IMPACT OF CREDIT REFERENCE BUREAUS ON NON-PERFORMING LOANS: A SURVEY OF COMMERCIAL BANKS IN KENYA

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DECLARATION

Declaration by the Candidate

I declare that this thesis is my original work and has not been presented anywhere else for any academic award in any institution; and shall not be reproduced in part or full, or in any format without prior written permission from the author and/or University of Eldoret.

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Declaration by Supervisors

This thesis has been submitted for examination with our approval as the supervisors

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DEDICATION

I would like to dedicate this work to my Husband, Parents and my children for their tireless effort, patience and support while I undertook the study.

ABSTRACT

Lending is the main business of financial institutions and loans is naturally the main asset and major source of revenue for Banks. Despite the huge income created from lending, available literature shows that huge shares of bank loans are defaulted thus affecting financial performance of these institutions. The main objective of this study was to find out the impact of credit reference bureaus on non-performing loans of Commercial Banks in Kenya. The Specific Objectives were: To establish the trend of nonperforming loans before introduction of Credit Reference Bureaus; To establish the trend of nonperforming loans after introduction of Credit Reference bureaus and to establish the relationship between credit reference bureaus and non-performing loans. The study was guided by the theory of information asymmetry and employed a longitudinal research design and the target population included all the 43 licensed Commercial Banks in Kenya. Secondary data was used in the study. Data was collected from the annual Central Bank of Kenya reports between 2005-2014. Modeling was done using Anova to find out if there is a relationship between credit reference bureaus and non-performing loans. The study findings indicated that the trend of Non-PerformingLoans has reduced since the year 2005-2014. However there is no significant relationship between Credit Information Sharing and Non-PerformingLoans (p=0.868654). Also the mean (M=0.688) shows there is no significant relationship between Credit Information Sharing and Non-PerformingLoans. In addition Non Performing Loans and Credit Information Sharing were highly correlated and inversely proportional. However, this correlation was not significant. This study shows that the number of nonperforming loans has gone down since the inception of Credit Reference Bureaus because now Commercial Banks can access information of people and companies which have defaulted. The study recommends, among other things establishment of more companies information sharing and capacity building of Credit Information Sharing firms to adequately provide for its increasing clientele base. The study ends by suggesting a further research to be conducted to explore the impact of Credit Information Sharing on the economic well being of small and medium sized enterprises (SMEs), as well as Savings and Credit Companies (SACCOs) and Higher Education Loans Board (HELB).

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OPERATIONAL DEFINITION OF TERMS

Banks: Is a financial institution and intermediary that accepts deposits and channels those deposits into lending activities, either directly by loaning or indirectly through capital markets (CBK,2010)

Commercial Bank: It is a financial institution that provides various financial services such as giving loans and taking deposits (Nganga,2011).

Credit Reference bureaus: They are information brokers, providing creditors with reliable, relevant and comprehensive data on the repayment habits and current debt of their credit applicants (CBK,2010).

Credit Information sharing: Process through which Financial institutions/Banks submit information regarding their borrowers credit history to a centralized location that later share it with other credit providers (Dankwah, 2012).

Impact: To have a strong impact on something. Measure of the tangible or intangible effects (consequences) of one thing's or entity's action or influence upon another. According to Sinare, (2008), Impact, describes the measure Credit reference bureaus have on Non-Performing loans.

Non-performing loans: Percentage of loan values, not serviced for more than three months. Non-Performing Loans are also commonly described as loans in arrears for at least ninety days, Jared Getenga,(2007).

ABBREVIATIONS

CBK   -Central Bank of Kenya

CIS   -Credit Information Sharing

CRB   -Credit Reference Bureau

CRM   -Credit Risk Management

HELB -Higher Education Loans Board

NPL   -Non-Performing Loans

SACCO   -Savings and Credit Cooperatives

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CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the background to the study, problem statement, the objective and justification of the study.

1.1 Background to the Study

The world's financial crisis has put the financial sector at the centre of policy makers" attention across the developed and developing world. It is accepted that the quantity or percentage of Non-Performing Loans is often associated with Bank failures and financial crisis in both developing and developed countries, (Caprio and Kligebiel, 2002). There is evidence that the financial or banking crises in East Asia and sub-Sahara African countries were preceded by high Non-Performing assets. In Indonesia, where over 60 Banks collapsed during the financial crisis, Non-Performing assets represented about 75% of total asset portfolios, The banking crisis which affected a large number of sub-Saharan African countries in the 1990s was also accompanied by a rapid accumulation of Non-Performing Loans, (Caprio and Kligebiel, 2002).

According to World Bank report (1994), in Uganda, owing to lack of proper regulations the country"s banking industry was described as extremely weak, with huge Non-Performing Loans and some banks teetering on the verge of collapse. Reeling from years of economic mismanagement and political interference, Uganda's banking industry posted huge losses in the early 1990's. To help address credit risk management in Ugandan banks, the

government introduced a statute that deals with several issues. Mulei (2003), indicates that financial institutions are facing an enormous risk of Non-Performing Loans (NPLs), noting that larger loans have greater risk exposure. If lenders don"t take extra care, there could be more loan defaults. To overcome the challenge of NPLs, an institution is required to monitor the behavior of borrowers. Thus the idea of establishing a Credit Reference Bureau (CRB) was conceived in order to enable banks to determine credit worthiness of their borrowers, individuals, groups and enterprises; and therefore reduce the loan default risk. In this respect CRB helps assist in first, sharing information on default among banks; secondly, eliminating corrupt borrowers – those with the aim of borrowing from different financial institutions with the aim of defaulting; thirdly, to provide commercial professional Credit Reference to prospective foreign investors; and also to identify honest/ credible borrowers based on known history and character.

Kenya has experienced banking problems since 1986, culminating in major banks failures, (37 failed banks as at 1998), following the crises of ; 1986-1989, 1993-1994, and 1998. The crises were mainly attributed to Non-Performing Loans, Kalani and Waweru, (2009). According to (Mulei, 2003), Daima Bank was placed under statutory management for failing to meet the minimum core capitalization threshold as well as poor management of loan portfolios. The single best contributor to the bad loans of many of the failed local banks was insider lending. In at least half of the bank failures, insider lending accounted for substantial proportion of bad debts. Most of the larger local bank failures in Kenya, such as the Continental Bank, Trade Bank and Pan African Bank involved extensive insider lending leading to huge amounts of Non-Performing Loans (Brownbridge, M.,1998).

As a result of the banking failures in Kenya, and to find a way forward to prevent further failures, the Credit Information Sharing mechanism was launched in Kenya following the legislation and gazette of the Credit Bureau Regulations on 11th July, 2007. The Credit Reference Bureau Regulations were issued following the amendments to the banking act passed in 2006 that made it mandatory for the deposit protection fund and institutions licensed under the Banking act to share information on Non-Performing Loans through Credit Reference Bureaus licensed by Central Bank of Kenya.

This was the result of many years of negotiations and agreement between Kenya Bankers Association, Central Bank of Kenya, the ministry of Finance and the office of the Attorney General aimed at finding way forward to the challenges facing the lending environment in Kenya and especially the Banking sector. (CBK Annual Report, 2010).

1.2 Problem Statement.

Lending is the main business of Financial Institutions and loans is naturally the main asset and the major source of revenue for Banks. Despite the huge income created from lending, available literature shows that huge shares of Banks loans regularly go bad and therefore affect the Financial Performance of these Institutions. The issue of bad loans can fuel banking crisis and result in the collapse of some of these Institutions with their attendant repercussions on the economy as a whole, some bad loan borrowers, who know that banks operate in isolation, have exploited information asymmetry by taking more loans from these Banks, with the intention of defaulting.

The banking industry has in the past been faced with the challenges of obtaining comprehensive information on clients" payment history for use during the credit assessment process. This has led to a high rate of NPLs after defaulters move from one bank to the other to secure credit facilities. Non-Performing Loans has been a persistent problem in Kenyan Commercial Banks, leading to the collapse of 37 banks as at 1998, Brownbridge, (1998). Bad borrowers, who know that banks have been operating in isolation have exploited information asymmetry to create multiple bad debts in the banking industry in Kenya, distorting the lending business in the credit market thus adversely affecting bank performance, threatening banking sector stability and curtaining growth of the credit to the private sector due to the high interest charged on facilities to compensate on the credit risk.

Therefore, the study sought to find the impact of CRB on NPLs in all Commercial Banks, that have been registered by the CBK.

1.3 Research Objective

1.3.1 Purpose of the Study

The main objective of the study was to establish the impact of Credit Reference Bureaus on Non-Performing Loans of Commercial Banks in Kenya.

1.3.2 Specific Objectives

The Specific objectives of the study were;

    i.   To establish the trend of Non-Performing Loans before introduction of Credit Reference Bureaus.

    ii.   To establish the trend of Non-Performing Loans after introduction of Credit Reference Bureaus.

    iii.   To establish the relationship between Credit Reference Bureaus and Non-Performing Loans.

1.4 Research Questions

i.   What was the trend of Non-Performing Loans before the introduction of CRB?

ii.   What was the trend of Non-Performing Loans after the introduction of CRB?

iii.   What was the relationship between Credit Reference Bureaus and Non-performing Loans?

1.5 Research Hypothesis

Ho: There is no significant relationship between Credit Reference Bureaus and Non-Performing Loans of Commercial Banks.

1.6 Significance and Justification of the Study

The findings of this study was of benefit to the management of Commercial Banks to develop credit risk management policies that will enable them achieve their long-term goals by enabling them identify customers with ability to pay on time and thus can be granted credit.

The study will also contribute to literature and form part of Empirical review and will inspire prospective researchers to explore more dimensions in the impact of Credit Reference Bureaus on Non-Performing Loans and would form basis for further research.

