bureaus help lenders make faster and more accurate credit decisions.They collect, manage and disseminate customer information to lenders in the form of credit reports. These credit

reports will help lenders to decide whether to extend an applicant's loan, credit card overdraft facility or extend any other product, which is reliant on customer's ability to repay at a determined cost. The individual financial institutions can use the information from the CRBs for credit scoring and evaluating client credit worthiness.

Global studies provide empirical support for the hypothesis that credit information sharing reduces default rates. Brown et al. (2008), show that credit information sharing reduces default rates using data from a panel of transition countries. Jappelli and Pagano(2002), on their survey of credit reporting in 43 countries show that credit levels are higher and default risk is lower in countries with credit information sharing. In Kenya previous studies have been conducted. Mugwe and Oliweny (2014) found that the return on equity, return on assets and net interest margin of the selected commercial banks had an upward trend after the licensing of Credit Reference Bureaus (2010 to 2014) compared to a downward trend for the period before the initiation of credit information sharing (2005 to 2009). Nyangweso (2013),Gaitho (2013), Kipyego&Wandera (2013) and Shisia, Sang, Mutung'u&Okibo (2014)shows that loan performance as measured by loan default rate is negatively related to credit information sharing, lending rate and total loans.

The studies have however based their conclusions on trends within the commercial banks data and have failed to discuss the effectiveness of credit information sharing agents in their distribution, collection and influence they have on lending policies. They barely focused on effectiveness of CRBs as critical function for information access and sharing and significance in mitigating the rate of non-performing loans. They failed to discuss the effectiveness of credit information sharing mechanisms at the CRBs on curbing non-performing loansas well as influence on lending policies in

the commercial bank sector. This study thus sought to add knowledge on the effect of credit information sharing by CRBs on curbing on-performing loans of commercial banks in Kenya.

1.3 Main Objective

The main objective of the study was to evaluate the effect of credit information sharing on curbing non-performing loans in commercial banks Kenya.

1.4 Specific Objectives

The study aimed at achieving the following specific objectives:

- 1) To establish how reputation collateral building through CRBs affects curbing non-performing loans of commercial banks in Nairobi County.
- 2) To determine the effect of CRBs credit evaluation processes on curbing non-performing loans of commercial banks in Nairobi County.
- 3) To establish effect of CRBs information management on curbing non-performing loans of commercial banks in Nairobi County.
- 4) To determine effect of credit information sharing policy framework adopted by CRBs on curbing non-performing loans of commercial banks in Nairobi County.

1.5 Research Questions

The research aimed at answering the following questions:

- 1) To what extent are CRBs effective in reputation collateral building for curbing non-performing loans of commercial banks in Nairobi County?
- 2) To what extent are CRBs credit evaluation processes effective in curbing non-performing loans of commercial banks in Nairobi County?

- 3) To what extent does CRBs information management affect curbing of non-performing loans for commercial banks in Nairobi County?
- 4) To what extent does the CRBs credit information sharing policy framework affect curbing of non-performing loans by commercial banks in Nairobi County?

1.6 Justification of the Study

Non-performing loans affect operational efficiency which impacts on profitability, liquidity and solvency position of financial institutions. This affects performance of banks hence the study would help inform policy makers on the use of credit information sharing as among the measures to put in place to mitigate prevalence of non-performing loans. The investigation being conducted would also create awareness about borrowers who access credit facilities without the intention of repaying borrowed funds.

1.7 Significance of the Study

The study aimed to evaluate the effect of credit information sharing on loan delinquencies extended by Commercial Banks in Kenya and provide information on formulation of policies by commercial banks to mitigate against nonperforming loans to financial institutions. The investigation would also be relevant to other areas in which credit reference bureau information can be used for the benefit of institutions that deal with credit issues and make contribution to body of knowledge on credit management and to enable researchers to carry out further research. Thus the study would be of great benefit mainly to the commercial banks, their credit management department and staff. Importantly, the study would provide information that can be

used by economists for the assessment of the lending business. Future researchers may use the study findings as reference during their studies

1.8 The Scope of the Study

This study was undertaken in Nairobi, where the researcher based the research on the 43 commercial banks registered and operating in Kenya. The researcher used the employees from the credit sections and operations departments of the institutions as the target population and collected data using questionnaires.

1.9 Assumptions of the Study

During the study, it was assumed that the participating banks conduct information sharing on borrowers. Further, it was assumed that the respondents would provide frank and credible information for the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter literature which is related to and consistent with the objective of the study is reviewed. The literature will be reviewed in relation to the set specific objectives of the study. The review is divided into theoretical and empirical review

2.2 Theoretical review

Models linking credit risk to economic activity are not new and theoretical papers have been developing business cycle models studying the interactions between the macroeconomic environment and financial fundamentals.

2.2.1 Theory of Information Asymmetry

The theory of asymmetric information was developed by George Akerlof, Michael Spence and Joseph Stiglitz. Akerlofin the 1970s and 1980s. In simple terms, the theory proposes that an imbalance of information between buyers and sellers can lead to inefficient outcomes in certain markets. Information asymmetry models assume that at least one party to a transaction has relevant information, whereas the other(s) do not. Some asymmetric information models can also be used in situations where at least one party can enforce, or effectively retaliate for breaches of, certain parts of an agreement, whereas the other(s) cannot.

According to Ekumah and Essel (2003) information asymmetry describes the condition in which relevant information is not known to all parties involved in an undertaking. As such information asymmetry has a relation to the lender and the

borrower in commercial banks as well as instances of loan nonperformance. Importantly in this study, it guided in the formulation of information asymmetry constructs.

2.2.2 Moral Hazard Theory

The moral hazard theory is based on the notion that the borrower has an incentive to default unless there are consequences to his future credit facility application. According to research by Dembe and Boden, (2000), the term dates back to the 17th century and was widely used by English insurance companies by the late 19th century. Early usage of the term carried negative connotations, implying fraud or immoral behavior (usually on the part of an insured party). Dembe and Boden point out, however, that prominent mathematicians studying decision making in the 18th century used "moral" to mean "subjective", which may cloud the true ethical significance in the term. The concept of moral hazard was the subject of renewed study by economists in the 1960.

Alloyo (2013) argues that moral hazard refers to the risk that a party to a transaction has not entered into contract in good faith, has provided misleading information about its assets, liabilities or credit capacity or has an incentive to take unusual risk in a desperate attempt to earn a profit before the contract settles .According to Omari (2012) moral hazard is the risk that the borrower may not utilize the funds prudently hence affecting his ability to repay the loan. The lender has no way of monitoring the usage of the loan to ensure that it is being used in manner that does not compromise the ability to repay the loan (Alloyo, 2013)

2.2.3 The Theory of Delegated Monitoring

Theories based on the collection of private information by an intermediary require that there be some benefit to using this additional information in lending. The theory of delegated monitoring of borrowers (Diamond: 1984) is one of the most influential in the literature on the existence of banks. Defined broadly, ‘monitoring’ of a borrower by a bank refers to information collection before and after a loan is granted, including screening of loan applications, examining the borrower’s ongoing creditworthiness and ensuring that the borrower adheres to the terms of the contract. Boyd and Edward (1986) contend that a bank often has privileged information in this process if it operates the client’s current account and can observe the flows of income and expenditure. This is most relevant in the case of small and medium enterprises and is linked to banks’ role in the payments system (Matthews and Thompson, 2008,). Further Matthews and Thompson (2008), state that the key element in this theory is the analysis of the costs and benefits of monitoring. Delegating the monitoring gives rise to a new private information problem where the party monitoring as an agent has private information. This leads to delegation costs which must be less than the minimum of costs without monitoring and total costs of direct monitoring. Through the credit reference bureaus, commercial banks are able to access information on borrowers’ position in a bid to ensure that they do not lend to loan delinquents. This reduces the risk of no-performing loans for the commercial banks. However, the CRB relations and operations costs should not override the benefits of information sharing for the commercial banks. As such the theory was crucial in the study in guiding on credit information sharing logistics cost influence on non-performing loans for commercial banks.

2.3 Empirical Literature

For decades, good loan portfolio managers have concentrated most of their effort on prudently approving loans and carefully monitoring loan performance. Richardson (2006) identifies that the identification and management of risk among groups of loans may be at least as important as the risk inherent in individual loans. Although these activities continue to be mainstays of loan portfolio management, analysis of past credit problems has made it clear that portfolio managers should do more to understand underlying credit risks.

2.3.1 Credit Reference Sharing and Non-Performing Loans

As credit provision is important to business enterprises and individuals, its recovery or repayment is equally important. Hoff and Stiglitz, (1990) explain that good repayment performance makes both lenders and borrowers to trust each other and promote their intimacy and closeness to serve each other. In this way both the lender and the borrower benefit from the financial interactions. But a tragedy commonly observed in loan markets is the high cost of loan default. It exists in both developed and under developed credit markets, (Gitahi, 2013).

Finlay (2008) states that between thirty and ninety days of delinquency, the debt collection process has failed and the account is transferred to debt recovery. This is an occurrence that all financial institutions wish to avoid since it has an adverse effect on financial performance. Consequently this debt is written-off and is recorded as a loss in that financial institution's profit and loss sheet (Finlay, 2008). Basel II (2004) requires banks to show categories for nonperforming loans according to days at risk and provisions used in analyzing NPL levels. The loan risk classifications include;

normal, watch, substandard, doubtful and loss. The risk classification using days at risk is therefore used to calculate nonperforming loan levels.

