Credit Reference Bureau (CRB) As a Strategic Control Measure and Its Influence on the Financial Performance of Commercial Banks in Eldoret, Kenya

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Abstract: Banks are profit making institutions and their performance is critical to their survival. Competition within the banking sector has seen most of these institutions adopt performance management tools that will enable them manage their performance. 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 the bad borrowers and this is making new borrowers more and more hesitant to borrow credit. The ministry of finance, the Central Bank of Kenya and the Kenya Bankers Association have been at the forefront in the introduction of Credit Information Sharing (CIS) to the credit market. The reason for introducing this mechanism was because there was a need to access reliable information on their customers in order to make lending more efficient. Today we have a working CIS that enables all commercial banks to share their credit information through licensed Credit Reference Bureaus (CRBs). The aim of this study was to investigate credit reference bureau and its influence on the performance of banks in Eldoret, Kenya during the period 2005-2011. The study was guided by the following research questions; What is the number of defaulted loans three years before and after the introduction of the CRB model?, How have debts outstanding at the time of default been classified?, How has the financial performance of the banks been three years before and after the introduction of the CRB model? And what is the relationship between the loans default and the financial performance of the banks. This means that the study was assessing the performance of the loan portfolio within the banking sector and how this could have affected the financial performance of the banks. The study targeted a population of 179 respondents from which 97 respondents was sampled comprising of 31 branch managers, 31 credit managers and 35 credit reference bureau employees. The study consequently employed simple random sampling and census sampling technique to select the respondents and data was collected using secondary sources such as the data collection sheets and primary sources such as the interview schedules. Analysis was done through descriptive statistics where findings were presented in form of charts, graphs and tables. ANOVA was used to test the significance the study’s hypotheses. The study found that there was high number of defaults in the year 2008 and the lowest in the year 2010 with only 15.9% being defaulted. From the study, it was also found out that, most of the secured loans, that is, the loans with collateral were the long-term loans at 96%. More so, wholesalers were found to be the greatest defaulters with a default rate of 41.6% while mining companies and electricity, gas and water supply companies both had the least default rate of 0.9% each. The findings further shows that 1 year after a default occurs on average 48% of the sample’s exposure at default was recovered, 2 years after a default on average 62% of the sample’s facility exposure was recovered. On average the biggest portion of recovery was gathered in the first year after a default and is decreasing each year. It is the recommendation of this study that lenders should appreciate the need for strategic control systems and consequently be able to develop other strategic control measures while enhancing effectiveness of CRB. It is also the recommendation of this study that lenders should identify strategic control measures that match their institution’s objectives and thus will ensure high performance of such firms.

Key Terms: Credit Reference Bureau, Financial performance, Strategic Control.
I. Introduction

Background of the Study

Banks are profit making organizations, and their performance can be defined by a host of financial indicators including the price to earnings ratios, the firm Vs stock beta and alpha, and TobinVs q ratios. The performance of the banks is critical to their survival. Competition within the banking sector has seen most of these institutions adopt performance management tools that will enable them manage their performance. For example the balance score card has been used by most banks to manage the financial performance of banks. The balance score card has been used as a strategic control tool that will oversee the financial operations of the bank and regulate cash operations at the bank. Financial performance ensures that a bank is in a position to compete favorably with others in the industry and with other banks. Consequently most banks that record favorable financial performance dominate markets in most regions (De Haas, 2009).

Under the global financial system, there have been concerns over the growing systemic risk across the borders and suggestions for a global regulatory system to tackle such risk. As pointed out by D’Apice and Ferri (2010), financial instability could be traced back to the 1930s but had become increasingly widespread in the past 25 years in different forms of bailout. The problem of systemic risk became a significant concern among public policy makers, bank regulators and central banks since the Asian financial crisis in 1998 as well as the Russian and Latin American crises in the 1990s (Alexander, 2006). Furthermore, Davis and Green (2008) pointed out that there could be emerging turbulence in the financial market given the interconnectedness among the markets; however, the existing international regulatory system is rather pathetic and lacks strong mechanisms of crisis management.

In a number of African countries, lenders (banks, finance companies, credit card companies, retailers, suppliers extending trade credit) routinely share information on the creditworthiness of their borrowers through credit bureaus, information brokers that in some cases are set up and owned by the lenders themselves and in others operated independently for profit by a third party. Lenders supply the bureau with data about their customers. The bureau collects this information with data from other sources (courts, public registers, tax authorities, etc.) and compiles a file on each borrower. The lenders that have contributed data can later obtain a return flow of consolidated data about a credit applicant by requesting from the bureau. Nowadays this two-way flow of data between lenders and the bureau is effected electronically (Lorange, 2004).

In Kenya, Sharing of credit information has made an important contribution to the development of the financial system. It has been found out that Credit Information Sharing (CIS) has proved an important aspect of financial infrastructure that enables lenders to improve risk assessment, and consumers obtain credit at competitive terms. Credit Reference Bureaus help lenders make faster and more accurate credit decisions. Through CRB, lenders are in a position to collect, manage and disseminate customer information within a provided regulatory framework (Lorange, 2004).

The CRB Model

By definition, a CRB is an agency that pools together the credit history of consumers so that the credit providers can make informed decisions about granting of loans. CRBs generate a credit report which contains detailed information on a person’s credit history. In Kenya, there are two licenced CRBs namely Metropol CRB and Transunion. A customer’s credit report is likely to contain demographic information, customer’s statements, payment profile information and account information that has to be captured into the systems. This is captured using Credit information sharing which is a process that allows credit providers to exchange customers’ information. This is done by the credit reference bureaus licensed by central bank of Kenya.

However, with the legislation of the Kenya credit reference bureau, the central bank allowed a third party to source customer credit history. In the past, banking in Kenya had clauses that protected the customer, because the banks were not allowed to share customer banking details. There were customer confidentiality clauses binding the banks from sharing information about customers. This made the sharing of important information like the bad debtors illegal. The sharing of customer information has now been allowed, showing the importance of the Kenya credit reference bureau (Larcker, 2005). It is mandatory for banks to give a listing of all their bad debtors’ information to the Kenya credit reference bureau. The information collected from all financial institution is collated and is useful especially for credit facilities. It is seen as a way to ensure that bad debts reduce.

Commercial Banks in Eldoret

Eldoret has 31 commercial banks which have sprung up in the last 5 years. Some of the leading commercial banks in town are Barclays Bank, Chase Bank, Commercial Bank of Africa, Consolidated Bank of Kenya, Standard Chartered Bank, Trans-National Bank, Equity Bank, Family Bank and National Bank of Kenya. The growth has been so drastic from the initial 16 banks in 2009 due to the increased economic activity in the region. The region has continued to attract investors as the region becomes more stable in the recent past. Agriculture
especially for maize and wheat has boosted the economy of the region. The town is also one of the largest in the north rift region in terms of infrastructure. Consequently the banks have found the region to be a suitable area for investment. The banks have employed locals and have made also significant contributions to the development of the region with the loans they offer.

Statement of the Problem
Ideally, commercial banks are expected to have in place mechanisms that will ensure that they only give credit to those who are able to repay loans through a credit scoring mechanism weather the loan is secured or not. The commercial banks are consequently expected to benefit from this practice on interests charged on the loan. Conversely, commercial banks are supposed to be giving out loans to the borrowers based on defined criterion that will secure the loans from the borrowers and also get to reward those have good repayment history. In spite of these efforts however, there still exist improper performances in the commercial banks in relation loan portfolio and profitability which is likely attributed to lack of appropriate implementation strategies of such measures. Furthermore, past research has not fully identified the extent to which controls can manage its loan portfolio and assist in understanding the characteristics of customers and eliminate over borrowing from multiple credit providers as there is no existing research on how Credit Bureau as a strategic measure influences on the financial performance of commercial banks. It is was on basis therefore that this study becomes relevant in which the study sought to assess the credit reference bureau as a strategic control measure and its influence on the financial performance of commercial banks in Eldoret, Kenya.