The study will also inform and enlighten the public on the impact of Credit reference Bureau and Credit Information Sharing since many people are not yet enlightened on its importance.

1.7 Scope of the Study

The study was carried out in all Commercial Banks which are registered by the Central Bank of Kenya and are operating in Kenya. Secondary data was collected from the Annual CBK reports and Credit Reference Bureau of Africa Ltd. The data was collected between June and July 2014. The study sought to establish the Impact of Credit Reference Bureaus on Non-Performing Loans of Commercial Banks in Kenya. This was guided by the specific objective; to establish the trend of Non-performing loans, before and after the introduction of Credit Reference Bureaus and to establish the relationship between Credit Reference Bureaus and Non Performing Loans.

1.8 Assumptions of the Study

It was assumed that the Credit Reference Bureau of Africa would be willing to give information on Credit Information Sharing and that relevant data from the Central Bank of Kenya Annual report could be accessed.

1.9 Ethical Considerations

While undertaking the study the research was accountable for any breach of ethical issues such as revealing any information that will affect the banks credibility and therefore should hold information in confidentiality, anonymity and avoid plagiarism. The researcher also got due authority from the University before undertaking the study

and dissemination was based on laid down procedures. The consent of the respondents was sought before administering the questionnaires and a brief introduction on the purpose of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter presents the literature review relevant to the study. It contains the theoretical framework, criticisms of the model, empirical evidence, and conceptual framework.

2.1 Concept of Non-Performing Loans

According to Auronen (2003) Non Performing Loans are those loans which are ninety days or more past due or no longer accruing interest. Hennie (2003) agrees arguing that Non Performing Loans are those loans which are not generating income. This is further supported by Caprio and Klingebiel (1996), cited in Fofack (2005), who define Non Performing Loans as those loans which for a relatively long period of time do not generate income that is, the principal and or interest on these loans have been left unpaid for at least ninety days. Non-Performing Loans are also commonly described as loans in arrears for at least ninety days (Jared Getenga, (2007).

A growing body of empirical evidence supports the hypothesis that information sharing enhances successful credit risk management. Analyses of credit bureau data confirm that credit reporting reduces the selection costs of lenders by allowing them to more accurately predict individual loan defaults, Kallberg and Udell, (2003). Experimental evidence by Barron and Staten, (2003), shows that a public Credit Reference Bureau can motivate borrowers to repay loans, when they would otherwise default. The impact of information sharing on the level of Non-Performing Loans has

been tested by two cross-country studies. Based on their own survey of credit reporting in 43 countries, Jappelli and Pagano (2002) show that bank lending to the private sector is larger and default rates are lower in countries where information sharing is more solidly established and extensive. These cross-sectional relations persist also controlling for other economic and institutional determinants of Bank lending, such as country size, GDP, growth rate, and variables capturing respect for the law and protection of creditor rights. Djankov et al. (2007) confirm that private sector credit relative to GDP is positively correlated with information sharing in their study of credit market performance and institutional arrangements in 129 countries for the period 1978– 2003.

Firm-level data suggest that information sharing may indeed have a differential impact on credit availability for different firm types. Love and Mylenko (2003) combine cross-sectional firm-level data from the 1999 World Business Environment Survey with aggregate data on private and public registries collected in Galindo & Miller (2001). They find that private Credit Bureaus are associated with lower perceived financing constraints and a higher share of bank financing (while public credit registries are not), and that these correlations are particularly strong form small and young firms Galindo and Miller (2001) also provide evidence that information sharing reduces credit constraints at firm level.

NPLs is the percentage of loan values that are not serviced for three months and above. Ahmad and Ariff (2007). Loans defaults reduce the profits of commercial banks through excessive provisioning and this has been a major problem that commercial banks face. Increase in NPLs rate is referred often as the failure of credit policy and this has led to the financial crisis that banking sector has been enduring. As

a result, increases in NPLs" rate are the main reason of reduction in earnings of banks (Irum, Rehana and Muhammad, 2012).

NPLs arise as a result of information asymmetry between borrowers and lenders and this can prevent the efficient allocation of credit. Lenders are often unable to observe the characteristics of borrowers, including the riskiness of their investment projects, and this induces adverse selection problems leading to high restrictions in the award of credit. Lenders may also be unable to control the actions that borrowers take after receiving a loan by relaxing their effort to prevent default or hide the proceeds of their investment to keep from having to repay their debts. This information gap on borrowers can be addressed through credit information sharing (Jappelli and Pagano, 1999).

Reducing the risk of loan default has received an increasing attention as a central activity of commercial banks. One of the approaches adopted by lenders in an attempt to reduce incidences of default is enhanced credit assessment process. Credit assessment process involves assessing the credit worthiness of the applicants. This process requires in depth analysis in order to reduce potential loan defaulters. Effective credit assessment therefore plays a very important role in the overall management of credit risk (Saunders & Wilson, 1999).

It was observed that credit bureaus was to help solve a problem that is inherent in lending: imprecise knowledge of a borrower's likelihood of repaying. Turner and Varghese (2007). The lender must instead infer the risk profile of the borrower. Incorrect assessments result in two symmetrical problems. Low-risk borrowers are mistaken as high-risk and high-risk borrowers are mistaken as low-risk. Consequently, low-risk borrowers face high interest rates that act as subsidies for high-risk

borrowers. These rates price drive many low-risk borrowers out of the market. On the other hand, high-risk borrowers receive subsidies and are hereby drawn into the market. Average prices go up to reflect the disproportionate presence of high-risk borrowers, and delinquency rates are higher. In response, lenders ration loans in a way that given two individuals with identical risk profiles and preferences, one will receive a loan and another will not. The study concluded that credit referencing drastically reduces the levels of default. Credit Information sharing reduces information asymmetry and thus by reducing information asymmetry between lenders and borrowers, credit registries allow loans to be extended to safe borrowers who had previously been priced out of the market, resulting in higher aggregate lending (Pagano and Jappelli,1993).

A research carried out by Brown and Zehnder (2006) showed that information sharing increases repayment rates, as borrowers anticipate that a good credit record improves their access to credit. This incentive effect of information sharing is substantial when repayment is not third-party enforceable and lending is dominated by one-shot transactions. Historical information collected by a credit bureau has a powerful default predictive power and adds value by private information exchanges that share information on business payment performance. Exchange-generated information provides significant explanatory power in failure prediction models controlling for other credit information that is easily available to lenders.(Kallberg and Udell ,2003).

According to the CBK Banking supervision report contained in the Kenya Economic Survey 2011, during the year 2010, Kenya''s banking sector recorded significant growth in assets driven by growth in deposits, injection of capital and retention of profits. Performance over the last quarter of 2010 was largely supported by credit

referencing and Agent banking among other initiatives pursued by the Central Bank (CBK, 2011)

Examining balance sheet data of large companies in 23 countries they find a positive relation between credit access and an index of information sharing. Evidence also supports the theory that information sharing reduces moral hazard. If lenders enter credit information sharing institution, their borrowers improve their repayment performance –delinquent payments on leases and loans decrease. Therefore in this study, non performing loans are loans that are ninety or more days delinquent in payments of interest and/or principal . The term "bad loans" in Fofack (2005) is used interchangeably with Non- Performing and impaired loans. Berger and De Young, (1997) also consider these types of loans as "problem loans". In effect, these would be considered bad or toxic assets on the bank"s books (Bexley and Nenninger, 2012). These descriptions were used interchangeably during the study. According to Berger and De Young (1997), Non Performing Loans could be injurious to the Financial Performance of Banking Institutions.

According to Waweru and Kalani (2009), Non-Performing Loans are closely associated with banking crises. The magnitude of Non-Performing Loans is a key element in the initiation and progression of financial and banking crises. Guy (2011) agrees arguing that non performing loans have been widely used as a measure of asset quality among lending institutions and are often associated with failures and financial crises in both the developed and developing world. Reinhart and Rogoff (2010) as cited in Louzis et al (2011) point out that non- performing loans can be used to mark the onset of a banking crisis. Despite ongoing efforts to control bank lending activities, non performing loans are still a major concern for both international and local regulators (Boudriga et al, 2009).

Non- performing loans are also commonly described as loans in arrears for at least ninety days (Guy, 2011) NPL in loan portfolio affect operational efficiency which in turn affects profitability, liquidity and solvency position of Banks. Batra, S (2003) noted that in addition to the influence on profitability, liquidity and competitive functioning, NPL also affect the psychology of bankers in respect of their disposition of funds towards credit delivery and credit expansion. NPL generate a vicious effect on banking survival and growth, and if not managed properly leads to banking failures. According to this paper, Nonperforming Assets/ loans are loans that are ninety or more days delinquent in payments of interest and/or principal (Bexley and Nenninger, 2012).

According to Saunders & Wilson (1999), banks need to gather adequate information about potential customers to be able to calibrate the credit risk exposure. The information gathered will guide the bank in assessing the probability of borrower default and price the loan accordingly. Much of this information is gathered during loan documentation. Lenders also need to consider the credit history of the prospective borrowers. This information may be taken from credit reporting bureaus that provides credit record which shows the applicant's past loans record.

Credit history with no adverse entries allows the borrower a fairly free hand at the choice of lender and product available from the entire lending community. If a borrower has a clean credit history, then this credit profile is the most preferred borrower type and implies a low risk of any future default or loss for the lender. An adverse credit history is an area which catches many borrowers out. Consequently, banks should go beyond information provided by the borrower and seek additional information from third parties like credit rating agencies and credit reference bureaus (Simson and Hempel, 1999). An analysis of firm-level data shows that access to bank

credit is easier in countries where credit bureaus or registries exist (Galindo and Miller, 2001).