According to the Global Financial System Report (IMF, 2007), the aggregate rate of non-performing loans varies considerably amongst countries with values ranging between 0.2% for Australia to 26.5% for Egypt, over the period 2002-2006. Non-performing loans have been viewed to constitute one of the most important factors causing reluctance for the banks to provide credit. In a high NPL condition, banks increasingly tend to carry out internal consolidation to improve the asset quality rather than distributing credit. According to the World Bank (2007), loan default also denies new applicants (corporate, individuals and governments) access to credit, as the banks cash-flow management problems augment in direct proportion to the increasing default problems.

Hunte (2006) further explains that loan default, especially in subsidized programs contribute to increasing income inequality as wealthy borrowers' capture the subsidies intended for small borrowers. Having understood the consequential impacts of non-performing loans, the accurate identification of a borrower's credit risk and the assignment of a risk rating that describes that risk lies at the heart of effective credit risk management process.

2.3.2 Addressing Non-Performing Loans in Financial Intermediaries

Bessis (2010) in an assessment of financial intermediary operational environment in regard to risk management notes that the inability of customers to service their debt can result in a partial or total loss of the sum lent to the counterparty and thus ultimately to the profitability of the institution. He further asserts that he sets up the base to show the general danger that high risks posed to both creditors and savers

requiring a more elaborate system of regulatory interventions in the banking sector. However Bessis(2010) only looks at the concept of risk management without divulging into the need for policy and regulations as a tool.

According to De Koker (2006) in a study on the impact of policies focused on customer due diligence on financial performance shows possible scenarios that financial institutions should consider in making policies to address the risks of financial transactions including: significant economic or industry sector downturns; adverse market-risk events; and unfavorable liquidity conditions.

Other researchers have also emphasized that in order to minimize loan defaults that lead to high levels of non-performing loans, banks are encouraged to use the “know your customer” principle as expounded by the Basel Committee on Banking Supervision. Information kept in CRBs’ databases may form part of the borrowers’ reputation collateral for purposes of accessing credit. Placing a premium on reputation collateral will serve an incentive for borrowers to repay their loans diligently hence addressing the moral hazard problem.

2.3.3 Reputation collateral building through CRBs and curbing non-performing loans of commercial banks

Ahmad (2013) holds the view that the most important qualification for successful lending is the ability to judge the character and credit-worthiness of borrowers. He views personal knowledge of the borrower to be less important in granting secured advances than in making loans without security. However, he maintains the position that, it is desirable in both cases for the lender to satisfy himself, as far as is reasonably possible, from a careful consideration of all relevant facts, that the borrower is capable of effecting repayments in accordance with his promise. In other

words, any security should be regarded as a last line of defense to fall back upon in exceptional circumstances only.

According to the FSDKenya (2012) report, one way of establishing the integrity, competence and creditworthiness of borrowers is through credit information sharing among credit providers through credit reference bureaus (CRBs). These are institutions that collect information on a borrower's credit history using, among others, his income, loan repayment record, payments to utility service providers, court judgments and decrees and even bankruptcy petitions and prepare comprehensive reports which are sold to creditors. Wanjira (2010) posits that a good payment history or track record ascertained from CRBs may constitute the borrower's reputation collateral with any defaults diminishing the value of that collateral.

According to Migwi (2013), a notable challenge is that in most developing countries, particularly Kenya, new firms, SMEs and low and medium income earners, lack assets such as land to use as collateral and do not fall within the group targeted by microcredit lenders. Access to credit for this segment of the market may be addressed by borrowers using their good credit history as collateral. This may be achieved by credit providers exchanging credit information among themselves through information brokers, generally known as CRBs.

Mituga (2011) held the position that CRBs may be harnessed to address the problems of moral hazard and adverse selection or mitigate their negative effects by facilitating building of information capital and sharing it among lenders who will use it to make prudent lending decisions. A mechanism for exchanging credit information through CRBs will reduce lenders' information disadvantage, consequently allow them to screen credit applicants and make accurate prediction of repayment probabilities thus minimizing adverse selection

Recognizing the integrity, competence and continuing creditworthiness of a borrower as the cornerstone of prudent lending and accepting a borrower's impressive credit history as collateral to underwrite credit, is very important in the Kenyan setting where credit has largely been underwritten by physical collaterals such as land and buildings which are inaccessible to a majority of borrowers,(CBK, 2010).It has the potential of altering the existing collateral technology and widening access to credit to the unserved or underserved segment of the society that does not have physical collateral to use as security and are not served by micro-finance organizations. Actually, CRBs mayalso be used by borrowers to develop evidence of their good repayment history or reputation collateral which they may use to access credit, thereby creating a positive image of credit standing and potential to repay loans.

2.3.4 Credit Evaluation Processes by CRBs and Curbing Non-Performing Loans

According to CBK (2010) report, lack of credit information has in the past led to banks factoring a risk premium in the pricing of credit. However, credit information is not the only factor that contributes to high cost of borrowing; there are other structural rigidities that contribute to this high cost of credit. The government must work closely with the bank to alleviate these barriers to make credit affordable. Fulton, (2004) indicated that originally, the credit approval decision was made using a purely judgmental approach by merely inspecting the application form details of the applicant and commonly focused on the values of the 5 Cs of a customer. These 5Cs are Character which measures the borrower's character and integrity including virtues like reputation and honesty; Capacity which measures the borrower's ability to pay for example job status, source of income and finally Conditions where the members'

borrowing circumstances are evaluated for example market conditions, competitive pressure, and seasonal character (Bessis, 2003)

Today, assessing credit worthiness of borrowers, variables are adopted by the CRBs. The process of modeling the variables important in the extension of credit is referred to as credit scoring Leonard, (1995). Based on statistical analysis of historical data of the customers, certain financial variables are determined to be important in the evaluation process of a credit applicant's financial stability and strength. This analysis produces coefficients which are translated into score weights. Subsequently, information on these important variables is obtained for new bank customers, (Shisia, Sang, Mutung'u&Okibo, 2014).An overall score for these new applicants is produced by adding the weighted scores which were generated from the responses to the different variables. If this overall score is above a predetermined cut-off point, the loan applicant receives a certain line of credit. If not, the applicant is denied credit.

One of the features that banks deliberate when deciding on a loan credit application is asserted to be the estimated chances of recovery Migwi (2013). Omari (2012) therefore states that in order to arrive at this, credit information is required on how well the applicant has honored past loan obligations.The distribution of credit information is important because there is usually a definite relationship between past and future performance in loan repayment. Very often this history is not within the bank's reach because the potential borrowers' repayment records are scattered in the various archives of the other financial institutions where the customer has previously borrowed Wandera&Kipyego (2013).

As advocated by the adverse selection theory, the adverse selection is the difficulty to select and distinguish healthy borrowers, those with a high credit rating, from those

that are riskier. Moral hazard on the other hand is the problem investors experience in verifying that borrowers are using their funds as intended Hubbard and O'Brien (2012). According to Gitahi (2013) information exchange from multiple sources improves the precision of the signal about the quality of the credit seeker. As a result, the default rate reduces.

Gitahi (2013) points out that that process by which the CRBs collect the information from multiple sources improves the precision of the signal about the quality of the credit seeker. In contrast, the effect on lending is vague, because when banks exchange credit information about borrowers' categories, the implied increase in lending to good borrowers may fail to compensate for the reduction in lending to risky borrowers, (Sullivan & Sheffrin, 2003).

2.3.5 Information Management by CRBs and Curbing Non-Performing Loans

According to Sinare, (2008), Credit References Bureaus are information brokers, providing creditors with reliable, relevant and comprehensive data on the repayment habits and current debt of their credit applicants. Under reciprocity agreements, credit bureaus obtain data from creditors and other sources, consolidate and package information into individual reports, and distribute it to creditors for a fee. Lewis (2004) indicated that most banks and most creditors prefer hard collateral-based credit but would extend cash flow- based credits if they can use a reliable and inexpensive system to exchange information on the character and ability to pay of borrowers.

Migwi (2013) observes that the use of CRB creates information collateral that can be used to borrow from commercial banks. Credit by the banking sector in Kenya has been to a large extent been underwritten by physical collateral such as land and

buildings and costs of evaluating that collateral Gitahi (2013). Credit information sharing thus enables borrowers build a track record (reputational collateral) that they can use to access credit Dankwah(2012). According to Otwori (2013) CRBs prevent the case of serial defaulters. The serial defaulters move from different lenders due to the fact that they can't access credit facilities with their current lenders, this view is supported by Mwiya (2010).

Dankwah (2012) asserts that credit bureaus issue several kinds of credit reports, depending on the information gathered, the type of credit application (consumer credit, house mortgage, small business loan, etc.) and, most importantly, the amount of detail requested by the lender. Reports range from simple statements of past defaults or arrears –“black” or “negative” data – to detailed reports on the applicant's assets and liabilities, guarantees, debt maturity structure, pattern of repayments, employment and Family history – “white” or “positive” data. Naturally the price of a credit report depends on the amount of detail, Otwori (2013).