Specific Objectives
The study set to achieve the following objectives:

i. To assess the number of defaulted loans before and after the introduction of the CRB model
ii. To establish the classification of debts
iii. To analyze the financial performance of the banks before and after the introduction of the CRB
iv. To examine the relationship between the loans default and the financial performance of the bank

Research Questions
The study was guided by the following research questions.

i. What is the number of defaulted loans three years before and after the introduction of the CRB model?
ii. How have debts outstanding at the time of default been classified?
iii. How has the financial performance of the banks been three years before and after the introduction of the CRB model?
iv. What is the relationship between the loans default and the financial performance of the bank?

Significance of the Study
The study provides an opportunity to banking industry in Kenya on how they can fully utilize implementation of Credit Reference Bureau. It also serves as business re-engineering tool towards making faster and more accurate credit decision which in turn yields value addition in providing financial solutions. It also contributes to the existing body of knowledge on Credit Reference Bureaus in banks especially in Kenya. Finally the study will be of great significance as well to scholars as it will form a basis for future research. The study will help academicians be able to elicit debate on the use of the CRB model as strategic control system within the banking industry and hence be able to assess further its effectiveness in enhancing the financial performance of banks. This study can also be used as a basis for further research and study in the study of strategic control and strategic control systems in organizations.

Scope of the Study
The study limited itself further to target population of 179 respondents from the 31 commercial banks in Eldoret town. The respondents comprised of credit managers, branch managers and members from Credit Reference Bureau. Geographically the study delimited itself to Eldoret town. Eldoret is a town in western Kenya. It is the capital and largest town in Uasin-Gishu County. Lying south of the Cherangani Hills, the local elevation varies from around 2100 metres above sea level at the airport to more than 2700 metres in nearby areas (7000–9000 feet). The population was 289,380 in the 2009 census, and it is currently the fastest growing town in Kenya. It is also the 2nd largest urban centre in mid-western Kenya after Nakuru and the 5th largest urban centre in Kenya. The reason for selecting the region is due to the high number of banks in the region and the high economic activities that characterize the region. Consequently, only banks that have branches within Eldoret town was selected to participate in the study.
Assumptions to the Study
This study made the following assumptions:

This study assumed that the respondents who participated in it had the basic knowledge on the influence of CRB model as a strategic control measure on the performance of commercial banks. Hence, they would be knowledgeable enough on the issues at hand.

The study also assumed that the respondents were able to give responses regarding the subject matter truthfully to enable the researcher gather all the required information that would facilitate the research analysis. The researcher also assumed that time to collect data would be adequate to collect sufficient information to facilitate the analysis.

Conceptual Framework
The study adopted the conceptual framework illustrated in the figure 1.0 below illustrating the relationship of the dependent and the independent variables in the study.

![Conceptual Framework Diagram]

Source: Authors Data (2015)

Researcher (2015)  

Figure 1.1 Conceptual Framework

The conceptual framework illustrates CRB as a strategic control measure to enhance the financial performance of commercial banks.

The conceptual framework provides the relationship that exists between the CRB and the financial performance of commercial. Credit Reference bureaus (CRB) complement the central role played by banks and other financial institutions in extending financial services within an economy. CRBs 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 a loan, credit card, overdraft facility or extend any other product, which is dependent on customer’s ability to repay at a determined cost.

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. The Banking (Credit Reference Bureau) Regulations, 2008 provides that the information to be shared among the banks is any customer information concerning their customers’ non-performing loans (NPLs) as well any other adverse information relating to a customer (negative information).

Financial performance is defined as subjective measure of how well a firm can use assets from its primary mode of business and generate revenue. There are many different ways of measuring financial performance, but all measures are taken in aggregation. Line items such as revenue from operations, operating...
income or cash flow from operations can be used, as well as total unit sales can be used in measuring the financial performance. The emergence of Credit Reference bureaus has significantly revolutionized lending and contributed to the improved financial performance of many banks as well as other financial institutions. Before the introduction of CRB, many borrowers used to borrow from one institution to the other without being identified. This led into many financial institutions experiencing immense losses as a result of non-performing loans. Through the use of CRB, the banks are in a position to obtain detailed information on a person’s credit history, including information on their identity, credit accounts and loans, bankruptcies and late payments and recent inquiries. Other information shared include: proven frauds and forgeries, Cheque kiting, false declarations and statements, receiverships, bankruptcies and liquidations, credit default and late payments, use of false securities and misapplication of borrowed funds (CBK, 2009).

II. Review Of Literature

Structuration theory

This theory was advanced by Giddens (1984) and is based on the premise that the classic actor or structure dualism has to be reconceptualized as the duality of structure. The structural properties of social systems exist only in so far as forms of social conduct are reproduced chronically across time and space. Behavior and structure are intertwined, people go through a socialization process and become dependent of the existing social structures, but at the same time social structures are being altered by their activities. This means that social structures are the medium of human activities as well as the result of those activities. Social structures not only restrict behavior but also create possibilities for human behaviour. The structuration of institutions can be understood in terms of how it comes about that social activities become stretched across wide spans of time-space. According to Giddens, this theory draws together the two principal strands of social thinking. Structuration theory attempts to recast structure and agency as a mutually dependent duality (Rose, 2001).

When people act in organizations, they recursively create dimensions of social interaction and particularly the discussion concerned with meaning, norms and power; actors draw upon interpretive schemes that mediate communication, resulting in the dialectical production and reproduction of structures of significations which constitute meanings. Interpretive schemes represent the organizational rules that inform and define interaction and are also reinforced or changed through social interaction (Orlikowski, 2001). While norms consist of rights and duties expected of actors in interaction, actors draw upon structures of domination and sanctions when exercising power. The use of power in organizations is also mediated through the organizational resources that participants bring to and mobilize within interaction (Giddens, 1984). Human action is defined by the ability to perform an action rather than by its intentions, as human actions have both intentional and unintended consequences.

Structuration theory is a general theory of the social sciences, in its original formulation; it pays little attention to technology (Jones 2003). However, given the pervasiveness of technology in organizations everyday operations, and especially the role of information technology in the process of enactment and reality construction in contemporary organizations, some attempts have been made to extend Giddens’s ideas by including an explicit dimension in social analysis (Walsham, 2002). Structurationist analyses have helped to increase our understanding of important IT-based contemporary phenomena.

Financial information system as a combination of people, material resources (equipment, hardware and software, supplies), and procedures organized to provide financial information to financial managers for decision making purposes. At a minimum, an information system must have the following technical elements: input (data), processing, in which input data are transformed into outputs, and an output (information). It also includes a storage element, where data can be stored before and after processing (Ties, 2002).

Control theory

It was developed by Walter Reckless in (1973), this theory states the inputs and outputs of a continuous control system are generally related by differential equations. If these are linear with constant coefficients, a transfer function relating to the input and output can be obtained by taking their Laplace transform. If the differential equations are nonlinear and have a known solution, it may be possible to linearize the nonlinear differential equations at that solution. If the resulting linear differential equations have constant coefficients one can take their Laplace transform to obtain a transfer function. A primitive way to implement control is simply to lock the throttle position when the drive engages cruise control. This type of controller is called an open loop controller because no measurement of the system output is used to alter the control, as a result, the controller cannot compensate for changes acting on an institution (Marshall, 2002).