2.2 Review of Theories and Models

2.2.1 Information Asymmetry Theory

The theory of asymmetric information indicates that it may be complex to distinguish between good and bad borrowers (Auronen, 2003), which may result into adverse selection and moral hazards problems. The theory expounds that in the market, the person that possesses more information on a particular item to be transacted (the borrower) is in a position to negotiate optimal terms for the transaction than the other party (the lender) (Auronen, 2003). The party that knows less about the same specific item to be transacted is therefore in a position of making either right or wrong decision concerning the transaction. Adverse selection and moral hazards have led to significant accumulation of non-performing loans in banks (Bester, 1994; Bofondi and Gobbi, 2003).

The very existence of banks however, is often interpreted in terms of its superior ability to overcome three basic problems of information asymmetry, namely, ex-ante, interim and ex-post (Uyemura and Deventer, 1993), thus able to reduce number of non-performing loans. Information asymmetry between banks and borrowers is one of the main contributors to high cost of credit as well as increased default. Banks tend to load a risk premium" to borrowers because of lack of customer information. This in turn increases cost of borrowing, meaning repayment of loans go up which translates to a high level of default. Kalberg and Udell (2003), point out that information exchange from multiple sources improves the precision of the signal about the quality of the credit seekers. As a result, the default rate decreases. Klein (1992), shows that information sharing can motivate borrowers to pay their loans, when the legal

atmosphere makes it difficult for banks to implement credit agreements. The study used information asymmetry theory. Information asymmetry between banks and borrowers is one of the main contributors to high cost of credit. Banks tend to load a" risk premium" to borrowers because of lack of customer information. This in turn increases cost of borrowing, meaning repayment of loans go up which translates to a high level of default. The credit information sharing (CIS) mechanism is therefore expected to facilitate the development of information capital to increase information asymmetry and allow the number of defaults to decline substantially. It is therefore the Central Banks expectation that savings arising from the sharing of credit information shall translate to lower default. In turn more Kenyans was able to access credit from institutions and the building of information capital should also serve as a key substitute to physical collateral. (CBK 2010).

2.2.2 Adverse Selection Theory

Information sharing reduces adverse selection by improving banks information on credit applicants (Pagano and Japelli, 1993). The adverse selection problem signals that when lenders cannot distinguish good from bad borrowers, all borrowers are charged normal interest rate that reflects their pooled experience. If this rate is higher than worthy borrowers deserve, it will push

some good borrowers out of the borrowing market. As a result the average quality of the borrowers fall, which in turn raises the interest rate even further? If adverse selection is severe enough, the credit market may collapse (Misukin, 1990).

Adverse selection may cause banks to impose credit rationing, putting quantitative limits on lending to some borrowers. By limiting the supply of loans, banks reduce the average default risk and therefore alleviate adverse selection problems (Stiglitz and

Weiss, 1991). Another way to reduce adverse selection is to require collateral for the loan, so as to sell it in case of default on the part of the borrower (Misukin, 1990). Also, if banks exchange credit information on defaults, borrowers are encouraged to apply more energy in their projects, in order to avoid defaults (Padilla and Pagano, 2000).

2.2.3 Moral Hazard Theory

The moral hazard problem implies that a borrower has the incentive to default unless there are consequences for his future applications for credit. This result from the difficulty lenders have in assessing the level of wealth borrowers will have accumulated by the date on which the debt must be repaid, and not at the moment of application. If lenders cannot assess the borrowers" wealth, the latter was tempted to default on the borrowing. Forestalling this, lenders will increase rates, leading eventually to the breakdown of the market (Alary and Goller, 2001).

Lenders' Moral Hazard- Padilla and Pagano (1997) developed a model in which the performance of a loan depends on the quality of the borrower and on her effort. Initially, each bank possesses private information on the quality of a borrower. As in Rajan (1992), after extending a loan to a borrower a bank can exploit its private information on his quality and threaten to withhold credit to extract rents from him (hold up). Anticipating that the returns of his effort was (partially) appropriated by the bank, the borrower has then a reduced incentive to exert effort ex ante. In turn, this worsens his repayment performance. Banks can tackle this incentive problem by committing ex ante to sharing one with another their proprietary information about borrowers" quality. Expecting that this information pooling will promote competition

among lenders, borrowers was reassured that no hold up was possible and will step up their effort, lowering delinquency rates, Padilla and Pagano (1997).

Borrowers' Moral Hazard -A channel through which a credit bureau can affect lending outcomes is by imposing discipline on borrowers. In Padilla and Pagano (2000), lenders" information sharing induces borrowers to exert effort because they "perform for a broader audience", that is, if they are delinquent on their contractual obligations, their misconduct was disclosed to more lenders. Thus in this context information sharing mitigates borrowers" moral hazard. However, Padilla and Pagano (2000) also underscore that this effect weakens if lenders pool information on borrowers" characteristics in addition to information on delinquencies. In this case, a high quality borrower knows that anyway his high quality was disclosed to lenders, regardless of whether his credit history is good or bad.

2.3 Concept of Credit Reference Bureaus

2.3.1 Overview of Development of Credit Reference Bureaus

According to World Bank (2009) survey, data collected reveals that almost 60 countries have Public credit registries (PCRs). PCRs contain information on the performance of borrowers in a financial system and are administered and maintained by either the central bank or bank Supervisor. The region with the highest coverage of public credit registries is Latin America, where 17 countries have established PCRs, including all the largest economies (Argentina, Brazil, Chile, Colombia, and Mexico).

The first countries to establish public credit registries were in Western Europe – Germany in 1934 followed by France in 1946. By the mid-1960s, three other European countries – Italy, Spain and Belgium – had also established PCRs. Early adopters included the former French colonies in Western Africa which formed the

West African Monetary Union in 1962 and immediately established public credit reporting following the French example. Also several Middle Eastern and North African nations adopted PCRs in the 1950s and 1960s (Egypt, 1957; Tunisia, 1958; Morocco, 1966; Jordan, 1966; and Turkey, 1951. The PCRs in Argentina and Brazil were established in the 1990s in response to financial crises also with the primary goal of supporting banking supervision. Over time, though, these registries were transformed to also enhance the information to private financial institutions.

2.3.2 Credit Reference Bureaus in Developing World

Throughout the developing world, the growing availability of consumer credit and the growing competition between Financial institutions have made the necessity of credit information sharing all the more apparent. However, the extent and efficiency of information sharing mechanisms vary greatly between countries and continents. Africa remains the region of the world with the least developed credit information systems, yet the exploding financial sectors in many African countries have sparked interest in the feasibility of the creation of credit bureaus to help manage borrower risk under heightened competition.

Latin America arguably has the most extensive coverage of credit information systems among developing regions, with credit information sharing recently being extended even into the microfinance sector. A pertinent example is Bolivia. Prior to 1999 Bolivian law forbade the existence of private credit bureaus (Campion, 2001), believing credit data was too sensitive and important a topic to entrust to the private sector.

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. The need for establishment of CRB services in any financial system arises because of information asymmetry between lenders and borrowers (Payday cash, 2010). 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.

Research by Armstrong, (2008), based on information from several countries across the globe show that the existence of credit registries is associated with increased lending volume, growth of consumer lending, improved access to financing and a more stable banking sector.

Further, Hansen et al, (2004), highlighted that many borrowers make a lot of effort to repay their loans, but do not get rewarded for it because this good repayment history is not available to the bank when they apply for new loans. Whenever borrowers fail to repay their loans, banks are forced to pass on the cost of defaults to other customers through increased interest rates and other fees. Put simply - good borrowers are paying for bad. Credit reporting allows banks to better distinguish between good and bad borrowers. (Angulin and Scapens, 2000) in their study indicated that it is difficult to

have accurate information on the financial ability of prospective borrowers and even more difficult to have accurate information on their credit history. This makes it extremely difficult for the lender to assess the credit worthiness of potential borrowers and their ability to pay the loans.

2.3.3 Credit Reference Bureaus in Kenya

The operations, establishment, licensing, governance and management of CRBs, is provided through the banking (Credit Reference Bureau) regulations, 2008.

Establishment and licensing of credit reference bureaus in Kenya, is through an entity incorporated as a limited company under the companies Act and application for a license is made through the Central Bank of Kenya. A bureau licensed may engage activities such as; store and update the customer information maintain database and generate reports and assess the credit worthiness of a customer. In addition: may carry out market and statistical research and sell to institutions specialized literature.

The Central Bank of Kenya has been mandated by law to license and supervise the operations of such bureaus; many borrowers make a lot of effort to repay their loans, but do not get rewarded for it because this good repayment history is not available to the bank that they approach for new loans. On the other hand, whenever borrowers fail to repay their loans banks are forced to pass on the cost of defaults to other customers through increased interest rates and other fees. Put simply - good borrowers are paying for bad. This is coming to an end with the adoption Credit Reference Bureau.

It involves credit reports; in this case a report is generated by the Credit Reference Bureau, containing detailed information on a person's credit history, including information on their identity, credit accounts and loans, bankruptcies and late

payments, and recent enquiries. It can be obtained by prospective lenders only when they have permissible reason as defined in law, to determine his or her creditworthiness.

Credit reporting allows banks to better distinguish between good and bad borrowers. Someone who failed to pay their loan at one bank will not simply be able to walk to another bank to get another loan without the banks knowing about it. Over time better information on potential borrowers should mean that it will be both cheaper and easier to obtain loans.

These credit reports provide a credit score that is unique to a customer's character. This credit score is a measure of credit risk calculated from a credit report using a standardized formula. A positive score is characterized by frequently paid bills; lack of defaults on outstanding balances; maintaining steady employment; On the other hand, a negative credit score is characterized by late payments; bankruptcy; fraud charges; liens or foreclosures; loss of employment. It is worth noting that sharing of negative credit information does not amount to blacklisting. However, such information is expected to be taken into account by banks while assessing applications for loans and other bank facilities.