Otwori (2013) further contends that effective system that ensures repayment of loans by borrowers is critical in dealing with asymmetric information problems and in reducing the level of loan losses, thus the long-term success of any banking organization. Effective CRM involves establishing an appropriate CR environment; operating under a sound credit granting process; maintaining an appropriate credit administration that involves monitoring process as well as adequate controls over CR (IAIS, 2003).

2.3.6CRBs Credit Policies and Curbing Non-Performing Loans

A policy is a deliberate system of principles to guide decision and achieve rational outcomes. A policy is a statement of intent and is implemented as a procedure or

protocol (Gerald & Phil, 2010). All organizations require policies that can guide or channelize thinking in decision making. CRBs, which are legal entities established as companies that allow financial institutions to exchange information on their clients 'repayment history and debt profile, require effective and solid policy framework so that they can operate effectively and efficiently (Rosemary, Baraka&Booked, 2010).

Establishing the credit worthiness of a client by credit reference bureaus is a complicated process that will entail both subjective and objective decisions (Kipyegon, 2011). This will be assisted by an effective policy framework that defines an area within which a decision is to be made and ensures that the decision will be consistent with and contributes to an before they become problems, make it unnecessary to analyze the same situation every time it comes up and nullify other plans, thus permitting managers to delegate authority and still maintain control over other subordinates (Nyangweso, 2013).

According to the Kenya Credit Information Sharing Initiative progress report (2012) Credit information is being shared on approximately 200,000 consumers, while there are approximately 5 million consumers who have credit agreements with formal sector financial institutions. This implies that current information sharing cover less than 5% of the consumers who have formal sector credit agreements, (Davel, 2012).

Mwiya (2014) in his assessment explains that banks face credit risk due to the fact that they do not have comprehensive borrower information from a historical perspective, the borrowers' characteristics and the intention of the borrower thus creating a moral hazard. According to Gaitho (2013) credit without strict discipline is nothing but charity. Gaitho (2013) further points out that proper credit policy and procedures require that credit references be ordered by creditors on a borrower and his

guarantors or co-makers each time that creditors consider a new extension of credit, or a renewal or increase of existing credit facilities.

2.4 Conceptual frame work

Independent Variables

Dependent Variable

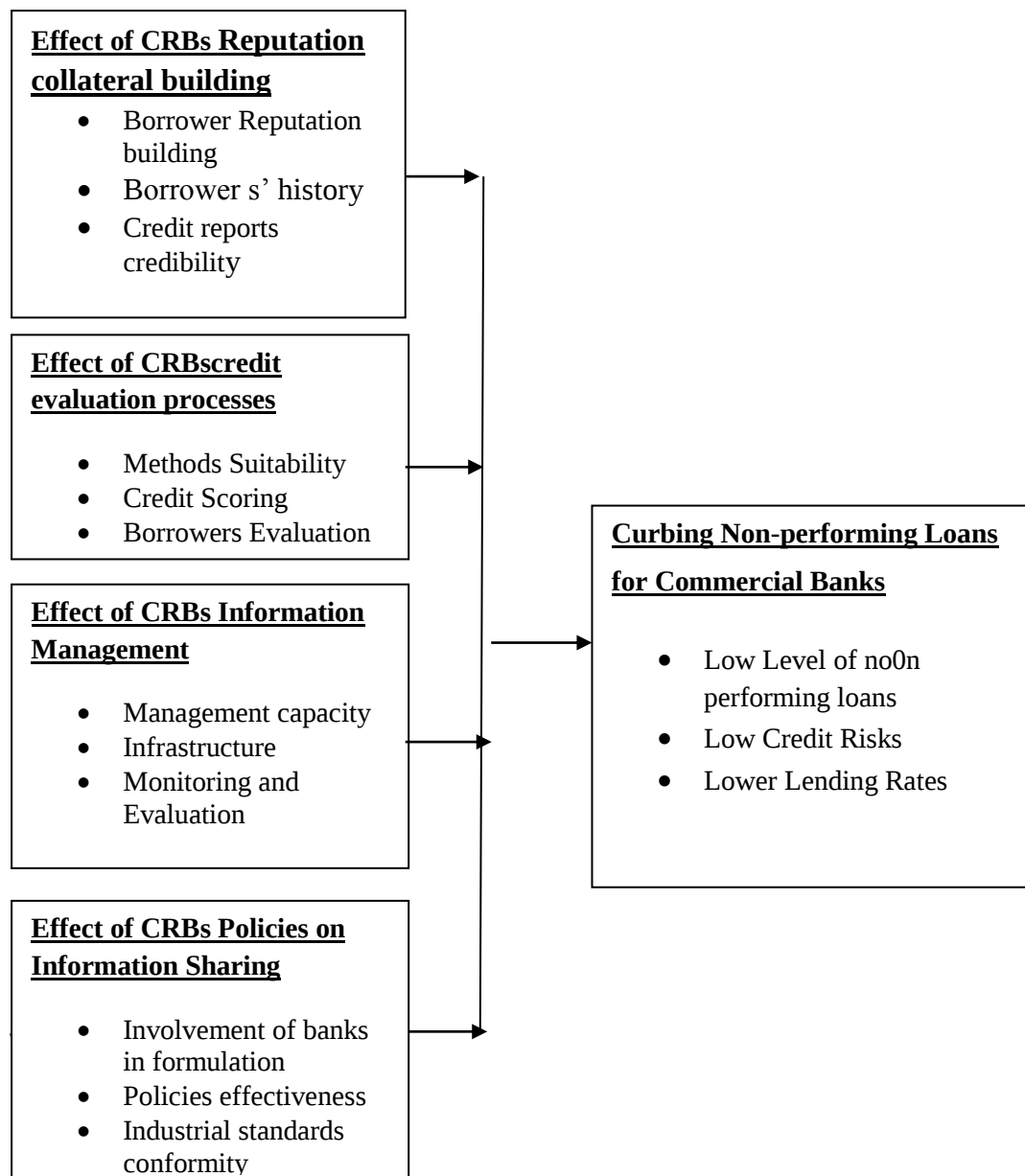


Figure 2.1 Conceptual Framework

Source: Researcher, 2016

2.5: Operationalization of the Variables

Table 2.1: Operationalization of the Variables

Types of variable	Variables	Indicator	Level of measurement	Data collection method
Dependent	Non-Performing Loans	-Level of nonperforming loans - Low Credit Risks -Lower Lending Rates	Ordinal/ Nominal	Structured Questionnaire
Independent	Reputation collateral building	- Borrower Creditworthiness -Borrower s' history -Credit reports credibility	Ordinal/ Nominal	Structured Questionnaire
Independent	Credit Evaluation Processes	-Methods Suitability -Credit Scoring -Borrowers Evaluation	Ordinal/ Nominal	Structured Questionnaire
Independent	CRB Information Management	-Management capacity -Infrastructure -Monitoring and Evaluation	Ordinal/ Nominal	Structured Questionnaire
Independent	Policies on Information Sharing	- Involvement of banks in formulation -Policies effectiveness -Industrial standards conformity	Ordinal/ Nominal	Structured Questionnaire

2.6 Research Hypothesis

HO₁ CRBs reputation collateral building does not affect curbing non-performing loans by commercial banks in Nairobi County

HI₁CRBs reputation collateral building affects curbing of non-performing loans by commercial banks in Nairobi County

HO₂ CRBs credit evaluation processes do not affect curbing of non-performing loans by commercial banks in Nairobi County

HI₂CRBs credit evaluation processes affect curbing of non-performing loans by commercial banks in Nairobi County

HO₃ CRBs information management does not affect curbing of non-performing loans by commercial banks in Nairobi County

HI₃ CRBs information management affects curbing of non-performing loans by commercial banks in Nairobi County

HO₄ CRBs policies on information sharing do not affect curbing of non-performing loans by commercial banks in Nairobi County

HI₄CRBs policies on information sharing affect curbing of non-performing loans by commercial banks in Nairobi County

2.7Summary of Literature Review

The aim of the literature review was to identify previous literature on the use of credit information sharing in the banking industry and effect on non-performing. The theories reviewed show that the idea of information asymmetry describes the condition in which relevant information is not known to all parties involved in an

undertaking. The two forms of information asymmetry are contained in the notion of moral hazard and adverse selection. The empirical literature gathered shows significant concern over effectiveness of credit reference bureaus on nonperforming loans in commercial banks which have continued to grow.

The empirical evidence on the use of credit information sharing shows that loans can be accessed easily by borrowers with good credit ratings. The downside is that certain institutional challenges on CRBs information management make it difficult for commercial banks to rely solely on credit information shared in the credit reference bureaus as a means of reducing non-performing loans.

The literature did not point to specific inefficiencies or effective components of the credit sharing process that assist banks to reduce the levels of non-performing loans. To fill in the gap, the study therefore focused on evaluating the effect of credit information sharing on non-performing loans in the Kenyan banking sector by assessing how the processes of credit evaluation, reputation collateral building, information collection and usage, as well as CRBs information policies influenced the banking sector in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the general methodology used to conduct the study. The chapter comprises of the research design, target population, sampling, data collection, data analyzing instruments and the description of applied model.