In a closed-loop control system, a sensor monitors the system output and feeds the data to a controller which adjusts the control as necessary to maintain the desired system output (match the car’s speed to the reference speed. Now when the car goes uphill the decrease in speed is measured, and the throttle position changed to increase engine power, speeding the vehicle. Feedback from measuring the car’s speed has allowed
the controller to dynamically compensate for changes to the car’s speed. It is from this feedback that the paradigm of the control arises: the control affects the system output, which in turn is measured and looped back to alter the control.

According to the study, control view holds that strategic control measures are facilitated due to the efficient functioning of the inputs and outputs of strategic control measures by ameliorating bank failures for the benefit of broader banks. In banks control measures would be served if the control system allocated resources in a socially efficient manner i.e. maximizing output and minimizing variance and performed well other functions of control in banks. These sorts of failures, along with the general need for mechanisms of regular public disclosure by business, make regulation controls if the strategic control is protected. This is where strategic control becomes important.

Theory on Performance of banks
Conventional economics theory
It was developed by Lewis, (1969); it states that the empirical evidence points a positive link on economic performance that drives firms due to the subsidies to joint thesis, network partners, and close cognitive distance of collaborative partners within a cluster. These factors increased patent performance in the biotech industry. Additionally, innovation capacity explains much of the GDP growth. The development of a national performance system through heavy investment of expenditures and personnel, patents, and high-tech service exports strengthened their innovation capacity.

The linking of the science sector with the business sector, establishing incentives for performance activities, and balancing the import of technology and indigenous R&D effort, both countries experienced rapid economic growth in recent decades. Also, the Council of Foreign Relations asserted that since the end of the 1970s, disproportionate share of the world’s wealth through aggressive pursuit of technological change, demonstrating that technological innovation is a central catalyst of steady economic performance. Concisely, evidence shows that innovation contributes to steady economic growth and rise in per capital income.

Banks performance economists believe that it is what primarily drives economic financial growth in today’s knowledge-based economy is not capital accumulation, as claimed by neo classicalism asserts, but innovative capacity spurred by appropriable knowledge and technological externalities. Economics growth in innovation economics is the end-product of knowledge regimes and policies allowing for entrepreneurship and innovation expenditures, permits, licenses, technological spillovers and externalities between collaborative firms; and systems of innovation that create innovative environments i.e., clusters, agglomerations, metropolitan areas. In relation to this topic, empirical studies investigating the banks performance-link lead to rather mixed results and indicate that the relationship be more subtle and complex than commonly assumed. In particular, the relationship of banks performance seems to differ in intensity and significance across empirical contexts, environmental circumstances, and conceptual dimensions. Also, the Council of relations asserts that since the end of a gained disproportionate share of the world’s wealth through aggressive pursuit of technological change strategic control measures are at most essential, demonstrating that technological financial institution is a central catalyst of steady economic performance. Concisely, evidence shows that innovation contributes to steady economic growth and rise in per capita income.

Empirical review
Default Rates in banks
Attempts to analyze empirically how strategic control measures can be used by banks effectively to derive plans for growth and development, the social justification for the existence of a banking firm is the generation of returns to its shareholders. No banking firm can meaningfully achieve the above objective without the adoption of the marketing philosophy which states that customer satisfaction is the economic and social justification for the firm’s existence. The basis of strategic control and evaluation measures is to enable all banks satisfy their customers’ needs and to maximize profit (Ties, 2002). In other words, this study will bring about an increasing awareness in the application of strategic control measures by banks. It can be justified to say banking has come of age in most countries especially in Africa, but nonetheless, these banks are not devoid of their customary problems. For instance, the banks can be faulted on not creating sufficient awareness to rural dwellers on the need for their safe depositing of money with them (Sweezy, 2009).

The complaints in the urban towns where customers complain of long queues to deposit or withdraw money or denial of loan applications Since desperate situations require desperate measures to control the situation, banks should aim to seek out how strategic control measures and performance will help improve bank services, improve on parameters for evaluation of banks by owners, customers and regulatory authorities (Warner, 2000).
It was meaningful, but also to other banks operating in the banking industry, as well as other players in the financial sector as a whole would come from the critical analysis of the financial firm’s strengths and weaknesses as well as possible and foreseeable opportunities and threats in the future (kepha, 2013).

Classification of Debts
Banks now operate in vastly competitive and nonlinear environments, the value of a particular bank lies increasingly in its ability to capture information, generate new ideas, how to control them, and eventually evaluate them towards its performance. According to (Kotler 2009), an idea that is not dangerous is hardly worth calling an idea. The same can be said of a strategic control measure. A great control measure provokes. It takes chances. This eventually attracts customers and the market to one’s brand. Therefore, there is a need for effective strategic control measures in an institution (Strange, 2005).

Strategic control is an off-shoot of performance and is nowadays referred to as corporate planning measure. According to (Olukanye, 2001) Strategic control is the process by which policies are formulated and strategies are selected and evaluated to achieve the performance goals and objectives of an institution. Both concepts of strategic control measures and performance are normally used interchangeably. According to Kotler, strategic control measures is the managerial process of developing and maintaining a viable relationship between the institution and its environment, through the development of performance based purpose, objectives and goals, growth strategies and business portfolio plans for company-wide operations. Strategic control is also seen as the institution key planning process towards what it wants to achieve in the long-term. It must convey a significant stretch for the institution, a sense of direction, discovery and opportunity that can be communicated as worthwhile to all employees. It should not focus so much on today’s problems but rather on tomorrow’s opportunities (Kotelnikov, 2007).

According to (Fashoyin, 2005), strategically control measures undertaken by banks are the most fundamental to all organizations. This involves the visualization and determination of a future course of actions that will lead on a financial institution to achieving its desired objectives; that is the setting of objectives and the determination of how to achieve those objectives in order to perform. Large organizations use their planning departments to transform objectives into realizable operational guidelines towards their performance, while most use them for gathering statistics and other mundane activities. This shortcoming derived from the poor status given/accorded the strategic control measures function in many banks and the overriding influence of top management performance. Consequently upon these, control is invariably confined to setting general and departmental goals and rarely includes carefully developed strategic control measures for translating these goals into realizable targets (Pellegrina, 2008).

Strategic control measures can be viewed as a broad managerial process of developing a vision, mission statement, goals and objectives with which to serve as influential guides to employees using the top bottom management approach and their proper evaluation (Warner, 2000). What the organization intends to become and at achieve at some point in the future is often stated in competitive terms. According to Strange and Mumford (2002) a vision involves a set of Strategic Planning, evaluation of proper control measures towards Performance of Banks. Beliefs about how people should act, and interact, to make manifest some idealized future state. A vision may contain commitment to: creating an outstanding value for customers and other stakeholders; developing a great new product or service; and/or developing a great company. Warner (2002) looks at a mission statement as an organization’s vision translated into written form. It makes concrete the leader’s view of the direction and purpose of the organization.

Financial performance under strategic controls
The financial sector of every economy is regarded as a nation’s heartbeat. It comprises the banking, insurance, mortgage, and capital market sub sectors. Banking in most countries has come a long way. Along the way, due to the harsh operating business environment, some banks lost out in the race to gaining customers’ confidence and profitability but nonetheless, regardless of such shackles, others weathered the storm (Merton, 2006). Most people believed that with the introduction of Universal Banking into the banking terrain, the sky was to be the limit for improved performance for banks as a single commercial bank, for instance, could dwell into other areas as merchant banking, insurance, mortgage finance, private banking and capital market operations and still operate as a single entity. But in the end, people’s expectations were dashed just to reap short-term returns without laying out any strategic control measures and their performance for the future. This is why a lot of banks fell like packs of cards during the banking consolidation era of 2005. From the foregoing, and looking at today’s trend, it is evident that the pace of change in the business environment presents fresh challenges daily (Hunter, 2006).