For many years, Kenyan banks have had to contend with having incomplete information about borrowers that in turn translated to higher risk premiums on interest rates. Bank industry players also say lack of credit reference information leads to a risk of overpricing low risk borrowers and under pricing high risk borrowers. The Central Bank of Kenya (CBK) is processing licenses for new credit reference bureaus to step up sharing of borrowers" information among banks.

Perennial defaulters had been the cause of high lending rates (Rukwaro, 2001). Negative reports would be used as a basis for denying habitual defaulters to access loans from any bank. Credit information sharing is a mechanism introduced by Central Bank requiring all banks to share data on the credit history of their customers. This information was shared by banks through credit reference bureaus when they want to establish the credit worthiness of a customer seeking a loan.

Banks and other credit providers use credit reports obtained from credit bureaus as part of the lending decision process. (Walsh, 2003) warns that having only one half of the picture (negative information) runs the risk of it becoming the only deciding factor - a blacklist with the potential of restricting access to credit. In the past, credit scoring focused on measuring the risk that a customer would not fulfill his/her financial obligations and run into payment arrears. More recently, credit scoring evolved to loss and exposure risk as well (Glennonet al, 2008). Scoring techniques are nowadays used throughout the whole life cycle of a credit as a decision support tool or automated decision algorithm for large customer bases. With increasing competition, electronic sale channels and recent saving, credit and cooperative regulations have been important catalysts for the application of semi- automated scoring systems.

Credit bureaus enable lenders to lend to more and better risk clients (avoiding dead beats) and to determine better (and lower) the bad loan spread that they need to cover expected losses of credit to good payers. Those lower costs for good credit risks motivate those borrowers to be more careful with repayment DjankovMcLiesh and Shleifer, (2005).

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.

Character is the moral obligation that a borrower feels to repay the loan. The lender will investigate the borrower's past payment experience, review a credit bureau report, and consider his educational background and experience in business. In addition character will be looked into as part of bank's credit control policy (Pyle, 1997). Capacity measures the borrowers ability to pay for example job status and source of income, Capital to determine the net worth of an individual, Collateral which determines the assets that an individual has to secure the debt and finally Conditions where the members" borrowing circumstances are evaluated for example market conditions, competitive pressure and seasonal character (Bessis, 2003).

Risk identification is vital for effective risk management. With the presence of a CRB, there is strong motivation for clients to repay their loans. 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. To be effective, credit bureaus gather information on all borrowers from as many of all available creditor sources, including financial institutions of all types, credit card companies, utilities, department and specialty stores, and other commercial, distribution, industrial, and service firms under reciprocity agreements (Berger and Frame, 2005). Creditors then receive a report on the borrower or applicant that they request giving a comprehensive picture of that individual's credit history and obligations.

Credit bureaus strive to provide credit reports with information that is relevant, complete, accurate and recent. They provide information through a variety of means but electronic means allow them to quickly and inexpensively process and provide massive amounts of information. A credit bureau score is based on the contents of the credit report at a particular point in time. The designers of a Credit Scoring system, through years of experience, determine which details are best able to predict future ability to repay (Beck et al, 2004). Effective risk management requires reporting and reviewing structure to ensure that risks are effectively identified, assessed and that appropriate controls and responses are in place. Risk monitoring can be used to make sure that risk management practices are in line and it also helps banks management to discover mistake at an early stage (Al-Tamini and Al-Mazrooei, 2007).)

According to Christen and Pearce (2005), the shareholders of the corporation can use their rights to demand information in order to judge the efficiency of the risk management system. Delinquency is the situation that occurs when loan payments are past due. A delinquent loan (or loan in arrears) is a loan on which payments are past due, while delinquent payments/payments in arrears are loan payments which are past due (Koch and MacDonald, 2000). Credit without strict discipline is nothing but charity. It must be pointed 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 credits facilities. Microcredit is the extension of very small loans (microloans) to those in poverty designed to spur entrepreneurship. The core issue of enlarging micro credit extension is to ensure risk compensation.

One main challenge facing the banking fraternity is not only growing competition for the underserved such as retail and small businesses, but also lack of strategies and skills to tackle impediments associated with this market. The banking sector in Kenya has to a large extent been underwritten by physical collateral such as land and borrowers without access to such collateral have been constrained in accessing credit. SMEs and individuals have been constrained in accessing affordable credit due to the perceived higher risk attached to them on account of lack of physical collateral. Microfinance institutions (MFIs) in Kenya are looking to gain access to the credit information of borrowers that is stored by local credit reference bureaus (CRBs), which allow only Commercial Banks to access such information in accordance with a regulation implemented in 2008. Representatives of unnamed Kenyan MFIs have reportedly argued that this puts them at a disadvantage by exposing them to the risk of lending to individuals and businesses that have previously defaulted on their loans.

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 (Basel, 1999 and IAIS, 2003). 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 (Basel; 1999, Greuning and Bratanovic; 2003 IAIS, 2003). Screening borrowers is an activity that has widely been recommended by Derban, Binner and Mullineux (2005). The recommendation has been widely put to use in the banking sector in the form of credit assessment.

According to the asymmetric information theory, a collection of reliable information from prospective borrowers becomes critical in accomplishing effective screening. Clear established process for approving new credits and extending the existing credits has been observed to be very important while managing CR (Heffernan, 1996). Further, monitoring of borrowers is very important as current and potential exposures change with both the passage of time and the movements in the underlying variables Donaldson, 1994; Mwisho,(2001), and also very important in dealing with moral hazard problem (Derban et al, 2005).

Brown and Zehnder (2007) found empirical evidence that the lending market would collapse due to credit risk in the absence of information sharing institution and reputational banking. However, their study also showed that establishing credit reference bureaus encouraged borrowers to repay their loans by allowing lenders to identify borrowers with a good payment history. The study showed that an information sharing institution positively impacted the credit market in the following ways: Without credit reference bureaus, borrowers had a tendency to repay loans only when they planned to maintain their current lending relationship. However, in economies with a credit information institution, borrowers had a higher chance of repaying their loans regardless of whether they were planning to continue their current lending relationship or not. Thus, it can be implied that credit sharing institutions, by documenting borrower behaviour, can positively impact borrower repayment and reduce NPLs.

The presence of CRBs reduces the information monopoly of a lender on its borrowers, thus reducing the extra rents that lenders can charge their clients. According to Jared Getenga (2007), one of the features that banks deliberate when deciding on a loan credit application is the estimated chances of recovery. To arrive at this, credit

information is required on how well the applicant has honored past loan obligations. This 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 borrower's repayment records are scattered in the various archives of the other financial institutions where the customer has previously borrowed. Whenever a borrower has credit information that the lender cannot access, this is officially referred to as information asymmetry.

Kalberg and Udell (2003) also point out that 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. 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. Banking competition for borrowers strengthens the positive effect of information sharing on lending: when credit markets are competitive, information sharing reduces informational interest charged and increases banking competition, which in turn leads to increased lending. Information sharing can also create incentives for borrowers to perform in line with banks" interests. Klein (1992) shows that information sharing can motivate borrowers to pay their loans, when the legal atmosphere makes it difficult for banks to implement credit agreements. In this model borrowers repay their loans because they know that defaulters were blacklisted, reducing external finance in future.

Credit reports are an important tool to assess consumer default risk, Barron and Staten, (2003). This is confirmed by Kalberg and Udell (2003), who document that trade credit history in Dun &Bradstreet"s reports improves default predictions relative to financial statements alone. Also Cowan and De Gregorio (2003) find that in Chile

positive and negative information in credit reports contributes to predict defaults. This improved assessment of credit risk appears to translate into higher lending. Galindo and Miller (2001) find a positive relation between access to finance (debt) and an index of information sharing in the World scope database, using the firm-level sensitivity of investment to cash flow as a proxy of credit constraints. They found that well-performing credit reporting systems reduce the sensitivity of investment to cash flows.

Using a pseudo panel-based model for several Sub-Saharan African countries, Fofack (2005) found evidence that economic growth, real exchange rate appreciation, the real interest rate, net interest margins, and inter-bank loans are significant determinants of NPLs in these countries. The author attributes the strong association between the macroeconomic factors and non-performing loans to the undiversified nature of some African economies.

Though many researches show that existence of CRB leads to a bigger credit market, lower default and interest rates, improved profitability and increased competitiveness within the industry, none of the studies has examined the impact of CRB on the level of Non-Performing Loans. This study seeks to fill in the noticeable gap in literature by examining the Impact of CRB on the level of Non-Performing Loans of Kenyan Commercial Banks.

Locally, few aspects relating to Credit Reference Bureau have been reviewed in Kenyan context. Mumi (2010) reviewed the impact of credit reference bureau on performance of Financial Institutions in Kenya; Sigei (2010) researched on evaluating the effectiveness of credit reference bureau in Kenya. Nganga (2011) carried out a study on stakeholder perception of credit reference bureau service in Kenya credit

market and Mumi, (2010) reviewed the role of credit reference bureau on credit access, a survey of Commercial Banks in Kenya. There exists no literature on the impact of credit reference bureaus on the non-performing loans of Commercial Banks in Kenya. This is the gap the study seeks to address by answering the research question; what is the impact of Credit Reference Bureaus on the level of Non-Performing Loans of Commercial Banks in Kenya?

Many studies have illustrated how comprehensive information helps lenders better predict borrower default. Kallberg and Udell (2003) found that historical information collected by a credit bureau had powerful default predictive power. A study by Barron and Staten (2003) showed that lenders could significantly reduce their default rate by including more comprehensive borrower information in their default prediction models.

An analogous study – specific to Brazil and Argentina – found similar default rate decreases when more information was available on borrowers (Powell, et al. 2004).Credit markets present asymmetric information problems. Lenders know neither the past behavior and the characteristics, nor the intentions of credit applicants. This creates a moral hazard problem that causes lenders to make credit decisions based on the average characteristics of borrowers rather than on individual characteristics.