3.2 Research Design

The research design used in this study was a descriptive research design. Descriptive research seeks to establish factors associated with certain occurrences, outcomes, conditions or types of behavior Polit&Beck(2004).

Descriptive research design was chosen because it enabled the researcher to infer the findings to a larger population with high level of accuracy and it required less time and it was inexpensive.

3.3 Target Population

A target population is the total number of elements about which one wishes to make some inference (Cooper &Schindler, 2008).The population of the study included 43 commercial banks registered and having operations in Nairobi County, Kenya, (CBK 2014). The study further targeted head offices of these commercial banks.Commercial banks have for so many years been the source of credit and are thus well versed with lending challenges including non-performing loans.

3.3.1 Sampling Procedure and Sample size

Sekaran and Bougie (2010) refer to sampling as the process of selecting a number of individuals so that the selected individuals represent the large group from which they will be selected. Sample size of the study was calculated basing on the formula that sample size should represent 10%-30% (Mugenda and Mugenda2010). Simple random sampling was applied on the 129 targeted respondents of the commercial banks at30%. Further, simple random sample was used to select 2 credit officers and 1 operations manager bringing the total number of sample size to 39.

3.4 Research Instruments

The study used questionnaires as the tools for data collection. A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents, (Franklin, 2012). The researcher engaged the use of questionnaires which optimally used structured questionnaire that contained closed questions which allowed collection of quantitative data. The data collection instrument allowed ease of data as well as saved time and allowed for un-ambiguity in answering questions and thus a thorough study.

3.5 Data Collection Methods

The study used primary data to come up with conclusive information on effect of credit information sharing at CRBs on non-performing loans in commercial banks. Primary data is that which is original data collected for a specific research goal whereas secondary data is that which has been collected for a different purpose and reused for another research question,(Hox&Boeije, 2005).The data collection exercise was carried out to come up with concrete data that was valuably used to draw conclusions.

Questionnaires were administered using drop and later pick method. The researcher dropped them to the respondent, gave them time to complete, and then picked them at a later date. The researcher sought authority from the institutions and arranged for access to the relevant officers.

3.6 Validity and Reliability of the study instrument

The questionnaires used for data collection were pretested for face validity through a pilot study carried out on ten participants at Commercial Banks in Kiambu County. These institutions were not part of the study sample to avoid biased results. Validity is the degree to which a test measures what it is supposed to measure, Joppe(2000). Content validity of the instruments was ensured through the use of expert's views in research including my supervisor who ascertained their validity.

Reliability is the extent to which instruments yields consistent responses over time, (Joppe 2000). The instrument was subjected to reliability test as an internal consistency technique using the Cronbach alpha test and alpha value of > 0.7 was considered high enough to judge the instrument as reliable for the study (Kotheri, 2004).

3.7 Data Analysis and Presentation

The results of the study were quantitative in nature. According to Chandarn (2004) quantitative data is the data that holds numeric value and is factual in nature. Processing and analyzing of the raw data was done using data analyses program Statistical Package for the Social Sciences (SPSS) which was used to generate inferential and descriptive statistics. The results were presented in the form of tables, graphs and an in depth analysis of the outcome. Relationship between the independent variables and the dependent was tested using regression analysis. The regression model is depicted as follows:

$$Y=a+b_1x_1+ b_2x_2+ b_3x_3+b_4x_4+e$$

Where:

Y-Is levels of non-performing loans

a-is the Y intercept when x is zero

b1, b2 , b3 and b4- are regression weights attached to the variables

e -is the error term

X₁= CRBs Reputation collateral building

X₂= CRBs Credit Evaluation Process

X₃= CRBs Information Management

X₄= CRBs Policies on Information Sharing

P- Value tested relationship between each of the independent variables and the dependent variable. The hypothesis test at 95% confidence level was: all results below 0.05 (5%-critical value) indicate a significant relation. R² was used to test the relationship between credit information sharing at the CRB and non-performing loans for commercial banks. R² nearing 1 indicated a greater change in rate of non- performing loans was caused by the study factors of credit information sharing at CRBs. Relevant interpretation, discussion and recommendations was drawn from the analyzed data.

3.8 Ethical Considerations

Research first sought a permit from KCA University and shared with managers of the selected commercial banks hence enabling the data collection process. The researches also sought consent and assent from the participating employees and participants were assured of confidentiality and privacy. All citations were referenced to avoid plagiarism

CHAPTER FOUR FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis of the study findings according to the data collected from the field. It provides general information on the relationship between Credit information sharing and non-performing loans of commercial banks in Nairobi.

4.2 Instrument Return Rate

Thirty nine questionnaires were given of which thirty five were returned as shown in Table 4.1. This represents a response rate of 90% which is above the 70% threshold recommended by (Mugenda and Mugenda, 2012).

Table 4.1 Instrument Return Rate

Population	Number of questionnaires distributed	Number of questionnaires returned	Response rate
Operations Managers	13	13	100%
Credit Officers	26	22	85%
Total	39	35	90%

4.3 Reliability Test

According to table 4.2 results showed that the alpha coefficients were all greater than 0.7, hence conclusion was drawn that the instruments were acceptable and reliable for the study. The researcher carried out a pilot study on ten respondents at commercial banks in Kiambu County to check for validity.

Table 4.2: Reliability Results

Variables	Cronbach's Alpha
Reputation collateral building	0.78
CRBs Credit Process Evaluation	0.76
CRBs Information Management	0.77
CRBs Policies on Information	0.75

4.4.1 Demographic Characteristics of the respondents

Data on background information of the respondents was collected. This included gender, academic qualifications, and working experience and age distributions.

Gender Distribution

Findings in Table 4.3 show that majority 22 (56%) of the participants in the study were female, while male were 13 (44%).

Table 4.3 Gender of respondents

GENDER	Male		Female		Total	
	N	%	N	%	N	%
Operations Managers	8	62	5	23	13	44
Credit Officers	5	38	17	77	22	56
Total	13	100	22	100	35	100

Age of the respondents

Findings in Figure 4.1 show that 12 (34%) of the participants were aged between 43-54 years whereas 10 (29%) were aged between 32-42 years.

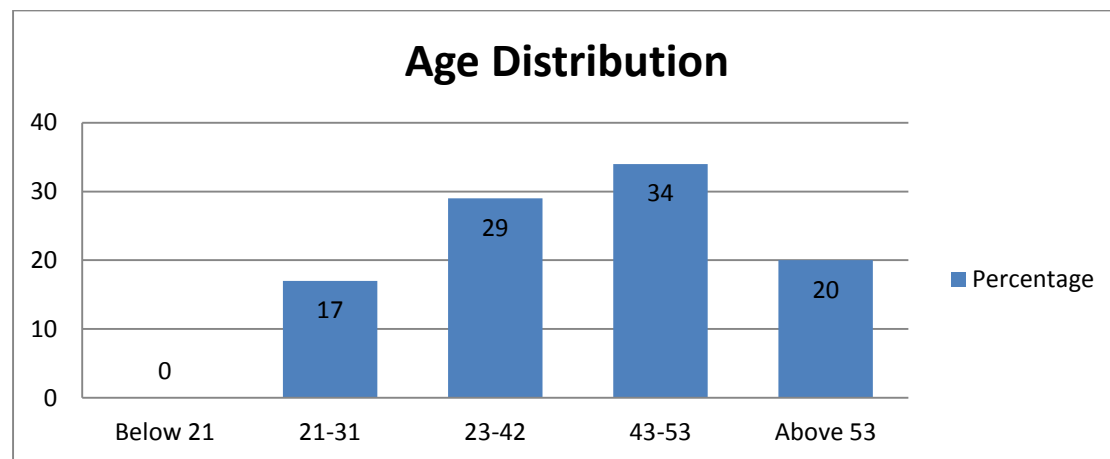


Figure 4.1 Age of the respondents

Academic Qualifications

As indicated in figure 4.2 majority 21 (60%) of the participants in the study were university graduates whereas 14 (40%) of the participants acquired college level of

education. The findings therefore show that majority of the participants were highly educated to enable them respond to the study's questions.