Therefore, a panacea must be found for the banking subsector, if it must adequately meet its challenges. The first challenge is solving the distress condition of the sector, since only a healthy system can perform its primary function of financial intermediation effectively. The second and related challenge is to restore public
confidence in the banking system, since confidence is fundamental for financial transactions. Various banks, therefore, need to come up with appropriate strategic control measures in creating unique brands, customer-friendly products/services that will bring about brand preference and customer confidence in their day to day performance. Hence, the application strategies designed and tailored for the achievement of the objective of the organization has to be fashioned out such that it will not only help in retaining the market share controlled, but also, the overall financial institution performance inform of increased earnings at minimum costs (Goold, 2003).

Relationship between the loans default and the financial performance of the bank

Under intense competitive pressures, banks are forced to take a careful look into their performance and the role they are called upon to play in the economies. Banking institutions face today a dynamic, fast paced, competitive environment at a global scale. This environment is the catalyst for major restructuring of the industry. The total number of banking institutions shrunk by one third but more than half of the small banks was eliminated in the process and the total number of employees increased by meager percentage while the automated teller machines increased almost a high fold (Keyt, 2001).

Domestic regulations in the financial unification policies intensified international competition, rapid innovations in new financial instruments and changing consumer demands and the explosive growth in information technology fuel this changes. In response, firms are forced to adapt in order to survive, and firm level innovation brings about more change of the competitive environment (Hunter, 2009). Competitive pressures coming from recent studies on the future of retail banking argue that the banking industry is today fragmented due to its inability to exploit economies of scale and scope and elaboration of the implications of this argument claim that inefficiencies are far more important than an exploited scale (Sikorska, 2006).

III. Research Methodology

Research Design

The study adopted the use of a descriptive case research design. The case study approach was preferred by the researcher due to time constrain and also on the availability and reliability of data from the commercial banks within the study area. Also the researcher works within the banking sector thus it was easier to collect data from the respondents. This descriptive case research was aimed at getting detailed information regarding the effects of credit reference bureau on the performance of banks. A descriptive study is concerned with finding out the what, where and how of a phenomenon. Descriptive research design was chosen because it enabled the researcher to infer the findings to a larger population with high level of accuracy. The focus of the study was both quantitative and qualitative in order to gain a better understanding and more insightful interpretation of the results. Descriptive studies are more formalized and typically structured with clearly stated hypotheses or research questions.

Target Population

Target population can be defined as a complete set of individuals, cases/objects with some common observable characteristics of a particular nature distinct from other population. According to Mugenda and Mugenda (1999), a population is a well-defined as a set of people, services, elements and events, group of things or households that are being investigated. The population consisted of 31 commercial banks in Eldoret from 2008 to 2012 as indicated in appendix II and in each selected bank, one branch manager and one credit manager was targeted. This period was considered long enough to provide sufficient data and to give results that reflect the current trend. The study also targeted 117 credit reference bureau employees in Eldoret town leading to a total of 179 respondents. The target population was categorized as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Target Population</th>
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<tr>
<td>Branch managers</td>
<td>31</td>
</tr>
<tr>
<td>Credit managers</td>
<td>31</td>
</tr>
<tr>
<td>CRB officials</td>
<td>117</td>
</tr>
<tr>
<td>Total</td>
<td>179</td>
</tr>
</tbody>
</table>

Source: Kenya Association of Banks (2015)

Description of the Sample and Sampling Procedures

The sample size is considered the major part of all statistical analyses. The sample size plays a crucial role in those cases of statistical studies where the statistical studies like sample survey, experiments, observational studies are involved (Cochran, 1977).
The study consequently employed Mugenda and Mugenda’s formulae, (2003) which recommends a sample size of 100% for a population of less than 100 respondents, 30% for a sample size of between 101 – 1000, 10% for a target population of between 1001 – 9,999 and 1% for a target of over 10,000.

The study employed both simple random sampling and census sampling techniques to select the respondents into the sample. Simple random sampling was used to select the CRB officials. In employing this sampling technique, the researcher used lottery method of a simple random sampling as a mechanism of selecting respondents in the study. Each member of the population was assigned a unique number. Each number was placed in a bowl or a hat and mixed thoroughly. The blind-folded researcher then picked numbered tags randomly from the hat and placed aside. All the individuals bearing the numbers picked by the researcher were the subjects to be used as a sample size for the study. Census sampling was used to select the branch managers and credit managers since they are the right people with prior knowledge of CRB operations and services.

<table>
<thead>
<tr>
<th>Target Group</th>
<th>Target Group</th>
<th>Procedure</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Branch managers</td>
<td>31</td>
<td>31 * 100%</td>
<td>31</td>
</tr>
<tr>
<td>Credit managers</td>
<td>31</td>
<td>31 * 100%</td>
<td>31</td>
</tr>
<tr>
<td>CRB officials</td>
<td>117</td>
<td>117 * 30%</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>179</td>
<td></td>
<td>97</td>
</tr>
</tbody>
</table>

Source: Kenya Bankers Association (2015)

Description of Research Instruments
The study employed the use of both primary and secondary sources of data in the data collection process.

Primary Sources
Interview Schedules
Interview is a method of collecting data that involves presentation of oral verbal stimuli and reply in terms of oral verbal response. The study employed the respondent type of interview where the interviewer retains all control throughout the process. The interview guide designed was meant for the branch managers and credit managers of the selected commercial banks in Eldoret town, Kenya.

Secondary Sources of Data
Financial Statements
In collecting data from the secondary sources, the study developed a data sheet which was used to summarize financial information from the bank regarding the loans and the loans types that the bank has issued to SMEs over a period of six years, three years before and three years after the adoption of the CIS. Other financial information collected by the data sheets included the kinds of SMEs categories that have received loans from the bank. This provided clear information regarding the performance of the banks before the introduction of the CRB model as a strategic control measure.

Validity of Research Instruments
Validity refers to whether the research instrument measures what it intends to measure. As nearly as possible, the data gathering should match the decisions you need to make. This means if you need to make a priority-focused decision. In ensuring the interview validity, the researcher gave a copy to the supervisor who was able to determine whether it suits the study or not. The interview schedule was used to collect the needed information from the mangers since it was considered valid (Hopkins 2000).

Reliability of Research Instruments
A reliable research instrument is one that will give the same results if you used it repeatedly with the same group. The one that is able to fetch the required information. This means that there is high level of clarity of the questions asked in the interview schedule to enable the correspondent to understand the questions being asked. To test the reliability of interview schedules, the researcher carried out a pilot study on them i.e. test them to determine whether they are clearly understood or are ambiguous. Since the instruments lacked any elements of ambiguity they were considered reliable.

Description of the Data Collection Procedures
The data collection process followed a systematic process where the researcher first sought a letter for data collection from the University. The researcher then used the letter to seek appointments on the data to be collected at the bank. This was done by setting days with the financial managers at bank to ensure that they are available to avail the required data to be used in the study.
Interview days was also set with the CRB officials to ascertain when the interviews can be conducted to ensure that their schedules are not heavily disrupted by seeking dates that are convenient for the officials of the Credit reference bureau.

**Description of Data Analysis Procedures**

Data collected was organized for analysis. The analysis adopted the use of both qualitative and quantitative techniques of data analysis i.e. descriptive and inferential statistics. In qualitative techniques thematic analysis was employed where responses from the interview schedules was discussed in themes that relate to the objectives of the study. ANOVA was used to test the hypothesis of the study. In quantitative techniques the researcher used descriptive statistics such as frequencies, percentages and means to analyze the data.