Moral hazard implies a lower average probability of payment, making credit more expensive. Stiglitz and Wise (1981) states that higher interest rates exacerbate Informational problem, adverse selection, because only higher risk borrowers are willing to accept loans at high interest rates. Additionally, those borrowers that have defaulted with a particular lender are the ones looking for alternative credit sources (akerlof,1970). This increases the average risk of lending and the corresponding

interest rate. Credit is hence allocated to excessively risky projects, and low risk borrowers face tighter credit constraints. Adequately managing credit risk in financial institutions is critical for the survival and growth of financial institutions.

In the case of banks, the issue of credit risk is of even greater concern because of the higher levels of perceived risks resulting from some of the characteristics of clients and business conditions that they find themselves in.

In recent decades, a large number of countries have experienced financial distress of varying degrees of severity, and some have suffered repeated bouts of distress (Hardy, 1998). The best warning signs of financial crises are proxies for the vulnerability of the banking and corporate sector. He showed that full-blown banking crises are associated more with external developments, and domestic variables are the main leading indicators of severe but contained banking distress. He adds that the most obvious indicators that can be used to predict banking crises are those that relate directly to the soundness of the banking system.

In the 1980's and early 1990's several countries in developed, developing and transition economies experienced several banking crises requiring a major overhaul of their banking systems. Kenya has experience banking problems since 1986 culmination in major bank failures (37 failed banks as at 1998) following the crises of; 1986-1989, 1993/1994 and 1998 (Kithinji and Waweru; Ngugi, 2001). Presently, several developed countries including the USA are experiencing a banking crisis. For example the Citibank group alone ,has written off more than $39 billion in losses.

The Kenyan banking sector was in the 80's and 90's saddled with a momentous Non-Performing Loans (NPLs) portfolio. This invariably led to the collapse of some banks. One of the catalysts in this scenario was ―Serial defaulters‖, who borrowed from

various banks with no intention of repaying the loans. Undoubtedly these defaulters thrived in the ―information asymmetry‖ environment that prevailed due to lack of a credit information sharing mechanism. The development of a sustainable information sharing industry is therefore recognized as a key component of financial sector reforms in almost all developing and emerging economies (CBK, 2010).

Hardy, D (1998) observed that the use of credit risk information systems has become a topic of analysis and promotion within international organizations and national governments. He states that one of the factors limiting the access to credit for micro enterprises is the lack of information on the risk that they represent to the financial intermediaries.

As a result the commercial banks need to make a bigger effort to complete the information they require in order to make decisions over the credit requesta they receive, incrementing their operational costs, which are generally transferred to their customers directly or indirectly. Credit service users, are generally classified in five categories according to their financial record and capacity. The categories range from A to E or from 1 to 5, depending on the country, indicating increased levels of risk. Users classified as A or 1 are customers who have a minimal or non- existent risk level, to which a premium rate is offered; while those who are classified as E or 5 present the highest risk.

Bank supervisory authorities demand that the regulated institutions set aside reserves according to the customer's risk level, which reaches 100% of the loan in the highest risk category. This implies a financial cost, which is transferred to the customers through the interest rate and other charges. The banking sector is generally classified in the C and D categories (in other words, high-risk customers).

The risk is compensated with rates over the premium interest rate, which makes their access to financing very expensive. Given that the banking sector is an important component in the national economies, the formal and informal financial intermediaries are demanding information about their real and potential customers in order to better evaluate the risk level they present.

On the other hand, the central bank and government are supporting the use of institutional information services as a way of reducing costs of lending and reducing financial risks and barriers to entity for other credit suppliers, all of which should translate into an increase in the credit supply and other financial services for the economy. These efforts are supported by evidence that indicates that where credit bureaus are operation, most of the banks consult the credit risk databases in order to decide whether to grant consumer credit and even more so grant micro enterprise credit. Additionally, the information obtained from the registries has been better valued than other sources of information used in evaluating credit worthiness, even more than guarantees and financial statement (CBK,2010).

Banks play a central role in extending financial services within an economy. In support of this role, credit bureaus help lenders make faster and more accurate credit decisions. Credit histories not only provide necessary input for credit underwriting, but also allow borrowers to take their credit history form one financial institution to another thereby enabling lending marketa more competitive and, in the end, more affordable. Credit Reference Bureaus (CRBs) assist in making credit accessible to more people, and enabling lenders and businesses reduce risk and fraud.

Andrew Powell et al (2004), states that Information problems have long been at the fore of analyses of credit markets. Indeed, one rationale for banks as institutions is to

gather information and establish relationships with borrowers in an effort to surmount these problems. A striking feature of banks is the amount of services that they offer and the economies of scope between them. For example, accounts and payments' services provide valuable data to the bank on the creditworthiness of clients as potential borrower. Jappelli and Pagano (1993), in a model with adverse selection, show that exchanging information on borrower type decreases default rates and reduces average interest rates. In a related paper, Padilla and Pagano (1997) show that information sharing among borrowers would lead to lower interest rates and increased lending.

Locally, various aspects of CRB have been reviewed by various scholars. Sigei (2010) researched on evaluating the effectiveness of credit reference bureau in Kenya. The case of KCB. His study revealed that CRBs play an important role in preventing serial loan defaulters from accessing credits from other financial institutions thus cushioning financial institutions against unforeseen credit risks.

 Similar sentiments are also shared by others researchers (Mumi, 2010; Gaitho, 2010). Nganga (2011) carried out a study on stakeholder perception of credit reference bureau service in Kenya credit market. The study reveals that many of the borrowers do not want to be listed in CRBs and would try as much as possible to service their credit facilities so as to protect their reputation.

2.4 Trends of Non-Performing Loans

The level of NPLs can be compared to that of other countries. The ratios between 2001 and 2002 were: 33 in Kenya, 24 in Zimbabwe, 16.81 in Philippines, 11 in Nigeria, 7.7 in Taiwan and 3 in South Africa (Waweru and Kalani, 2009). Apart from Kenya, the rest of the countries had lower NPLs level than Tanzania. Performance of

CBs in terms of performing loans is very crucial notonly for sustainability and growth of the CBs, but also in the stability of currency and the economy as a whole (Greuning and Bratanovic, 2003). This is because NPLs create a credit risk that on one hand can cause CBs be more risk averse hence reduce the capital flow to different sectors in the economy and on the other hand can cause liquidity risk and can make CBs insolvent which in turn can influence payment system thus, destabilize the economy in the long run. Studies to established reasons behind non performing loans have been conducted in other countries.

In Spain, Fernandez, Jorge and Saurina, (2000) pointed out that despite Bank supervisors being aware that most banking crises were directly related to inadequate management of credit risk by respective institutions, it was difficult for supervisors from Central Banks to pursue bank managers to follow more prudent credit policies during economic upturn, that even conservative managers might find market pressure for higher profits very difficult to overcome. Nishimura, Kazuhito and Yukiko (2001) studied the situation in Japan and concluded that some of the loans made to companies during the bubble era became non- performing when the bubble burst. Gorter and Bloem (2002) argued that non-performing loans are mainly caused by an inevitable number of wrong economic decisions by individuals and plain bad luck (inclement weather, unexpected price changes for certain products, etc.).

In Africa, Brownbridge, (1998) concluded that many of the bad debts in banks were attributable to moral hazards; the adverse incentives on bank owners to adopt imprudent lending strategies, in particular insider lending at high interest rates to borrowers in the most risky segments of the credit market. To the borrowers'' side, they also tend to divert the funds to risky investments once they are granted the loans. CBs have employed different strategies in attempt to reduce the level of loss caused

by NPLs. In Japan among other strategies, they pursue a lending strategy backed by appropriate credit risk evaluations (Bank of Japan, 2003 quoted in (Waweru and Kalani, 2009). In China, turning over the NPLs to asset management companies was proved very successfully (China Daily, 2002 quoted in Waweru and Kalani, 2009).

In Kenya banks shift away from concentration on security based lending and put more emphases on the customer ability to meet the loan repayment. Reduction of interest rates however, was observed to be a successful action taken by bank management. Others were mostly associated with proper appraisal of borrowers in particular use of credit limit ratios, based on cash flows, use of forecasts and feasibility studies and use of standard lending procedure (Waweru and Kalani, 2009). The nature of CBs business expose them to risks one of them being associated with default from borrowers. Literature shows that their default may be caused by factors external or/and internal to the bank. Given the fact that external factors are uncontrollable by Credit Bureaus, emphasis on tackling internal factors was expected. The Kenyan banking sector comprises 43 Commercial Banks, 1 mortgage finance company, 6 deposit taking microfinance institutions, 2 credit reference bureaus, 5 representative offices, and 115 exchange bureaus (CBK Annual Report 2010).

Table 2.1: Loans and Advances and Non-Performing loans

PERIOD	LOANS AND ADVANCES (in billions)	NON-PERFORMING LOANS (%)
2012	1,296,452	61.9
2011	1,152,011	58.3
2010	786,591	61.5
2009	668,580	68.8
2008	555,062	58.3
2007	518,917	56.1

Researcher 2014 adopted from CBK annual reports and Bank supervision annual reports

2.5 Conceptual Framework

The conceptual framework of this study is presented in figure 2.1. It constitutes the dependent and independent variables.

