THE RELATIONSHIP BETWEEN CREDIT REFERENCE BUREAU SERVICES AND FINANCIAL PERFORMANCE OF THE COMMERCIAL BANKS IN KENYA

A SURVEY OF COMMERCIAL BANKS IN MERU COUNTY

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A Thesis Submitted to the School of Business and Economics in Partial Fulfillment for the Requirement of Master's Degree in Business Administration of Kenya Methodist University

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DECLARATION

This thesis is my original work has not been presented for a degree or any other award in any other university.

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DEDICATION

This thesis is dedicated to my beloved wife Marina and my daughter Angel

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ABSTRACT

The aim of this study was to establish the relationship between credit reference bureau services and financial performance of commercial banks in Meru County. Information about the credibility level of potential borrowers is unavailable and most of the potential borrowers come from less fortunate backgrounds. A large number of them have never borrowed from commercial banks in the past and pledging collaterals to guarantee payment of the loans they intent to borrow is a challenge. Sharing credit information gives people the opportunity to offer affordable credit access as the search costs and risk premiums are significantly lowered. However, CRBs have gained bad publicity as at times the credit information they offer is inaccurate. This study attempted to establish the association between credit reference bureau services and financial achievement of the commercial banks in Kenya. Banks' financial performance was compared against customer information sharing, credit scoring, market research and information capital. Information sharing theory, moral hazard theory and consumer behavior theory were used to relate the CRB services and bank financial performance. The study applied descriptive research design. This design was usable to answer the questions concerning relation between credit reference bureau services and the financial achievement of commercial banks in Meru County. The study was census and focused on eighteen commercial banks operating in Meru County. The study used self-administered questionnaires to collect the data. Statistical package for social sciences (SPSS) was used in data processing and analysis. Descriptive statistics and multiple linear regression model were used for analysis. Tables and Summary reports were used to present the data. It was found that information sharing and credit scoring has meaningful effect on Banks' financial performance. The study would be a great contribution to the existing body of knowledge especially for researchers who may use this research in furthering their research through reviewing the literature in the area to establish the existing gap.

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ABBREVIATIONS AND ACRONYMS

CBK	Central Bank of Kenya
CIS	Credit Information Sharing
CRB	Credit Reference Bureau
FSAP	Financial Sector Assessment Programme
FSDP	Financial Sector Development Plan
IMF	International Monetary Fund
NPL	Non Performing Loan
PAR	Portfolio at Risk
SACCOS	Saving and Credit Cooperative Societies

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

A credit Reference Bureau (CRB) is an organization that gathers information from multiple sources and offers credit reports for variety purposes on the individual customers. The financial services providers, including commercial banks use the CRB generated information to target the prospective customers and manage the existing relationship with clients. Concerning the loan, lenders consult the CRB to check on customer's credit information. The CRB offers information on individual borrowing and bill payment habits, the information allows business banks, saving and credit cooperative societies (SACCOS) and other microfinance organisations to determine the willingness of lenders to repay a loan. Getting the CRB program in place can influence a credit's interest rate and other terms. The credit report from the CRB entails information on a persons' credit history, the identification, bankruptcies, recent enquiries late payments and credit accounts, (Bornventure, 2018).

The CRB compiles and maintain database concerning the customers, when banks want to update their data base they obtain the information from the CRB. The database ids necessary as enables the bank to generate reports regarding the customers, tis helps .the banks in improving their financial performance's, through loan process improvement, quality work and workforce productivity, (Al-Musali, Ismail, 2016)

South American countries such as Brazil and Argentina made the move to enhance banking supervision which was triggered by the financial crisis in 1990 (Mugwe & Oliweny, 2016). Credit markets represent asymmetric information challenges. Lenders have neither prior knowledge of the client's past behavior nor the characteristics or intentions of clients applying for credit (Kerage & Jagongo, 2015)

African countries faced the problem of non-performing loans, as well loans were taking long to process before the introduction of CRBs. A case study in Zambia and the introduction of CRBs in Rwanda, confirms the problem African countries were facing to manage their loan portfolios. According to the 2004 banking and finance magazine in Zambia, their banking system was traditionally distinguished by a long history of credit delinquency, perpetuated in part by poor regulatory structures and unfavorable economic circumstances. The belief that lending to small and medium-sized businesses and individuals was risky arose, which caused Zambian borrowers difficulties in obtaining finance due to general poor credit records and lack of infrastructure to track bad debtors and pave the way for good debtors. This was necessary information that would help banks to track their credit portfolios. Comprehensive information regarding the credit borrower's history could only be obtained from CRBs which were nonexistence in Zambia, (Mwiya, 2012).