**IV. Data Analysis**

**Presentation, Discussion And Interpretation Of Findings**

**Presentation of the findings**

This section presents the findings on the relationship between credit reference bureau and financial performance of commercial banks in Eldoret town, Kenya. In Kenya, credit information sharing is facilitated by credit information bureaus licensed by the CBK and involves both commercial banks and customers (both as individuals or institutions). In Kenya, there are two licensed credit reference bureaus, namely; CRB Africa which was licensed in 2010 and Metropol Ltd licenced in April 2011. Therefore, to bring out the effect of the two variables, the data collection covered the periods between 2008 and 2012.

The study, solely, adopted the use of secondary data sources. The information on financial performance was captured from Kenya National Bureau of Statistics (KNBS) offices while data on credit reference bureau was captured from Commercial banks in the study area. The study used descriptive statistics (involving mean, percentages and standard deviation), analysis of variance was carried out to establish the relationship between financial performance and credit reference bureau

**Information on loans**

One of the main tasks of commercial banks is to offer loans, and their main source of risk is credit risk, that is, the uncertainty associated with borrowers’ repayment of these loans. The Banking (Credit Reference Bureau) Regulations, 2008 became effective in February 2009. The Regulations require all licensed banks to share information on Non-Performing Loans (NPLs) through a Credit Reference Bureau (CRB) licensed by CBK. The role of licensed CRBs is to collect, collate and process data received from approved sources of information and generate credit reports to be used by lenders.

**Defaulted Loans**

Credit Reference Reports will help banks stem out malpractices in the banking sector since customers whose credit reports indicate as having been involved in malpractices are subjected to stringent terms and conditions. This is also expected to help banks suppress the levels of NPLs while increasing their loan books. To bank customers, credit information sharing is expected to minimize the problem of information asymmetry in the financial sector. Information asymmetry between banks and borrowers is one of the main contributors to high cost of credit. To this end, 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 study investigated the loans that had been defaulted from the sampled companies and presented the information as illustrated in the Table 4.1 between the years 2008 – 2012.

<table>
<thead>
<tr>
<th>Year of Default</th>
<th>Number of Defaults per Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>517</td>
<td>25.8</td>
</tr>
<tr>
<td>2009</td>
<td>341</td>
<td>17.0</td>
</tr>
<tr>
<td>2010</td>
<td>319</td>
<td>15.9</td>
</tr>
<tr>
<td>2011</td>
<td>462</td>
<td>23.1</td>
</tr>
<tr>
<td>2012</td>
<td>363</td>
<td>18.2</td>
</tr>
<tr>
<td>Total</td>
<td>2002</td>
<td>100</td>
</tr>
</tbody>
</table>

**Debt Outstanding at the time of Default**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number of Defaults</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>451</td>
</tr>
<tr>
<td>40</td>
<td>616</td>
</tr>
<tr>
<td>50</td>
<td>935</td>
</tr>
<tr>
<td>Total</td>
<td>2002</td>
</tr>
</tbody>
</table>

**Forms of Collateral**

<table>
<thead>
<tr>
<th>Type of Collateral</th>
<th>Number of Defaults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Collateral</td>
<td>240</td>
</tr>
<tr>
<td>Guarantees</td>
<td>720</td>
</tr>
</tbody>
</table>

**Table 4.1: Descriptive statistics for the sample of defaulted loans**
The study findings illustrate information on the number of defaults per year and on the amount of debt outstanding at the time of default. The study found that there was a high number of defaults in the year 2008 and the lowest in the year 2010 with only 15.9% being defaulted. However, in regards to debt outstanding at the time of default, the loss was observed at the highest level (46.7%).

**Figure 4.2 outstanding debts at the time of default**

![Figure 4.2 outstanding debts at the time of default](image)

**Source: Authors’ Data (2015)**

**Figure 4.3 Forms of collateral**

![Figure 4.3 Forms of collateral](image)

**Source: Authors’ Data (2015)**

**Loan types**: The researcher also sought to classify the loans according to the loan types in an effort to differentiate between the secured and the un-secured loans as illustrated in Table 4.2.

**Table 4.2 Secured Versus Unsecured Loans**

<table>
<thead>
<tr>
<th>Type of Loan</th>
<th>Secured</th>
<th>Frequency of Secured (%)</th>
<th>Unsecured</th>
<th>Frequency of Unsecured (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-Term</td>
<td>1488</td>
<td>96</td>
<td>62</td>
<td>4</td>
<td>1550</td>
</tr>
<tr>
<td>Short Term</td>
<td>1612</td>
<td>86.7</td>
<td>248</td>
<td>13.30</td>
<td>1860</td>
</tr>
<tr>
<td>Total</td>
<td>3100</td>
<td></td>
<td>310</td>
<td></td>
<td>3410</td>
</tr>
</tbody>
</table>

**Debt Outstanding at the time of Default**

<table>
<thead>
<tr>
<th>Size</th>
<th>Secured</th>
<th>Frequency of Secured (%)</th>
<th>Unsecured</th>
<th>Frequency of Unsecured (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>248</td>
<td>80</td>
<td>62</td>
<td>20</td>
<td>310</td>
</tr>
<tr>
<td>Medium</td>
<td>558</td>
<td>72</td>
<td>217</td>
<td>28</td>
<td>775</td>
</tr>
<tr>
<td>Small</td>
<td>2170</td>
<td>93.3</td>
<td>279</td>
<td>6.7</td>
<td>2449</td>
</tr>
<tr>
<td>Total</td>
<td>2976</td>
<td></td>
<td>558</td>
<td></td>
<td>3534</td>
</tr>
</tbody>
</table>

**Source: Authors’ Data (2015)**

DOI: 10.9790/0837-20514464
From the study, it was found out that, most of the secured loans, that is, the loans with collateral were the long-term loans at 96%. The unsecured long-term loans only represent 4%. The high percentage of secured long-term loans can be attributed to good loan servicing by the clients which enables them to secure loans without guarantees and the taking of overdrafts which in some financial institutions do not require guarantees at all. This is also so high because it always involve taking of large amount of money by the borrowers which requires long duration for repayment. The percentage of secured short-term loans was found to be at 86.7% while the percentage of short-term unsecured loans was 13.30%. Only a small percentage of unsecured short-term loans (13.30%) is inferred to small number of clients with only good loan repayment records. Table 4.2 also shows the concentration of different forms of secured and unsecured bank’s exposure in the sample according to the amount of debt outstanding at the time of default. We can see that small outstanding defaults (93.3%) are most frequently secured with one of the forms of collateral. For purposes of clear presentations the findings were presented as shown on Figure 4.4 and 4.5.

**Figure 4.4** frequency of secured and unsecured loans.

![Frequency of secured vs un-secured](image)

**Source: Authors’ Data (2015)**

**Figure 4.5** Debt outstanding at the time of default

![Debt outstanding at the time of default](image)

**Source: Authors’ Data (2015)**

**Number of defaults by industrial sectors**

The study also sought to establish the concentration of default cases in different business sectors and the use of secured/unsecured loans across these sectors.
Table 4.3: Number of defaults by industrial sectors

<table>
<thead>
<tr>
<th>Economic activities</th>
<th>Number of Defaults with Collateral</th>
<th>Number of unsecured Defaults</th>
<th>Number of Defaults (Total)</th>
<th>Frequency(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>0.9</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>80</td>
<td>5</td>
<td>85</td>
<td>15.0</td>
</tr>
<tr>
<td>Electricity, gas and water supply</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>0.9</td>
</tr>
<tr>
<td>Construction</td>
<td>15</td>
<td>5</td>
<td>20</td>
<td>3.5</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>215</td>
<td>20</td>
<td>235</td>
<td>41.6</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>20</td>
<td>5</td>
<td>25</td>
<td>4.4</td>
</tr>
<tr>
<td>Transport, storage communication</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>1.8</td>
</tr>
<tr>
<td>Financial intermediation</td>
<td>25</td>
<td>10</td>
<td>35</td>
<td>6.2</td>
</tr>
<tr>
<td>Real estate</td>
<td>70</td>
<td>20</td>
<td>90</td>
<td>15.9</td>
</tr>
<tr>
<td>Education</td>
<td>10</td>
<td>10</td>
<td>20</td>
<td>3.5</td>
</tr>
<tr>
<td>Other service activities</td>
<td>25</td>
<td>10</td>
<td>35</td>
<td>6.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>480</td>
<td>85</td>
<td>565</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Authors’ Data (2015)