Independent variable   **Dependent Variable**

Credit Reference Bureau

Credit Information Sharing

Non Performing Loans

-Net non-performing loans

-Gross Non performing loans
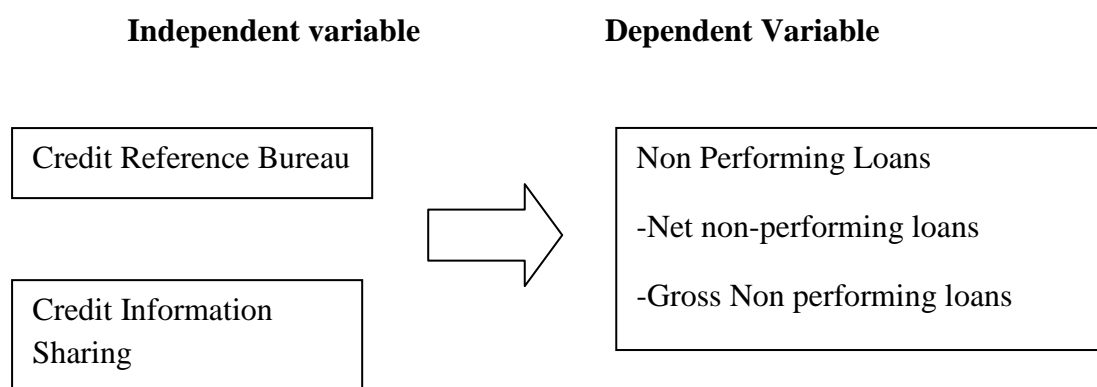
Figure 1: Conceptual Framework

(Source; Author 2015)

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Overview

This chapter reviewed the research designs used, target population, data collection and data collection instruments, data analysis and the research model used while conducting the research.

3.1 Study Area

The study covered all the Commercial Banks in Kenya.

3.2 Research Design

This study employed a longitudinal research design. This is because the study compiled data for a long period in order to find the impact of Credit Reference Bureaus on non-performing loans.

3.3 Target Population

The target population involved six large banks, 15 medium sized banks and 22 small banks which add up to 43 commercial banks which are registered by the Central Bank of Kenya, as described by the table below.

Table 3.1:Target population categories

Category	Banks market share	No. of banks	Percentage
Large	53.7 %	6	14%
Medium	36.8%	15	35%
Small	9.5 %	22	51%
Total	**100 %**	**43**	**100%**

Source (Bank supervision report 2012)

3.3 Data collection

The study used secondary data. Data was collected from annual financial statements for the ten years from 2005 to 2014, as these financial statements are audited and thus are considered to have accepted levels of reliability (Neuman 1997). Other relevant data was obtained from various internal reports, other official documents and relevant publications such as the bank supervisions report. The credit referencing and checks data was collected from Credit Reference Bureau Africa Limited.

3.4 Data analysis

Secondary data was adopted from the annual financial statements from the year 2005-2014. The NPL data relating to the periods 2005-2009 (before introduction of CRB) and 2010-2014 (after introduction of CRB) was analyzed to establish the trend and the relationship between CBR and NPLs. Graphical presentation was done to present the trend of NPLs while inferential tests involved ANOVA and t-Test that helped describe the relationship between the NPLs.

3.5 Model specification

The basic principle of ANOVA is to test for differences among the means of the populations by examining the amount of variations between each of the samples, relative to the amount of variation between the samples. In this case the researcher"s concern is to analyze the trend of NPLs before and after the introduction of CRB in order to know whether they differ significantly. The ANOVA technique is important in this context because the researcher wanted to compare two sets of data such as trend of NPLS before and after introduction of CRB and investigated the differences among the means of the two sets of data simultaneously. ANOVA gave a more explanatory power of the independent variable (CRB) than regression thus more preferred.

The ANOVA model:

$$Y_{ij} = \mu + t_i + \sum_{ij}$$

Where:

μ = grand mean

t_i = ith treatment effect.

$\sum_{ij}$ = random error term.

Y_{ij} = dependent variable.

i.e the response of the ith experimental unitsthat receive the ith treatment. The researcher tested;

HO: $\mu_1 = \mu_2 - - - - - - - - - - = \mu_t$

The Régression Model

$$Y = \beta o + \beta 1 X1 + \varepsilon$$

Where;

βO =Constant Y = NPLs

β = Beta

X1 = Credit information request

ε = Error of prediction

3.6 Measurement of Variables

The average level of NPLs in 2005-2009 was taken to depict the normal NPLs before the introduction of Credit reference bureau. The average ratio of NPLs in 2010, 2011, 2012, 2013 and 2014 was measured to give the change in the NPLs in 2010-2014. The study hypothesized that Credit Information sharing was the independent variable influencing NPLs after its adoption by Commercial Banks. Its influence was measured by comparing the means of NPLs before and after adoption of CBR. The difference was used to describe the relationship between Non-performing loans and Credit Reference Bureaus.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the findings of the research.

4.1Trend of NPLs before introduction of CRB

The trend of NPLs before introduction of CRB is shown in figure 4.1

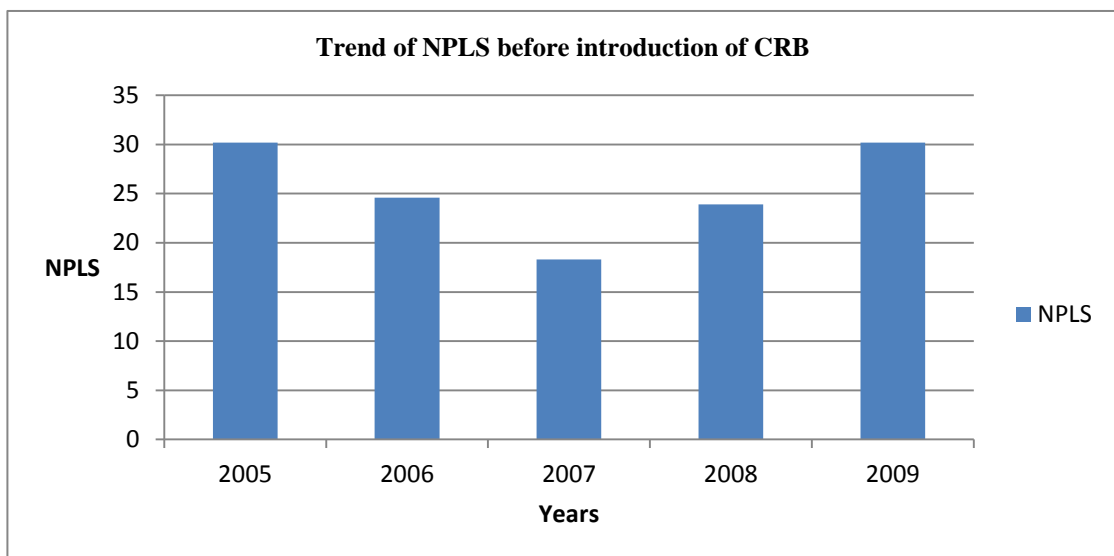**Figure 4.1 : Trend of NPLs before introduction of CRB**

Source Survey data (2014)

The study established that, before introduction of CRB, Commercial Banks recorded high NPLs as shown in figure 4.1. In 2005, NPLs were standing at 30.2 while in 2009, NPLs were standing at 24.5. Figure 4.1 generally shows a declining trend over the years concerning NPLs recorded despite individual figures for each year being high.

4.1.1: Trend of Quarterly NPLs before introduction of CRB

The trend of the quarterly NPLs were obtained for the years 2005-2009 as shown in Table 4.1. A graphical presentation of the results is shown as in figure 4.2.

Table 4.1 2: Quarterly NPLs in billions before adoption of CRB

Quarters	2005	2006	2007	2008	2009
March	31.2	25.3	23.2	20.2	22.9
June	31.3	25.5	23.7	20.0	26.7
Sep	31.7	25.3	22.5	21.1	26.4
Dec	32.6	25.4	20.7	21.5	27.2
Average	**31.7**	**25,37**	**22.52**	**20.7**	**25,8**

Source Survey data (2014)

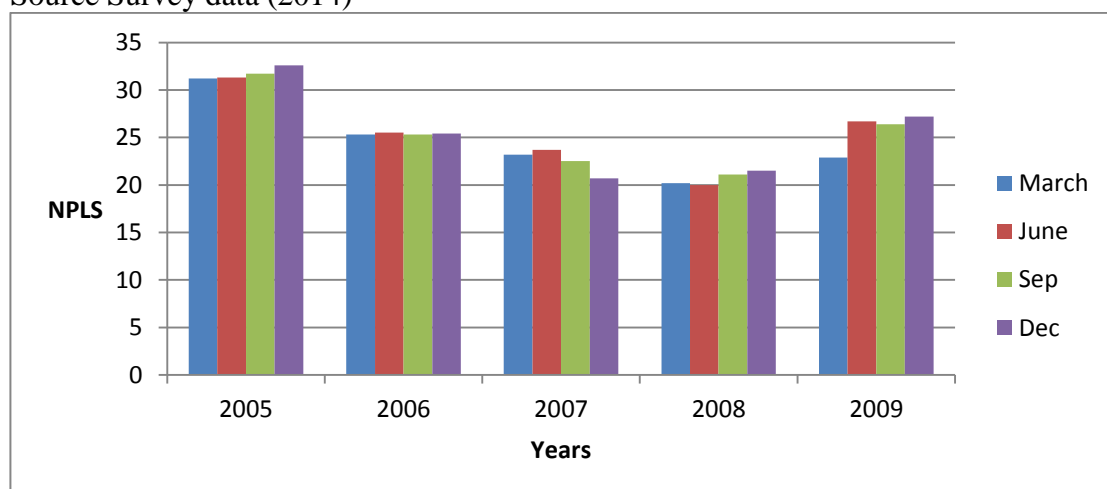**Figure 4.2 : Trend of Quarterly NPLs in billions before adoption of CRB**
Source Survey data (2014)

The study established that, before introduction of CRB, Commercial Banks recorded high NPLs as shown in table 4.1 and figure 4.2 respectively. In 2005, average NPLs was 31.7 while in 2009, NPLs was 25.8. Figure 4.2 further illustrates a declining trend of NPLs despite Non Performing Loans being relatively high.

4.2 Trend of NPLs after introduction of CRB

The results showing the trend of NPLs after introduction of CRB is graphically presented in figure 4.3.