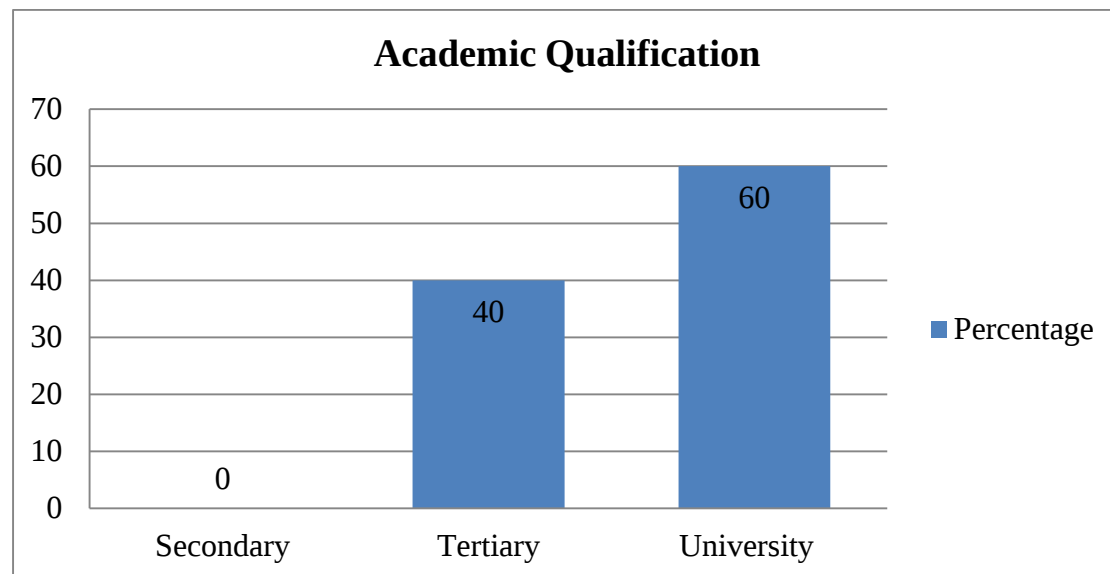


Figure 4.2 Academic qualifications

Table 4.4 Experience in the Bank

Years	Frequency	Percentage
Less than 1	2	6
1-3	7	20
4-6	6	17
7-9	15	42
Over 9	5	15
Total	35	100

According to table 4.4 above, 42% of the participants in the study had been in the bank for between 7 and 9 years, 20% being there for 1-3 years and 17% 4-6 years. Also, 15% had worked in the bank for over 9 years. This shows that majority of the participants had been in the bank long enough to provide credible data.

4.1.2 Duration of credit department operation

The duration of operation of credit department in respondent's institutions was sought and as per figure 4.3 below, it was cited to have operated for over 9 years by over half (51%) of the participants, and 7-9 years by 34%. Thus the departments had been in operations for some time and information on loan repayment can be accessed over a period of at least one year. Respondents can thus provide credible and reliable information during data collection.

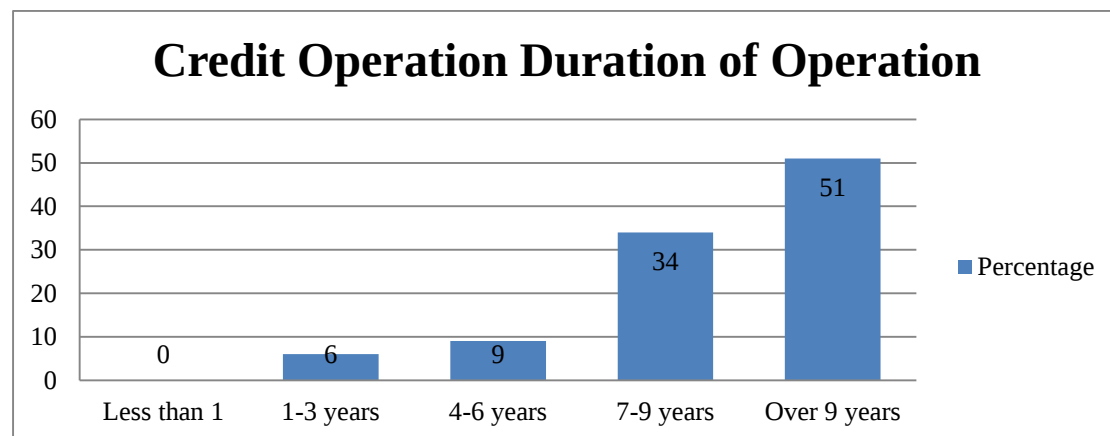


Figure 4.3 Duration of credit department operation
4.1.3 Bank's renewal of its license with CRB

According to figure 4.4 all the respondents 35 (100%) concurred that their banks had renewed their license with CRB. As such, the banks had an active relationship on credit information sharing and are thus averse with the relevant issues on borrowers' information and lending decisions.

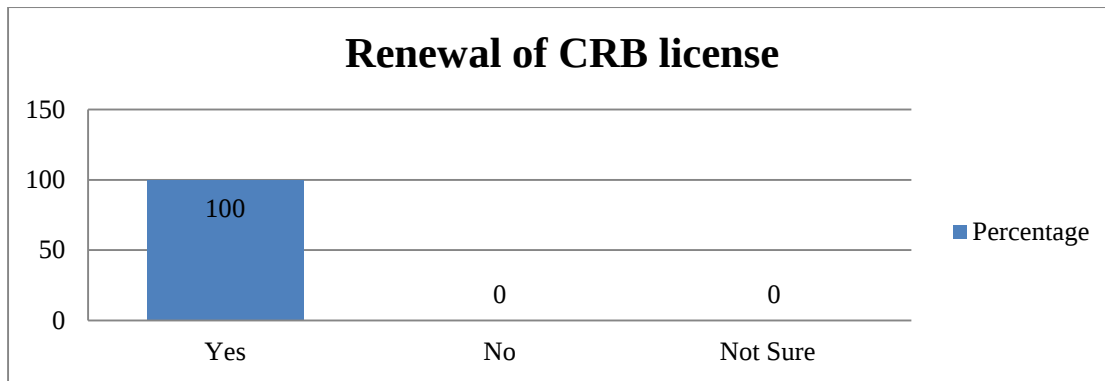


Figure 4.4 Bank's renewal of its license with CRB

4.2The effect of reputation collateral building by CRBs in Kenya on non-performing loans

The effect of reputation collateral building by CRBs in Kenya on non- performing loans was sought in this study

Table 4.5 The effect of reputation collateral building by CRBs in Kenya on non-performing loans

AREAS	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Credit information sharing enables borrowers' profiling for lending decisions	0%	0%	0%	80%	20%
Creditworthiness contribution	0%	38%	0%	42%	20%
Provide impressive credit history as collateral to underwrite credit	0%	0%	0%	20%	80%
Enhance banks capacity to make informed decisions on lending to credible borrowers	0%	0%	%	63%	37%
Influences on mitigation of non-performing bank loans	0%	0%	0%	58%	42%

Table 4.5 above shows that credit information sharing enables borrowers' profiling for lending decisions according to all (100%) the respondents. Further, CRBs information sharing contributed to borrowers' reputation building for creditworthiness rating according to

62% of the respondents. However, 38% disagreed, showing that motivation for timely loan repayment was not significantly based on the CRBs activities. All the respondents (100%) agreed that credit information sharing through CRBs provide impressive credit history as collateral to underwrite credit and also that it enhanced banks' capacity to make informed decisions on lending to credible borrowers. Further, they all agreed that the credit evaluation process influenced mitigation of non-performing loans in commercial banks. Thus the reputation collateral building had a significant influence on non-performing loans in Commercial banks operating in Nairobi.

4.3 Credit evaluation processes of CRBs effect on non-performing loans in commercial banks in Kenya

The effect of credit evaluation processes of CRBs in Kenya on non-performing loans was sought in this study.

Table 4.6 Credit evaluation processes factors of CRBs effect on non-performing loans in commercial banks in Kenya

Factors	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Methods are effective for mitigating Banks' credit default	0%	17%	9%	60%	14%
Credit scoring enables banks to ascertain loan delinquency and act appropriately	0%	0%	0%	100%	0%
CRBs avail all information on borrowers past credit transactions	0%	66%	0%	25%	9%
Credit scoring enables banks to ascertain loan delinquency and act appropriately	0%	0%	0%	100%	0%

According to table 4.6 above, the credit evaluation methods were found to be effective in mitigating banks' credit default by 74% of the respondents, and the credit scoring

enabling the banks to ascertain loan delinquency and act appropriately. Thus they were found to enable the banks assess credit portfolios of borrowers and thus lend decisively with reduction of credit risks. Information from the credit evaluation processes did not provide all information on borrowers past transactions according to a majority 66%. However, all the respondents agreed that credit scoring enabled commercial banks to ascertain loan delinquency and act appropriately. Thus, the credit evaluation processes had a significant influence on borrower assessment functions of credit departments in commercial banks, though full disclosure of borrowers was not fully accessible.

4.4 Extent respondents agreed on CRBs information management factors in curbing non-performing loans.

The effect of CRBs information management by CRBs in Kenya on non- performing loans was sought in this study. The results were as stipulated in table 4.7 below

Table 4.7 Extent respondents agreed on contribution of CRBs information management factors in curbing non-performing loans

Factors	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
CRBs have the managerial capacity	0%	33%	36%	25%	6%
CRBs infrastructure	0%	14%	17%	58%	11%
CRBs credit information analysis	0%	11%	0%	60%	29%
Evaluation of lending trends for loan repayment policies formulation by banks	0%	14%	0%	60%	26%

As indicated in table 4.7 above the influence of CRBs managerial capacity to manage information supplied by the commercial banks was not found to be significant in that 33%

disagreed and 36% of the respondents being neutral. Infrastructure was however favorably rated since a total 69% agreed that it was effective in the management of credit information. Further, credit information analysis was cited to enhance banks decisions on lending according to 89%of the participants. Further, 86% of the respondents agreed that CRBs were able to monitor and evaluate lending trends for loan repayment policies formulation by commercial banks. Thus, though information management was found to influence mitigation of non-performing loans, the institutional capacity for information management was not highly rated.

4.5 Extent CRBs information sharing policies influence curbing of non-performing loans for commercial banks

The effect of CRBs policies for information sharing on non- performing loans was sought in this study.