The study findings on table 4.3 above was obtained taking into consideration 11 selected business sectors which were served with credit by the banks; it was observed from the study findings that there were defaults in both the secured loans and the unsecured loans by various business sectors. However, wholesalers were found to be the greatest defaulters with a default rate of 41.6% while mining companies and electricity, gas and water supply companies both had the least default rate of 0.9% each. Despite the default rates being reported in all the businesses which obtained loans from the bank, the concentration of default lies in the wholesale and retail trade at 41.6%, the real estate at 15.9% and the manufacturing businesses at 15%. The study as well sought to find out the rate of default by the below listed aggregated industrial sectors. The findings were presented as shown in Table 4.4.

Table 4.4 Aggregated industrial Sectors

<table>
<thead>
<tr>
<th>Aggregated Sectors</th>
<th>Number of Secured Defaults</th>
<th>%</th>
<th>Number of unsecured Defaults</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>80</td>
<td>94.1</td>
<td>5</td>
<td>5.9</td>
<td>85</td>
</tr>
<tr>
<td>Real estate</td>
<td>70</td>
<td>77.8</td>
<td>20</td>
<td>22.2</td>
<td>90</td>
</tr>
<tr>
<td>Services</td>
<td>95</td>
<td>82.6</td>
<td>20</td>
<td>22.2</td>
<td>115</td>
</tr>
<tr>
<td>Trade</td>
<td>235</td>
<td>94.0</td>
<td>15</td>
<td>6.0</td>
<td>250</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>480</strong></td>
<td><strong>87.3</strong></td>
<td><strong>60</strong></td>
<td><strong>6.0</strong></td>
<td><strong>540</strong></td>
</tr>
</tbody>
</table>

Source: Authors’ Data (2015)

Aggregation of both the secured defaults and the unsecured defaults into manufacturing, real estate, services and trade portrays that in general, the number of unsecured defaults are generally low with the maximum rate of default being 22.2% for both the real estate and the service companies compared to the secured loans which are very high. The highest default rate is at 94.1% in the manufacturing industry and the lowest default rate being 77.8% for real estate companies. A further aggregation, as used in the econometric tests, lead to four activity sectors: real sector, manufacturing, and services. Because of the small number of unsecured defaults the distribution across the four aggregated sectors is quite volatile but the portion of unsecured defaults is low in all four groups and does not exceed 22.2% as in the case of real estate and the services industries. For clear presentations the findings were presented as shown in Figure 4.6.

Figure 4.6 Aggregated industrial sectors

Source: Authors’ Data (2015)
Sample un-weighted cumulative recovery rates
The study also sought to report the 1-, 2-, 3- and 4-year cumulative recovery rates for the total sample.

<table>
<thead>
<tr>
<th></th>
<th>1-year cumulative Recovery</th>
<th>2-year cumulative Recovery</th>
<th>3-year cumulative Recovery</th>
<th>4-year cumulative Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.480</td>
<td>0.620</td>
<td>0.700</td>
<td>0.730</td>
</tr>
<tr>
<td>Median</td>
<td>0.500</td>
<td>0.880</td>
<td>0.910</td>
<td>0.910</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.410</td>
<td>0.400</td>
<td>0.360</td>
<td>0.350</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: Authors’ Data (2015)

Cumulative recovery rates are calculated for the total sample of 182 facilities taking them all at a time. The study focused on the time factor of recoveries of the loans in the sample not taking into account the duration of resolution proceedings. This information shows that 1 year after a default occurs on average 48% of the sample’s exposure at default was recovered, 2 years after a default on average 62% of the sample’s facility exposure was recovered. On average the biggest portion of recovery was gathered in the first year after a default and is decreasing each year.

Effects of CRB on Loans
- **Effect on defaulted loans**
  The study findings showed that after the introduction of CRB in 2008, the banks were in a position to track the defaulters of loans with the highest number of default on loans being experienced in the year 2008 the time when the CRB came into effect. This showed that the CRB had adverse effects on tracking the loan defaulters. However, in respects to debt outstanding at the time of default, the loss was observed at the highest level (46.7%). That is, the CRB had more on the loss. The study findings also showed that the CRB had effects on the loans with collaterals only.

- **Effect on loan types**
  The information on the effect of CRB on loan types (secured long term and short term loans), the findings showed that, before the introduction of CRB, the variability on loan types was observed to be high in all the types of loans. However, CRB had effects on all the types of loans with now steady variation. It was observed that the there was a steady increase in frequency of loans being borrowed from the banks. This came out as result of the effect brought by CRB which came to stabilize on loans. The findings were as presented on figures 4.7 and 4.8

**Figure 4.7 Frequency of loan types before introduction of CRB**

Source: Authors’ Data (2015)
• Effects on secured versus un-secured loans

The study showed that the CRB had effects both on secured and un-secured loans. However, the study revealed variability of both secured and un-secured loans before the introduction of CRB (2008). CRB showed effective effects on frequency of defaults in loans on all the industrial sectors with retail and whole having the highest frequency of defaults. The findings also showed that CRB had effects in both long term and short term loans irrespective of the loan type. In addition, CRB had smaller effects in debts outstanding at time of default with small types of loans (93.3%). This is so because in most cases, small amount of loans is easier to repay as compared to large amounts of loans.

Effects of CRB on Earnings per share

The study also sought to find out the changes in EPS before and after the introduction of CRB (2008). The researcher employed ANOVA to assess relationships between the changes in the Earnings per Share of the Banks that had shown significant changes in the EPS bases before introduction of CRB (2008). The ANOVA process therefore was an exclusive criterion that involved evaluating the relationships between the changes in EPS before and after CRB was adopted in the bank. This was to provide clear information regarding the performance of the banks before the introduction of the CRB model as a strategic control measure.

Table 4.6: Changes in EPS before and after the introduction of CRB (2008)

<table>
<thead>
<tr>
<th>Analysis of Variance (ANOVA)</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before(2008)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>16.767</td>
<td>1</td>
<td>8.383</td>
<td>5.539</td>
<td>.005</td>
</tr>
<tr>
<td>Within Groups</td>
<td>155.884</td>
<td>31</td>
<td>1.513</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>172.651</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After(2008)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>13.047</td>
<td>1</td>
<td>6.524</td>
<td>16.886</td>
<td>.012</td>
</tr>
<tr>
<td>Within Groups</td>
<td>39.792</td>
<td>31</td>
<td>.386</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>52.840</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ data (2015)

The ANOVA (Analysis of Variance) table indicated that before the introduction of CRB (2008), there was a significant changes in the EPS ($F= 5.539, p = 0.005$). After the introduction of CRB, the study shows also that there was no significant changes i.e. ($F = 16.886, p = 0.102$). This shows that CRB brought the stability on earnings per share hence reducing the variability that was there before the introduction of CRB. The findings on this were as presented in Figure 4.9 and 4.10.
Effects of CRB on P/E Ratios

Changes on the P/E Ratio was also examined with an aim of evaluating the performance of the company’s after introduction of CRB through the use of ANOVA and the following sets of data were obtained.