Trend of NPLS after intoduction of CRB
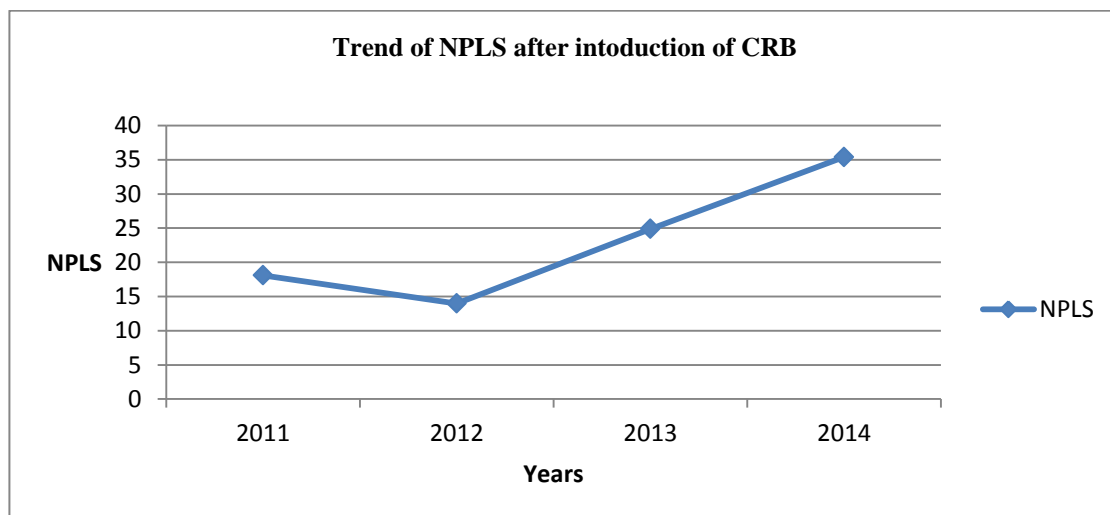
Figure 4.3: Trend of NPLs after introduction of CRB

Source Survey data (2014)

After introduction of CRB, Commercial Banks recorded lower figures of NPLs compared to the years before CRB adoption. The highest recorded NPLs during this period was during the year 2014 when it rose to 35.4 while the least recorded was 13.98 in the year 2012. The general trend of NPLS as described in figure 4.2 is that of rising NPLs but at reduced figures. This is attributed to enhanced corporate governance and risk management through adoption of CRB.

4.2.1 Trend of Quarterly NPLs after adoption of CRB

Table 4.2 : Trend of Quarterly NPLs in billions after adoption of CRB

Quarters	2010	2011	2012	2013	2014
March	28.5	20.76	17.1	24.76	46.5
June	25.56	21.13	18.6	33.03	49.6
Sep	22.5	20.2	21.1	34.8	48.1
Dec	20.6	19.4	21.4	36.9	50.7
Annual average	**24.3**	**20.4**	**19.6**	**32.6**	**48.7**

Source Survey data (2014)
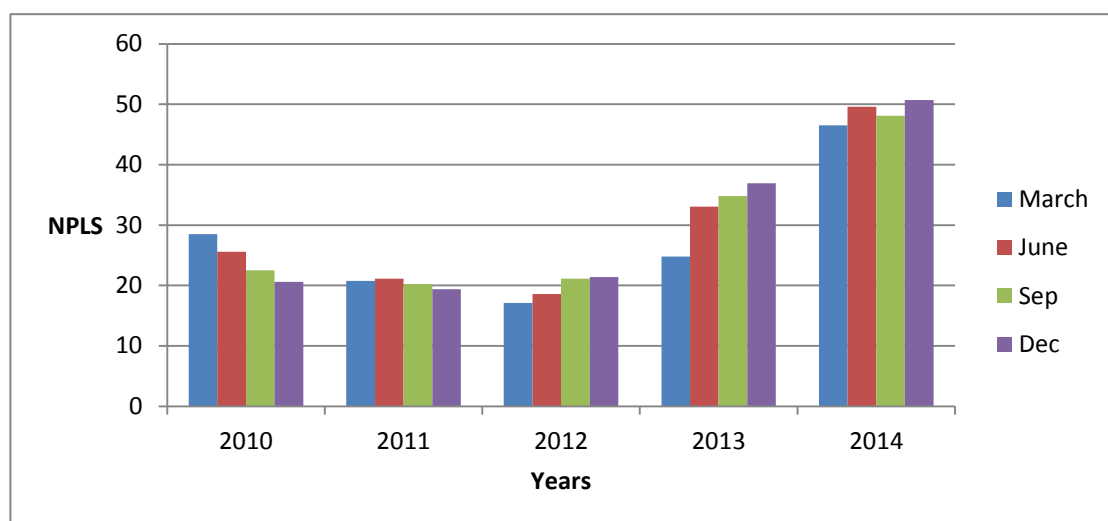
Figure 4.4 :Trend of Quarterly NPLs in billions after adoption of CRB
Source Survey data (2014)

When annual average NPLs were plotted on a bar chart, results revealed that NPLs figures after introduction of CRB had reduced compared to when CRB had not been adopted by Commercial Banks. Despite the fact that the trend of NPLs showing that it was rising, the individual figures were somehow low. The rising trend can be attributed to the 2013 elections, unforeseen circumstances such as misfortunes (loss of income, inflationary pressures, heightened unemployment, depreciated currency and

tight financial conditions that weaken the borrowers' repayment capacity. Despite the case it cannot be overruled that CRB has not significantly contributed towards reduction of NPLs. Therefore Commercial Banks should continue to employ CRB services.

4.3 Relationship between CRB and NPLs

The relationship between CRB and NPLs from the Anova Model is shown in Table 4.3 below.

Table 4.3 :Anova: Single Factor results

SUMMARY

Groups	Count	Sum	Average	Variance
Column 1	5	119.3	23.86	18.018
Column 2	5	115.86	23.172	63.14972

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1.18336	1	1.18336	0.029158	0.868654	5.317655
Within Groups	324.6709	8	40.58386			
Total	325.8542	9				

Source Survey data (2014)

Since F < F crit, we fail to reject the null hypothesis. This is the case, 0.47496<5.317655. The means of the two data sets are all equal. This implies that CRB has not contributed significantly towards reduction of NPLs. To affirm the results of ANOVA, a paired t-test was performed to determine if CRB was effective and results obtained are shown in Table 4.4.

Table 4.4 : t-Test: Paired Two Sample for Means

	Variable 1	*Variable 2*
Mean	23.86	23.172
Variance	18.018	63.14972
Observations	5	5
Pearson Correlation	-0.27145	
Hypothesized Mean Difference	0	
df	4	
t Stat	0.154243	
P(T<=t) one-tail	0.442444	
t Critical one-tail	2.131847	
P(T<=t) two-tail	0.884888	
t Critical two-tail	2.776445	

Source Survey data (2014)

Thus, the two-tail p-value for this t-test is p=0.4 (.442444) and t= 0.15 these results having not been adequate to report the relationship, further calculations were done to determine the differences in NPLs between BEFORE and AFTER introduction of CRB, creating the following new column called "DIFF" using the Excel worksheet, as shown in Table 4.5.

Table 4.5 : Difference between NPLs

Before CRB adoption	After CRB adoption	DIFF(Difference)
30.2	19.08	11.12
23.6	13.98	9.62
18.4	22.9	-4.5
22.6	35.4	-12.8
24.5	24.5	0

Source Survey data (2014)

The means and standard deviations for the period before and introduction of CRB were determined as shown in table 4.6.

Table 4.6 : Descriptive statistics of the difference between NPLs before and after CRB adoption

	Column1
Mean	0.688
Standard Error	4.460505
Median	0
Mode	#N/A
Standard Deviation	9.973992
Sample Variance	99.48052
Kurtosis	-1.42815
Skewness	-0.31323
Range	23.92
Minimum	-12.8
Maximum	11.12
Sum	3.44
Count	5

The mean NPLs change after introduction of CRB (M=0.688, SD =9.973992, N= 10 years) was slightly significantly greater than zero, t(4df)= 0.154243, two-tail p = 0.4, providing evidence that the CBR is somehow effective in reducing NPLs.

From the results, the calculated Mean (M=0.688) is almost zero. Consequently we state that, where as there is a relationship between CRB and NPLs, this relationship is not significant.

Existence of a weak relationship between credit information request and NPLs was further illustrated by the regression results. The results are as summarized in table 4.9 a, b and c.

Table 4.7a : Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.518[a]	.268	.024	.24068

a. Predictors: (Constant), Credit information request

Table 4.7b   : Reliability of the Regression Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.064	1	.064	1.099	.371[a]
	Residual	.174	3	.058		
	Total	.237	4			

a. Predictors: (Constant), Credit information request

b. Dependent Variable: NPLs

Table 4.7c   : Coefficients

	Model	Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.216	3.977		.306	.780
	Credit informatio n request	.766	.731	.518	1.048	.371

a. Dependent Variable: NPLs

Table (a) shows the regression model summary. The results show that only 2.4% of the variations in NPLs is explained by credit information request. This implies that credit information requests by commercial banks did not impact significantly on reduction of NPLs. Table (b) indicates the ANOVA results. This results imply that the regression model did not have prediction ability since the P value (0.371) is greater than 0.05; P> 0.05. Table (c) further illustrates that credit information request was not significant in the model in explaining NPLs. This is because the P value (0.371) is greater than 0.05; P>0.05.

CHAPTER FIVE

DISCUSSIONS

5.0 Introduction

This chapter presents the discussions based on the results from chapter four.