Table 4.8 Extent CRBs information sharing policies influence curbing of non-performing loans for commercial banks

FACTORS	Very little	Little	Moderate	Large	Very large
Involvement of banks while formulating information management policies	0%	49%	0%	51%	0%
Effectiveness of CRBs credit policies in enhancing credit management by the banks	0%	57%	0%	43%	0%
CRBs policies alignment to credit policies in the banking industry	0%	0%	0%	80%	20%
CRBs policies effect on information sharing among banks	0%	40%	0%	43%	17%

In reference to results in table 4.8 above, CRBs engagement of banks during the formulation of credit information policies was cited as large by 51% and little by 49% , showing that the banks were not always involved during policy formulation by the CRBs.

Effectiveness of CRBs credit policies in enhancing credit management by the banks was cited as little by over half (57%) of the respondents, showing a not very high significance, while CRBs policies alignment to credit policies in the banking industry was found to be large by all the respondents. However, the CRBs policies effect on information sharing among banks was cited as large by 60% of the respondents, but 40% found it little, thus showing a not highly significant level of influence.

4.6 Extent banks reviewed policies detailing non-performing loans and procedures to reduce the levels.

As indicated in figure 4.5 extent to which banks reviewed policies detailing non-performing loans and procedures was cited as large by a majority (83%) of the respondents. As such, the banks undertook measures that mitigated credit default risks through policies frameworks that guided credit management.

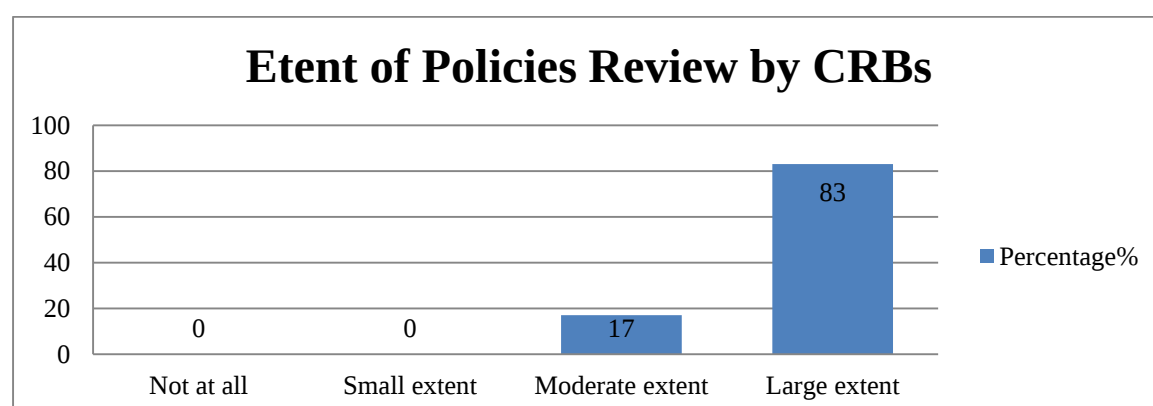


Figure 4.5 Extent banks reviewed policies detailing non-performing loans and procedures to reduce the levels.

4.7 Extent banks rely on CRBs credit information reports

Table 4.9 Extent banks rely on CRBs credit information reports

EXTENT	Frequency	Percentage%
Not at all	0	0
Small extent	0	0
Moderate extent	0	0
Large extent	35	100

Total	35	100
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Source: Research Data, (2016)

Results in table 4.9 above show that the extent to which banks rely on CRBs credit information reports was cited to be large by all (100%) of the respondents. Thus, the credit information from CRBs contributed significantly to lending decisions that reduced credit risks

4.8 Extent to which reputation collateral building influences loan delinquency in the banking sector

According to table 4.10,below the extent to which reputation collateral building influences loan delinquency in the banking sector was cited as large by 58%, though 42% of the respondents cited it moderate. Thus reputation collateral building did not have a significant effect on non-performing loans at the commercial banks in Nairobi.

Table 4.10 Extent to which reputation collateral building influences loan delinquency in the banking sector

EXTENT	Frequency	Percentage %
Not at all	0	0
Small extent	0	0
Moderate extent	15	42
Large extent	20	58
Total	35	100

4.9 Eextent credit evaluation processes of CRBs influence credit policy formulation in banks

According to table 4.11 below credit evaluation processes of CRBs influence on credit policy formulation in banks was cited as large by all (100%) the respondents. As such, the credit evaluation process significantly influenced lending policies for the commercial banks.

Table 4.11 Extent credit evaluation processes of CRBs influence credit policy formulation in banks

EXTENT	Frequency	Percentage%
Not at all	0	0
Small extent	0	0
Moderate extent	0	0
Large extent	35	100
Total	35	100

4.10 Extent to which CRBs credit information policies influence selection of credible borrowers in the banks

Results in table 4.12 below show that the extent to which CRBs credit information policies influence selection of credible borrowers in the banks was at 46% cited as average , small by 22% and large by 31%. The mixed responses show that the credit information policies did not have a very significant influence on borrower selection in the banks.

Table 4.12 Extent to which CRBs credit information policies influence selection of credible borrowers in the banks

EXTENT	Frequency	Percentage %
Not at all	0	0
Small extent	8	22
Moderate extent	16	46
Large extent	11	31
Total	35	100

4.11 Factors posing a challenge to the use of CRB information for addressing non-performing loans

The extent to which several factors pose a challenge to the use of CRB information for addressing non-performing loans was sought.

Table 4.13 Factors posing a challenge to the use of CRB information for addressing non-performing loans

FACTORS	Very little	Little	Moderate	Large	Very large
Information Management practices	0%	14%	14%	58%	14%
Organizational structure	0%	57%	0%	43%	0%
Lender Management	0%	20%	60%	20%	0%
Legal framework	0%	17%	0%	83%	0%
Relevance of information to borrowers lending behavior	0%	40%	43%	17%	0%

According to table 4.13 above information management, organization structure, and legal frameworks were the major factors posing challenges on the usage of CRBs information by the banks. Relevance of borrower behavior information as well as the organization structure posed the least challenge

4.12 Extent credit information sharing contributes to achievement of institutional performance

The study sought to establish the extent credit information sharing contributes to achievement of the following institutional performance areas.

Table 4.14 Extent credit information sharing contributes to achievement of banks performance

AREAS	Not at all	Small Extent	Moderate extent	Large extent	Very large extent
Credit risk levels	0%	0%	0%	80%	20%
Credit Performance levels	0%	0%	32%	42%	26%
Wider customer base	0%	38%	42%	20%	0%
Lower Lending rates	0%	0%	20%	80%	0%

As indicated in Table 4.14 above credit information was found to highly influence credit risk levels, credit performance levels and lowering lending rates. However, it lowly

affected wider customer base, and as such access to credit information from CRBs by commercial banks played a significant role in credit management, though not in expansion of customer base for the commercial banks.

4.13 Hypothesis Testing

Coefficient of Correlation (Pearson)

The coefficient of correlation enables assess the strength of a relationship between the dependent variable and independent variable. The larger the correlation value the stronger the association between two variables. It also shows the direction of relationship between two variables. In the study, aspects of credit information sharing through CRBs are the independent variables and curbing non-performing loans by commercial banks is the dependent variable. The correlation coefficients are as indicated in the tables below for the four credit information sharing aspects.

Table 4.15 Pearson Correlation Analysis

	Curbing non-performing loans	
Reputation collateral building	Pearsons	.575**
	Sig.	.005
	N	35
Credit Evaluation Process	Pearsons	.860**
	Sig.	.000
	N	35
Information Management	Pearsons	.745**
	Sig.	.000
	N	35
CRBs Policies	Pearsons	.470**
	Sig.	.000
	N	35

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

Results according to table 4.15 above the correlation between reputation collateral building and curbing non-performing loans was fairly positive as indicated by correlation (R^2) of 0.575, strongly positive for credit evaluation process(0.860), as well as information management at 0.745, and fair at .470 for CRBs policies on information sharing. Two variables (credit evaluation processes and information management) strongly influenced the curbing of non-performing loans since the Karl Pearson correlation coefficients were high above +0.5, showing a strong positive correlation. However, reputation collateral building was moderate at +0.575. CRBs information sharing policies had a low effect (+0.470). The results show that there was a significant relationship between reputation collateral building, credit evaluation processes as well as information management, and curbing non-performing loans of the commercial banks.

4.14 Regression Analysis

Table 4.16 Test of Normality

Kolmogorov-Smirnov			Shapiro-wilk test		
Statistic	df	Sig.	Statistic	df	sig.
0.377	64	0.061	0.867	64	0.072

Table 4.17 Model Fit Results

Model Fitting Information				
Model	-2 Log Likelihood	Chi-Square	f	Sig.
Intercept Only	128.422			
Final	91.576	41.913	11	0.000

Table 4.18 :Results of the R^2

Model	R	R Square	Adjusted R Square	Standard Error of Estimates	Durbin-Watson
1	.928 ^a	.674	.633	.1026780	2.285

a. Predictors: (Constant), b. Dependent Variable: curbing non-performing loans

R Square, also called the Coefficient of Determination stands at 0.674 as stipulated in table 4.18 above. This implies that 67.4% of the variation in curbing non-performing loans (the dependent variable) is explained by variability in the independent variables i.e. reputation collateral building, credit evaluation processes, information management and CRBs information sharing policies. To this effect, only 32.6% of the variation in the curbing non-performing loans is explained by other variables not included in the model. Therefore, guided by Draper, Smith, & Pownell (1966) and Seber & Lee (2012), it was concluded that at least one of the variables under assessment were useful in curbing nonperforming loans.