Table 4.7 Changes on P/E Ratios before and after the introduction of CRB (2008)

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before (2008)</td>
<td>Between Groups</td>
<td>2.817</td>
<td>1</td>
<td>2.817</td>
<td>1.838</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>159.334</td>
<td>31</td>
<td>1.532</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>162.151</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>157.099</td>
<td>31</td>
<td>1.511</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>162.764</td>
<td>32</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The study indicated that there was significance changes on P/E of banks before CRB (F = 1.838, p = 0.002) but there was no significant changes in the P/E ratios of the banks after the CRB was introduced (F = 3.7750, p = 0.178). This showed that the introduction of CRB had effects on P/E ratios. From the study findings it is clear that the P/E ratios had significant variability before the introduction of CRB but there were steady variations in such P/E ratios upon the introduction of CRB. This is because the CRB came into effect to correct the variability that was experienced before.
V. Discussion of findings

Defaulted Loans

The study found that there was high number of defaults in the year 2008 and the lowest in the year 2010 with only 15.9% being defaulted. This can be interpreted to mean that the series of 182 default cases is highly skewed towards 2008. However, in regards to debt outstanding at the time of default, the loss was observed at the highest level (46.7%). Therefore, this means that the distribution of the debt outstanding is highly skewed towards the low end (small exposures). The also showed the debts outstanding at the time of default. The loss debts were found to be highest at 46.7%. This can be inferred that the high losses that were experienced by financial institutions were as a result of default by the borrowers who failed to service their loans. Figure 4.2 shows that the most sought form of collateral by the debtors is the use of guarantors at 32% while the least sought source of collateral is assignment of receivables. The other sources of collaterals are real estate collateral at 29.3%, financial collateral at 10.7% and the physical collateral at 8%. The inference is that the majority of debtors use guarantees as their collateral because of lack of stable sources of income. The findings are consistent with study by Sweezy, (2009) who alleged that the banking sector has come of age in most countries, but nonetheless, these banks are not devoid of their customary problems. For instance, the banks can be faulted on not creating sufficient awareness to loan borrowers.

However, as a result of banks and financial institutions business, they expose themselves to the risks of default from loan borrowers. Quality credit risk assessment and risk management and creation of adequate provisions for bad and doubtful debts can reduce the banks credit risk. When the level of nonperforming assets is high, the assets provisions made are not adequate protection against default risk. Banks in Kenya have been lending funds to serial defaulters, this is as a result of banks having different credit information regarding the and these borrowers have exploited the information asymmetry to borrow several loans from the Kenyan banks and defaulting in the long run thus increasing the level of nonperforming assets (NPAs) in the banking sector in Kenya. Due to information asymmetry, the Central Bank of Kenya and Kenya Bankers Association came together to initial Credit Information Sharing in the Kenya to cap the loop hole exploited by the serial defaulters. 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. According to bank supervision annual report CBK, 2009 it enables the banks to know how borrowers have been repaying their loans. Credit Information Sharing enables the banks get access a Credit Report.

The research findings tell us that the use of credit reference bureaus has an impact on non-performing loans banks should implement in their lending policies the use of the credit reference bureaus in making credit decisions as well as recovery of bad debts. The Credit reference bureaus have a positive impact on the reduction of non-performing loans and therefore their use should be adopted by all banks and other lending institutions like agricultural firms and industrial sectors in order to curtail the serial defaulters. Since the introduction of the CRB’s in 2008, banks have been able to reduce the level of non-performing loans to advances ratio compared to the periods prior to 2008

Loan types

The figure 4.3 shows the analysis of the frequency of unsecured loans. The long-term secured loans were the most frequently borrowed type of loans at 96% while the long-term unsecured loan is the least at 4%. The percentage of short-term secured loan was also high i.e. 86.70%. The high percentage of both the short-term and long-term secured loans can be inferred to the general population as being as a result good customer repayment records and the flexibility in duration of repayment which enables the clients to secure loans without fear. The introduction of CRB is another contributing factor that has led lending institutions to increase the portfolios of their short-term secured loans since it will be very easy for banks and financial institutions to track the credit records of their various clients. The low percentage (4%) of unsecured long-term loans is attributed to the fact that banks cannot risk to lend money to clients for long periods of time (usually over 7 years) without collaterals due to a lot of uncertainties in the volatile and dynamic business environment.

The analysis on the frequency of debt at the time of defaults (see fig. 4.5 above) shows that at the time of default, the analysis indicates that small loan type borrowers were the greatest defaulters at 93.3% followed by large loan type borrowers at 80% default rate. Taking into consideration that earlier analysis indicated that majority of the long-term loans comes with collateral, it can be depicted that despite the use of collaterals to secure loans, default rate is still high in secured loans (both the large and small loans). This can be attributed to financial crisis which are caused by tough economic times.

Number of defaults by industrial sectors

The findings in regards to the number of defaults by industrial sectors (see figure 4.6 above) gives a general overview of loan defaults by the industrial sectors in terms of secured defaults and the unsecured defaults. From the findings of the study, the analysis indicates that the loans with collateral are the ones with the
highest rates of defaults. The manufacturing industries are leading with a default rate of 94.1% with the minimum default rate being 77.8% for the real estate. On the other hand, the unsecured loans have very low rates of default which are depicted with the highest default rate being 22.2% for both the real estate and the services industries while the least default rate is the manufacturing industry with a default rate of 5.9%. This means therefore that these sectors have low defaults both in terms of secured and unsecured loans

**Changes on P/E Ratios before and after the introduction of CRB (2008)**

The study indicated that there was significant changes on P/E of banks before CRB (F = 1.838, p = 0.002) but there was no significant changes in the P/E ratios of the banks after the CRB was introduced (F = 3.7750, p = 0.178) (see table 4.6) the CRB upon its inception reduced the variability that was experienced before hence no significance changes were observed based on the variations in P/E ratios. This was due the effect of CRB as a strategic control measures used by banks to effectively derived plans for growth and development, as the social justification for the existence of a banking firm is the generation of returns to its shareholders. The lack of the growth of the relationship between the asset base and the P/E ratio before the introduction of CRB could have been as a result of the slow trends in adoption of the marketing philosophy which states that customer satisfaction is the economic and social justification for the firm’s existence and performance.

The findings conquer with findings by Ties, (2002) which stated that the basis of strategic control and evaluation measures of strategic tools such CRB is to enable all banks satisfy their customers’ needs and to maximize profit.

**Interpretation of findings**

**Defaulted Loans**

The study found that there was high number of defaults in the year 2008 and the lowest in the year 2010 with only 15.9% being defaulted. This can be interpreted to mean that the series of 182 default cases is highly skewed towards 2008. This may be attributed to the post election violence of 2007 which disrupts the economic state of the country. Contrary, Kenyan banks play a pivotal role in the economy in the intermediation process by mobilizing deposits from surplus units to deficit units. The surplus is channelled to deficit units through lending. Lending is the main activity of banks in Kenya. However, banks in Kenya have had a high rate of loan default from the borrowers which have caused significant losses to the banks. This is because commercial banks have varied credit information and credit history about their borrowers and the credit seekers have taken this shortfall to get many loans from these banks which increases their rate of default because they might fail to service back all the loans

**Loan types**

The economic growth of a country and the development of banking are correlated. The banking sector is an indispensable financial service sector supporting development plans through channelizing funds for fruitful purpose, mobilizing and controlling flow of funds from surplus to deficit units and supporting financial and economic policies of government. The success of banking is assessed based on profit and quality of assets it possesses. Even bank serves social objective through its priority sector lending, mass branch networks employment of many people, maintaining quality asset book and continuous profit and making is important for banks continuous growth. A major threat to banking business is nonperforming assets. NPA represent bad loans, the borrowers of which failed to satisfy their obligations.