5.1 Trend of Non Performing loans before introduction of NPLs

Before introduction of CRB, Commercial Banks recorded high NPLs. In 2005, NPLs were standing at 30.2 while in 2009, NPLs were standing at 24.5. A declining trend was observed overthe years concerning NPLs despite individual figures for each year being high. The trend on quarterly basis before introduction of CRB, in 2006 the NPLs were constant compared to 2009 where the NPLs rose but at a lower rate. This could have been attributed by the post-election violence and other factors such as high interest rates(Waweru and Kalani, 2009).

5.2 Trend of Non-Performing loans after introduction of CRB

After introduction of CRB, NPLs figures slightly decreased in 2010 to 2011 compared to the years before CRB adoption. The highest recorded NPLs during this period was during the year 2014 when it rose to 35.4 while the least recorded was 13.98 in the year 2011. Also, after basing on the quarterly trend, in 2010 the NPLs seems to reduce constantly. According to Tom (2015) this is attributed to introduction of CRB .However, the NPLs seem to rise in 2013 to 2014 which rose to 50.7. The general trend of NPLs though, is that of rising NPLs but at reduced figures. This can be attributed to enhanced corporate governance and risk management through adoption of CRB(Waweru and Kalani, 2009).

In the theoretical analysis of the trends of the NPLs, it was expected that there was an anticipated reduction in the NPLs when there is more information sharing. It was evident that the survey data agreed with this fact. From the survey data as well as the report, it was evident that, there has been a general decrease of the NPLs from the year 2005 to the year 2014. It should be clear that CRB were initiated because of the need to share information by lenders on borrowers. It was a reality that borrowers were quick to move on to other banks and secure credit while they have defaulted in their previous bankers. On the other hand, banks were quick to offer loans to clients because of the excitement of selling its products to make more profits. This led to huge NPLs because borrowers become unable to repay after securing expensive loans and being unable to get out of the debt circle. This situation has put the financial sector on a crisis and policy makers" have to find a way to circumvent the failure made by the banks. Caprio and Kligebiel, (2002) reiterates the failures made by banks that had led to huge rise in quantity of NPLs.

The issue of NPLs has been a problem in almost any economy. World Bank report (1994), indicated to lack of proper regulations in Uganda"s banking industry, which was extremely weak, with huge non-performing loans and some banks teetering on the verge of collapse (Mukalazi, 1999). This mess which was also as a result of economic mismanagement and political interference was addressed by creating credit risk management. This attracted the attention of Kenya Bankers Association, Central Bank of Kenya and the ministry of Finance and the office of the Attorney General aimed at finding way forward to the challenges facing the lending environment in Kenya and especially the banking sector, (Bank Supervision Annual Report CBK, 2007). There was need for establishment of CRB services in Kenya"s financial system and this was particularly fuelled by information asymmetry that existed between lenders and

borrowers (Payday cash, 2010). 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. After many years of negotiations and agreement between CRB was formed through an act of parliament leading to the establishment of CRB in Kenya in the year 2006, seems to be on the fast lane to solve the problem of NPLs since banks can now be able to overcome the challenge of

NPLs because they are better placed to monitor the behavior of borrowers and determine credit their worthiness. This was one of the most important policy shift that saved the NPLs crisis.

With the establishment of the CRB, credit reporting allows banks to better distinguish between good and bad borrowers. Otherwise it would be very difficult to have accurate information on the financial ability of prospective borrowers and even more difficult to have accurate information on their credit history (Angulin and Scapens, 2000). This makes it extremely difficult for the lender to assess the credit worthiness of potential borrowers and their ability to pay the loans. Credit bureaus enable lenders to lend to more and better risk clients and to determine better (and lower) the bad loan spread that they need to cover expected losses of credit to good payers.

There was a rise in NPLs in the year 2011 through 2013. An explanation for this is that the rise is attributed to the economic crisis and rise in interest rates due to the 2013 elections. Borrowers were not able to repay their loans because of high interest

rates and inflation. During this period the economy went into a slump, inflation increased and purchase on basic items became expensive (Tom, 2015).

5.3 Relationship between credit information sharing and NPLs

The study indicated that little about NPLs can be explained by the CIS. Financial institutions have long been engaged in cut throat competition. This has led to rogue borrowers taking advantage of the situation. There has risen a scenario, where borrowers do multiple borrowing of loans in multiple banks or financial institutions, and this over indebtedness has increased loan default as has been the case. The installation of CRB was timely to salvage the situation because

the information asymmetry that had prevailed between lenders and borrowers had escalated the problem. However, this gap was bridged and it became more beneficial due to the fact that screening loan application enabled lenders to sort out prospective borrowers who have defaulted with other lenders. To date the sharing of information is yet to go get fully established because the existing CRBs are operating below capacity on one hand and it takes considerable amount of time to develop databases. In addition, the CBK is yet to process licenses to allow other players to offer credit information sharing services. Further, banks have been in dilemma as to what information of the borrower to let go or withhold.

The study failed to reject this hypothesis even though there exists a relationship between CBR and NPLs. This relationship was not significant enough since the mean difference was almost zero. The explanation is that CRB are yet to operate on a full scale and currently information being shared is either inadequate in its current form or unavailable. Under circumstances of information availability, there also exist unforeseen circumstances such as misfortunes (loss of income, inflationary pressures,

heightened unemployment, depreciated currency and tight financial conditions) that weaken the borrowers" repayment capacity and all these should be put into perspective (Waweru and Kalani, 2009).

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

The study concluded that;

The Trend of NPLs before introduction of CRB was reducing though the figures remained high. The trend of NPLs on Quarterly basis seems to also reduce but it started rising again in 2009.

The trend of NPLs after introduction of CRB also increases but the figures seem to be lower than that of before CRB introduction.

There was no significant relationship between CRB and NPLs.

> Indeed CRB has an effect on the level of NPLs in the Commercial Banks in Kenya. The passing of the Banking Act passed in 2006 that made it mandatory for Commercial Banks to share information on NPLs through CRB licensed by the CBK and the establishment of the CRB in Kenya represents a significant undertaking and from the study carried out, this has and will continue to add value to the Banks.

6.2 Recommendations

The study recommends the following;

6.2.1 Recommendation to management

The study recommends the following;

i. Banks should establish a credit management team that would be responsible and ensure that all customers who may seek to take up a facility with the bank are well vetted and checked against the licensed CRB, in Kenya before approval of the facility.

ii. Credit Information Sharing should be adopted by other sectors such as Sacco"s as well as Microfinance Institutions in order to reduce information asymmetry and enhance timely payment of loans to reduce NPLs.

iii. Regulations should also place emphasis on confidentiality of information handled by CRBs and also places stringent restrictions on the use and application of such information. Therefore Banks and CRBs should not share any information on individuals without their consent. The regulations need to provide for stringent penalties for such breaches by CRBs.

iv. Finally, the Government should carry out awareness seminars about the credit policies and the CIS systems to remove the negative notion on "black listing" from consumers of banking products and the general public and instead enhance its importance.

v. Positive CIS should be shared by the CRBs so as to increase the chances of a good credit worthy customer to negotiate for better terms while taking a loan.

vi. To enhance information sharing, there is need for integral connectively through ICT, so that information is readily available when required. Through technology, banks or financial institutions can subscribe to CIS databases and information was readily available at any given time. However, laws governing information sharing need to be put in place to guarantee the right to personal privacy. This can be seen by one of the CRB offices in Kenya, which has taken

the bold step in providing information through Phones; therefore one can access information timely.

vii. More companies that offer services that relate to information sharing be established. As pointed out by Kalberg and Udell (2003), that information exchange from multiple sources improves the precision of the signal about the quality of the credit seeker and as a result the default rate reduces.

6.3 Suggestion for further research

The researcher recommends the following;

i. Further research should be done to explore the impact of CIS on the economic well being of small and medium size enterprise (SMEs). This is because of the fact that SMEs form the largest category of borrowers and therefore need a lot of Financial support.

ii. Further research should be done on finding out the factors that contribute to high Npls in Kenya.

iii. Further research should also be done to determine if there are any challenges that the CRBs face in trying to reduce the number of Npls in Kenya.

iv. Research should also be carried out on Positive information sharing and its impact to borrowers.

v. Finally further research on the change of level of NPL can be carried out by institutions that furnish CRB with defaulters such as HELB so as to determine if there is an effect of CRB on their NPL portfolio.

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APPENDICES

Appendix i: TREND OF NON-PERFORMING LOANS BEFORE AND AFTER INTRODUCTION OF CRB.

	YEAR	Gross NPLs
	2005	30.2
	2006	23.6
Before		
	2007	18.4
	2008	22.6
	2009	24.5
	2010	19.08
	2011	13.98
After		
	2012	22.9
	2013	35.4
	2014	24.5

APPENDIX ii: LIST OF COMMERCIAL BANKS IN KENYA

NO	COMMERCIAL BANKS
1	Kenya Commercial Bank Ltd
2	Equity Bank Ltd
3	Co-operative Bank Ltd
4	Standard Chartered Bank Ltd
5	Barclays Bank Ltd
6	CFC Stanbic Bank (K) Ltd
7	Commercial Bank of Africa
8	NIC Bank
9	Diamond Trust Bank
10	I & M Bank
11	National Bank of Kenya
12	Chase Bank Ltd
13	Citi Bank Ltd
14	Bank of Africa Ltd
15	Bank of Baroda Ltd
16	Prime Bank Ltd
17	Housing company of Kenya
18	Family Bank
19	Imperial Bank
20	Bank of India
21	Eco Bank Kenya Ltd
22	African Banking Corporation
23	Consolidated Bank of Kenya
24	Gulf African Bank Ltd
25	Development Bank of Kenya
26	Equitorial Commercial Bank
27	K-Rep Bank
28	Giro Commercial Bank
29	Guardian Bank
30	Victoria Commercial Bank
31	Fidelity Commercial Bank
32	First Community Bank
33	Habib Bank
34	Trans-National Bank

SOURCE: CBK (2013)