Table 4.19 Regression Analysis

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	B		Std. Error	Beta
(Constant)	.134		1.332	1.62
Reputation collateral building	.1608		.0114	.113
Credit evaluation process	.3211		.272	.211
Information management	.2021		.144	.127
CRBs Policies	.3814		.293	.223

According to table 4.19 above, the coefficients analysis gives β_0 (Beta) at .1608, β_1 at 0.3211, β_2 at .2021 and β_3 at .3814. Where β_0 is the constant, β_1 , β_2 and β_3 are parameter for estimation of the independent variables; reputation collateral building, credit evaluation process, and information management. The estimated equation is: curbing non-performing loans = $0.134 + 0.026X_1 + 0.033X_2 + 0.029X_3 + 0.053X_4 + 0.72$. With the critical value of 0.05 (95% confidence level), three values (reputation collateral building-0.026; credit evaluation processes-0.033; and information management-0.029) were within

the acceptance region hence significant in the study; CRBs policies beta value was above the critical value of .05(-0.53) making it insignificant. Overall, the hypothesis for the three (reputation collateral building, credit evaluation process and information management) takes the alternative position and the null hypotheses are rejected.

CHAPTER FIVE

SUMMARY OF MAJOR FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study entailed the curbing of nonperforming loans for commercial banks in Nairobi County. The chief aim was to analyze the effect of credit information sharing through CRBs on curbing nonperforming loans for the commercial banks. The chapter therefore recounts the summary of the major findings, the conclusions reached, recommendations and highlights of the area that require further research.

5.2 Summary of Findings

In this chapter, the results of the study were used to collaborate the hypotheses posed with regard to commercial banks nonperforming loans in Nairobi County. The studies found that majority of the respondents were female represented by over half of the respondents. Through questionnaires, information relevant for this study was collected. Majority of the respondents were well trained with sixty percent having degree qualification, and ninety four percent with at least one year experience in the credit department of their bank. Hence the respondent had adequate experience to understand the concepts of under study. All the respondents concurred that their banks had renewed their license with CRB,

meaning that they had an active relationship on credit information sharing and were thus averse with the relevant issues on borrowers' information and lending decisions. The results on the research questions are summarized below.

5.2.1 The extent to which CRBs reputation collateral building affects curbing non-performing loans of commercial banks in Nairobi County

The study sought to establish the effect CRBs reputation collateral building on non-performing loans in Commercial Banks through stipulated areas. Results showed that credit information sharing enabled borrowers' profiling for lending decisions by the banks, while CRBs information sharing motivated borrowers to repay loans on time. CRBs information sharing contributed to borrowers' reputation building for creditworthiness rating according to sixty two percent of the respondents. All the respondents agreed that credit information sharing through CRBs provide impressive credit history as collateral to underwrite credit and also that it enhanced banks' capacity to make informed decisions on lending to credible borrowers. Further, they all agreed that the credit evaluation process influenced mitigation of non-performing loans in commercial banks. The hypothesis testing ($R^2 = 0.575$ and $P=0.026$) depicts that the reputation collateral building had a significant influence on non-performing loans in Commercial banks operating in Nairobi, though it did not significantly influence motivation to repay loans promptly.

5.2.2 The extent to which CRBs credit evaluation processes affect curbing non-performing loans of commercial banks in Nairobi County

The study sought to evaluate credit evaluation processes factors of CRBs effect on non-performing loans in commercial banks. Results showed that the credit evaluation methods were found to be effective in mitigating banks' credit default. Credit scoring enabling the banks to ascertain loan delinquency and act appropriately thus enabling the banks to lend

decisively with reduction of credit risks. Information from the credit evaluation processes did not provide all information on borrowers past transactions according to a majority sixty six percent, showing that access to full information of borrowers from banks was not fully symmetrical. The hypothesis testing ($R^2 = 0.860$ and $P=0.033$) depicts that the credit evaluation processes had a significant influence on borrower assessment functions of credit departments in commercial banks, though full disclosure of borrowers was not fully accessible.

5.2.3 The extent to which CRBs information management affects curbing of non-performing loans for commercial banks in Nairobi County

The study further sought to establish the influence of CRBs information management on curbing non-performing loan for commercial banks. It was found that the influence of CRBs managerial capacity to manage information supplied by the commercial banks was not significant. CRBs infrastructure was however favorable rated since a total sixty nine percent agreed that it was effective in the management of credit information. CRBs credit information analysis, monitoring, monitoring and evaluation enhanced banks decisions on lending according to eighty nine percent of the respondents. Further, eighty six percent of the respondents agreed that CRBs were able to monitor and evaluate lending trends for loan repayment policies formulation by commercial banks. Thus, though information management was found to influence mitigation of non-performing loans, the institutional capacity for information management was not highly rated. The hypothesis testing ($R^2 = 0.745$ and $P=0.029$) depicts that information management strongly affect the curbing of non-performing loans for commercial banks in Nairobi.

5.2.4 The extent to which CRBs credit information sharing policy framework affects curbing of non-performing loans by commercial banks in Nairobi County

The study sought to establish the extent to which CRBs policies on information sharing affect non-performing loans for commercial banks. Results were that CRBs engagement of banks during the formulation of credit information policies was cited as large by fifty one percent and little by forty nine percent, showing that the banks were not always involved during policy formulation by the CRBs. Effectiveness of CRBs credit policies in enhancing credit management by the banks was not high, while CRBs policies alignment to credit policies in the banking industry was found to be large by all the respondents. However, the CRBs policies effect on information sharing among banks was cited as large by sixty percent of the respondents showing a not highly significant level of influence. Thus the effect of CRBs credit information sharing policies on curbing nonperforming loans was not high. The regression analysis results in relation The hypothesis testing ($R^2 = 0.470$ and $P=0.053$) depicts that confirm these results since the beta value was .53, positing an insignificant influence.

5.3 Discussions

5.3.1 Reputation Collateral Building and Curbing Commercial Banks non-performing loans

Karl Pearson's coefficient of results (R^2) was 0.575. The finding rejects the null hypothesis, meaning that reputation collateral building had an effect (though moderate) on curbing non-performing loans in commercial banks. Mituga (2011) opined that a mechanism for exchanging credit information through CRBs reduces lenders' information disadvantage, consequently allow them to screen credit applicants and make accurate prediction of repayment probabilities thus minimizing adverse selection. Wanjira (2010) posited that a good payment history or track record ascertained from CRBs may constitute the borrower's reputation collateral with any defaults diminishing the value of

that collateral. However the study findings add that for the case of reputation collateral building there was no significant effect on non-performing loans for the commercial banks.

5.3.2 Credit Evaluation Processes and Curbing Commercial Banks non-performing loans

Karl Pearson's coefficient of results (R^2) was 0.860. The results rejected the null hypothesis of the study, meaning that credit evaluation process strongly affects curbing of non-performing loans for the commercial banks. The findings concur with Gitahi (2013) who pointed out that that process by which the CRBs collect the information from multiple sources improves the precision of the signal about the quality of the credit seeker. Thus credit evaluation and reports submitted by the CRBs provided crucial information that enhanced the commercial banks' lending decisions

5.3.3 Information Management and Curbing Commercial Banks non-performing loans

Karl Pearson's coefficient of results (R^2) was 0.745. This means that there was a strong positive relationship between information management by CRBs on non-performing loans of commercial banks. The findings concur with Otworu (2013), who contended that effective system that ensures repayment of loans by borrowers is critical in dealing with asymmetric information problems and in reducing the level of loan losses, thus the long-term success of any banking organization.

5.3.4 CRBs Policies and Curbing Commercial Banks non-performing loans

Karl Pearson's coefficient of results (R^2) was 0.470. Thus the findings accept the null hypothesis, meaning that the policies did not significantly influence curbing of non-performing loans in the commercial banks. Rosemary, Barako&Bokea (2010) found that CRBs, being legal entities established as companies allow financial institutions to

exchange information on their clients' repayment history and debt profile, and require effective and solid policy framework so that they can operate effectively and efficiently. However, the study findings show that the current CRBs policies not significant in curbing non-performing loans for the commercial banks. Thus, the CRBs must review and restructure their policy frameworks to enhance the capacity of commercial banks in credit management for curbing loan default.

5.4 Conclusion

Credit information sharing is now an important phenomenon in the banking sector. Credit reference bureaus are mandated by the Central Bank of Kenya to coordinate credit information sharing in the financial sectors, and for banks in particular. The sharing of borrowers' information is crucial in the mitigation of credit risk for the banks. The ability of the CRBs to provide accurate and timely information for banks use in lending decisions was a significant area studied in this research. Concisely, the study sought to establish whether through CRBs credit information sharing, the commercial banks reduced the rate of nonperforming loans through the survey of commercial banks operating in Nairobi.