Michael et al (2006) emphasized that NPA in loan portfolio affect operational efficiency which in turn affects the profits of the bank, liquidity position and solvency position of banks. Batra, S (2003) noted that NPA also affect the psychology of bankers in respect of their disposition of funds towards credit delivery and credit allocation. The high level of non-performing loans in the banking industry has been a hindrance to economic stability. According to CBK bank supervision annual report (2009), the stock of NPLs expanded by 7.8% to Ksh 64.9 billion by Match 31st, 2009 from Ksh 58.3 billion in 2008. In the year 2006, the NPLS were Kshs. 56.4 billion from Kshs. 68.6 billion in 2005. (Bank Supervision Annual Report 2006) In 2007 and 2008, the average non-performing loan to total loans for the industry was 25% and 24% respectively (Market Intelligence 2008). NPLs in Kenya stood at Kshs. 107.4 billion at the end of 2001. This represented 38% of total loan of Kshs. 281.7 billion in the banking sector. (Oloo, 2003). When loans become non-performing, banks liquidity and its earnings are adversely affected. This can be compared with levels of NPLs in other countries

**Number of defaults by industrial sectors**

From the findings of the study, the analysis indicates that the loans with collateral are the ones with the highest rates of defaults. The manufacturing industries are leading with a default rate of 94.1%. On the other hand, the unsecured loans have very low rates of default which are depicted with the highest default rate of 22.2%. This was interpreted to mean that 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 secured banks loans regularly go bad and therefore affect the financial performance of these institutions. The issue of bad secured 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. Certainly bad loans can lead to the collapse of banks which have huge balances of these nonperforming loans if measures are not taken to minimize the problem.

VI. Summary Of Findings, Conclusion And Recommendations

Summary of the Findings

In summary the study found that there was high number of defaults in the year 2008 and the lowest in the year 2010 with only 15.9% being defaulted. From the study, it was also found out that, most of the secured loans, that is, the loans with collateral were the long-term loans at 96%. More so, wholesalers were the found to be the greatest defaulters with a default rate of 41.6% while mining companies and electricity, gas and water supply companies both had the least default rate of 0.9% each. The findings further shows that 1 year after a default occurs on average 48% of the sample’s exposure at default was recovered, 2 years after a default on average 62% of the sample’s facility exposure was recovered. On average the biggest portion of recovery was gathered in the first year after a default and is decreasing each year.

The study findings showed that after the introduction of CRB in 2008, the banks were in a position to track the defaulters of loans with the highest number of default on loans being experienced in the year 2008 the time when the CRB came into effect. This showed that the CRB had adverse effects on tracking the loan defaulters. However, in respects to debt outstanding at the time of default, the loss was observed at the highest level (46.7%). That is, the CRB had more on the loss. The study findings also showed that the CRB had effects on the loans with collaterals only.

The study showed that the CRB had effects both on secured and un-secured loans. However, the study revealed variability of both secured and un-secured loans before the introduction of CRB (2008). CRB showed effective effects on frequency of defaults in loans on all the industrial sectors with retail and whole having the highest frequency of defaults. The findings also showed that CRB had effects in both long term and short term loans irrespective of the loan type. In addition, CRB had smaller effects in debts outstanding at time of default with small types of loans (93.3%). This is so because in most cases, small amount of loans is easier to repay as compared to large amounts of loans.

In relation to CRB effects on EPS, the findings indicated that before the introduction of CRB (2008), there was a significant changes in the EPS (F= 5.539, p = 0.005). After the introduction of CRB, the study shows also that there was no significant changes i.e. (F = 16.886, p = 0.102). This shows that CRB brought the stability on earnings per share hence reducing the variability that was there before the introduction of CRB.

The study indicated that there was significance changes on P/E of banks before CRB (F = 1.838, p = 0.002) but there was no significant changes in the P/E ratios of the banks after the CRB was introduced (F = 3.7750, p = 0.178). This showed that the introduction of CRB had effects on P/E ratios. From the study findings it is clear that the P/E ratios had significant variability before the introduction of CRB but there were steady variations in such P/E ratios upon the introduction of CRB.

Conclusion

Information is the lifeblood of the modern economy. However, before the introduction of CRB in 2008 in Kenya, information about a business’ s or individual’s credit track record (loan history) was unavailable making borrowing of money difficult and interest rates high so as to offset the higher perceived risk. Credit information sharing helped correct this imbalance by allowing banks and other lending institutions to collect and share data on millions of potential borrowers, thus allowing lenders to gather information on the creditworthiness of each. By facilitating information sharing among lenders, credit bureaus has since 2008 enables lending institutions sort good borrowers from bad, price loans appropriately, decrease processing time and reduce screening and other transaction costs. By the same token, credit information sharing has also helped banks and other financial institutions recover loans.

Credit Reference bureaus (CRB) complement the central role played by banks and other financial institutions in extending financial services within an economy. CRBs 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 a loan, credit card, overdraft facility or extend any other product, which is dependent on customer’s ability to repay at a determined cost.

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. The Banking (Credit Reference Bureau) Regulations, 2008
provides that the information to be shared among the banks is any customer information concerning their customers’ non-performing loans (NPLs) as well any other adverse information relating to a customer (negative information).

From the study findings, it is evident that banks have envisaged the greatest strategic renovation in their operation with the introduction of new concepts like CRB which have placed them in new platform. Many borrowers such as manufacturing industries that are potentially good credit risk fail to get funding because the lenders cannot objectively establish their credit history due to the underlying challenge of information asymmetry. Also, some bad loan borrowers due to high default rate of such borrowers, who know that banks operate in isolation, have exploited the information asymmetry to create multiple bad debts in the banking industry in Kenya. The operation nature of these loan serial defaulters have distorted the lending business in the credit market, adversely affecting bank performance, threatening banking sector stability and curtailing growth of the credit to the private sector due to the high interest charged on facilities to compensate on the credit risk. Therefore, this upsurge of default of loans borrowed by industrial sectors has caused a spiral effect on the interest charged to all borrowers across the market. In addition, the fear of lending to bad debtors has led to the tendency by banks to scramble for less risky lending in the form of low or no interest charged to all borrowers across the market. In addition, the fear of lending to bad debtors has led to the tendency by banks to scramble for less risky lending in the form of loan securities. Therefore the basis of strategic control and evaluation measures of strategic tools such CRB is to enable all banks satisfy their customers’ needs and to maximize profit.

The study therefore concludes based on the findings that there is a significant relationship between CRB as a strategic control measure and the performance of commercial banks. The research findings showed that before commissioning of credit reference bureaus the financial performance of the commercial banks was fairly constant. However the financial performance increased slightly with commencement of credit reference bureaus.

**Recommendations**

Based on the findings, the study the recommends that the Government of Kenya needs to publish the credit-reference regulations and create awareness for the same so that lenders can submit credit information of their borrowers (all lenders to report positive and negative information on repayment performance) with the credit bureaus. The study also recommends that an open system needs to be enhanced to allow financial institutions as well as non-bank entities; retailers, wholesalers, telecom and utility companies access to credit history of borrowers so as to know which clients to serve and what differential price to charge to cover risks. To facilitate financial performance of commercial banks even more effectively, information access should be available at low or no cost.

The regulator of the financial institutions that is the central bank should enact policies that guide the use of the credit reference bureau information by banks as well as the consumers. There also needs to be an elaborate effort to educate the public on the importance of paying debts, the impact that bad information has on one’s financial status as well as the effect of good information.

It is the recommendation of this study that lenders should appreciate the need for strategic control systems and consequently be able to develop other strategic control systems such as systems controls and internal procedural controls while enhancing effectiveness of CRB. It is also the recommendation of this study that lenders should identify strategic control systems that match their institution’s objectives and thus will ensure high performance of such firms.

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