The findings were that credit information sharing enabled borrowers' profiling for lending decisions by the banks. It provided impressive credit history as collateral to underwrite credit and also that it enhanced banks' capacity to make informed decisions on lending to credible borrowers. The credit evaluation methods were found to be effective in mitigating banks' credit default while Credit scoring enabling the banks to ascertain loan delinquency and act appropriately, thus enabling the banks to lend decisively with reduction of credit risks. Information from the credit evaluation processes did not however provide all information on borrowers past transactions meaning that access to full information of borrowers from banks was not fully symmetrical.

The influence of CRBs managerial capacity and infrastructure to manage information supplied by the commercial banks was not significant. CRBs credit information analysis, monitoring, and evaluation enhanced banks decisions on lending and hence CRBs were able to monitor and evaluate lending trends for loan repayment policies formulation by commercial banks. CRBs engaged of banks during the formulation of credit information policies though not significantly. Though the CRBs credit information sharing policies were aligned to those of the banking sector, their effectiveness of CRBs credit policies in enhancing credit management by the banks was not high. In conclusion, there was a significant influence of credit evaluation processes, information management and reputation collateral building. However CRBs credit information sharing policies did not significantly influence the curbing of nonperforming loans for commercial banks.

5.5 Recommendations

The study recommends that the CRBs should review their policies to ensure that they contributed to mitigation of credit risks for financial sector players including the commercial banks. Adopting a collaborative approach, the CRBs will greatly gain from the input of the commercial banks in enhancing strategies for information sharing in curbing nonperforming loans. Institutionally, the CRBs should develop capacity development initiatives to enhance staff skills level for better service delivery and customer satisfaction. Infrastructure for managing information received from the banks as well as transmission should be enhanced. This will ensure efficiency and timely receipt of borrower information for quick lending decisions to banks.

Commercial banks on the other hand should create effective strategies for collecting borrower information to ensure that the information delivered to the CRBs can be relayed to other banks for lending decisions. Their systems of borrower information analysis should avail as much details as possible on borrowers, though legal limitations in the

industry should be observed. The banks should also create a framework for information usage to mitigate cannibalism of good customers. Importantly, the CRBs should avail their institutional information for stakeholder consumption including corporate information, membership and their professional standards. This will improve the company profiles and public perceptions. The public will thus accept to provide as much information as is necessary for credit information sharing among the commercial banks.

5.6 Limitations of the study

Challenges were experienced while undertaking the study. First accessing the respondents in the banks posed difficulties due to the busy work environment in the banking sector. However, with the cooperation of the operations managers, the researcher was allowed to drop the research instrument and later collect after a stipulated time convenient for both the study and the respondent. Further, the geographical distribution of the banks required a lot of travelling and to ensure timely data collection. Thus the researcher was able to cover data collection in the stipulated timeframe for the study.

5.7 Suggestions for Further Research

There is need for more studies focusing on constraints to effective information management by the CRBs and further research on strategies enhancing borrower information collection for mitigating loan defaults within financial institutions such as the commercial banks.

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APPENDICES

Appendix I: Time Frame

ACTIVITY	SCHEDULE
Draft proposal writing and Approval by Institutional review board (IRB)	June 2016
Sampling and data collection	June – July 2016
Data entry and analysis	June - July 2016
Abstract	July 2016
Draft report presentation	July - August 2016
Final report presentation	August 2016

Appendix II: Budget

ACTIVITY/ITEM	AMOUNT
Data collection expenses	10,000
Data analysis expenses	5,500
Stationery	2,000
Research Assistants Allowance	7,000
Internet access	2,000
Printing (questionnaire & proposal)	3,000
Transport	3,000
Total	32,500

Appendix III

Questionnaire

INSTRUCTIONS:

Kindly answer the following questions by writing a brief answer or ticking in the space or boxes provided respectively.

SECTION A: DEMOGRAPHIC INFORMATION

Please tick (✓) as appropriate

- Gender:
Male [] Female []
 - Age group:
Below 21 years [] 21 – 31 yrs []
 32 – 42 yrs [] 43 – 53 yrs []
 Above 53 years []
 - Educational level
Secondary school [] Tertiary/ College []
University []
 - How many years have you worked in the Bank?

Less than 1 year [] 1 - 3 years []
4 - 6 years [] 7 - 9 years []
Over 9 years []
 - How long has the credit department been in operation?

1-3 years []
4-6 years []
7-10 years []
More than 10 years []
6. Has the organization renewed its license with CRB?
- Yes [] No[] Not Sure[]

SECTION B: EFFECT OF REPUTATION COLLATERAL BUILDING BY CRBs ON NONPERFORMING LOANS FOR COMMERCIAL BANKS

1. Indicate the extent to which you agree with the following regarding the effect of reputation collateral building through CRBs on non-performing loans of commercial banks in Nairobi (on a scale of 1-5 where 1- Strongly Disagree, 2- Disagree, 3 – moderate, 4 – Agree and 5 – Strongly Agree)

Factors	1	2	3	4	5
Credit information sharing enables borrowers' profiling for lending decisions					
CRBs contribute to establishment of borrowers' creditworthiness					
CRBs provide impressive credit history as collateral to underwrite credit					
CRBs information enhances banks capacity to make informed decisions on lending to credible borrowers					
CRBs reports accuracy and credibility influences mitigation of nonperforming loans in commercial banks					

SECTION C: EFFECT OF CREDIT EVALUATION PROCESSES BY CRBs ON NON PERFORMING LOANS FOR COMMERCIAL BANKS

2. To what extent you agree with the following in regards to the effect of credit evaluation processes by CRBs on non-performing loans for commercial banks in Nairobi (using a scale of 1-5 where 1- Strongly Disagree, 2- Disagree, 3 – moderate, 4 – Agree and 5 – Strongly Agree)

Factors	1	2	3	4	5
CRBs credit evaluation methods are effective for mitigating Banks' credit default					
CRBs avail all information on borrowers past credit transactions					
CRBs credit scoring enables banks to ascertain loan delinquency and act appropriately					
CRBs borrower evaluation enhances the banks' capacity to select credible borrowers and reducing credit risk					

SECTION D: INFORMATIONMANAGEMENT BY CRBs EFFECT ON NONPERFORMING LOANS FOR COMMERCIAL BANKS

To what extentwould you agree with the following in regards to the influence of CRBs information management in curbing non-performing loansfor commercial banks in Nairobi (using a scale of 1-5 where 1- Strongly Disagree 2- Disagree, 3 – moderate, 4 – Agree and 5 – Strongly Agree)

Factors	1	2	3	4	5
CRBs has the managerial capacity to manage credit information supplied by commercial banks					
CRBs infrastructure is effective in the management of credit information					
CRBs credit information analysis, monitoring, monitoring and evaluation enhances banks decisions on lending					
CRBs are able to monitor and evaluate lending trends for loan repayment policies formulation by commercial banks					

SECTION E: CRBsPOLICIES ON INFORMATION SHARING AND CURBING NON-PERFORMING LOANS

3. To what extent you agree with the following in regards to the effect of CRBs information sharing policies in curbing non-performing loans for commercial banks in Nairobi (using a scale of 1-5 where 1- Very little 2- Little, 3 –Moderate, 4 – Large and 5 – Very large)

Factors	1	2	3	4	5
How much do CRBs involve bank while formulating information management policies?					
How effective are CRBs credit policies in enhancing credit management by the banks?					
To what extent do the CRBs policies aligned to credit policies in the banking industry?					
How much do you think the CRBs policies have affected information sharing among banks?					

SECTION F: MEASURE OF POLICY IMPLEMENTATION

Using a scale of 1-5 where 1-Not at all, 2- Small extent, 3- Moderate extent, 4- Large extent and 5- Very large extent

4. Please indicate to what extent you review policies detailing non-performing loans and procedures to reduce the levels.

Not at all	[]	Small extent	[]
Moderate extent	[]	Great extent	[]
Very great extent	[]		

5. To what extent does your bank rely on CRBs credit information reports?

Not at all	[]	Small extent	[]
Moderate extent	[]	Great extent	[]
Very great extent	[]		

6. To what extent does reputation collateral building influence loan delinquency in the banking sector?

Not at all	[]	Small extent	[]
Moderate extent	[]	Great extent	[]
Very great extent	[]		

7. To what extent do credit evaluation processes of CRBs influence credit policy formulation in your institution?

Not at all	[]	Small extent	[]
Moderate extent	[]	Great extent	[]
Very great extent	[]		

8. To what extent do CRBs credit information policies influence selection of credible borrowers in your institution

Not at all	[]	Small extent	[]
Moderate extent	[]	Great extent	[]
Very great extent	[]		

SECTION F: NON-PERFORMING LOANS

9. Please indicate the extent to which the following factors pose a challenge to the use of CRB information for addressing nonperforming loans(using a scale of 1-5 where 1- Very little 2- Little, 3 –Moderate, 4 – Large and 5 – Very large)

Factors	1	2	3	4	5
Information Management practices					
Organizational structure					
Lender Management					
Legal framework					
Relevance of information to borrowers lending behavior					

10. To what extent does credit information sharing contribute to achievement of the following institutional performance areas:(using a scale of 1-5 where 1- Not at all, 2- small extent 3– moderate extent 4 – Large extent and 5 – Very large Extent.)

Areas	1	2	3	4	5
Credit risk levels					
Credit Performance levels					
Level of nonperforming loans					
Lower Lending rates					

*****THANK YOU FOR PARTICIPATION*****