The World Bank and International Monetary Fund (IMF), through the Financial Sector Assessment Program (FSAP), made a financial system assignment and established, among other items, a weak credit culture in Zambia. Over the past years, there was a culture of nonpayment of loans and other bank facilities, leading to an extremely lengthy and difficult process to the banks to recover their money. The

government developed Financial Sector Development Plan (FSDP) in 2004, which came up with recommendation of establishing a private sector-led Credit Reference Bureau (CRB) by December 2004. CRB provided the positive and negative information of the borrowers which helped to curb the bad behaviour of customer's failure to honour their debts. Earlier the performance of Zambian banks was affected by the non-performing loans but after the introduction of CRB the scenario changed and their performance improved in relation to loans portfolio. (Bruce, 2012).

The CRB provides the commercial banks and other lending institutions with different services; as stipulated in the Credit Reference Bureau Regulation 2013. The exchange of information is one of the programs aimed at resolving knowledge asymmetry between borrowers and lenders, since it includes on record the past of borrowers. It helps to know the borrower's characteristics, in order to permit more predictions on their loan payment possibilities. The issue of indebtedness is eliminated as customers are realized by the lenders when they want to get credit simultaneously from different lenders, thus act as discipline devise to the borrowers, (Chikalipah, 2017)

Credit scoring is also a services rendered by the CRB, it involves applying of the mathematical formulas to provide the score of a customer regarding the ability to access and repay the loans. The scoring method illustrates how quickly a person completes his debt obligation and is committed. Banks use the details to grant and expense the loan to those who are more timely in paying less for the loan and vice versa to those who are not (Bornventure, 2018).

The third service offered by the credit Reference Bureau (CRB) to the commercial banks is market research; it involves collecting information on the market and

customers. It reveals the size of the market potential, how to stand out from competition, customer likes and dislikes and customers' financial potential. When a bank want to launch a new branch, introduction of a new product such as mobile banking and discovering if there is market for their product and services, when a bank want to know their competitors, market research is necessary, (George, 2017).

The CRB Africa started its operation in Rwanda the year 2009, before then banks had difficulties in determining their clients' ability to repay debt, as well as loan delinquencies. After the introduction of CRB, they took the responsibility of providing accurate information on borrowers' debts profiles and repayment history, an activity which was previously carried out by the lending institutions. The CRB has played a crucial role in assisting banks in their processes of credit appraisal and successfully mitigating credit risk by offering prompt and reliable information on the debt profile of the borrower. With the establishment of CRB services in financial systems, it will encourage banks and commitment to loan repayment, hence the overall development in the economy as well Banks improvement in performance. (Ivan & Mugisha, 2013)

Financial performance is the situation in which a financial benefit is generated. This is calculated using bank productivity, which is the main objective of any company and the enterprise, cannot operate for a long period of time without it. Benefit is calculated using revenue and expenditure, profit is money earned by commercial operations, for example interest in banks, and service fees from bank profits. Expenses are the interests on deposits and all running expenses being paid by the banks, (Mwangi, 2015).

Many financial institutions worldwide face a variety of uncertainties on non-performing loans (NPLs), and commercial banks having been listed by CRB have suffered weak financial results. In order to overcome this, the lending agency is supposed to monitor the lenders 'conduct, through lack of credit records on loan applicants it affects the possibility in recovering the principal amount and the interest, (Kuhn, 2017).

The concept of setting up the CRB was intended to allow financial institutions to assess the credit viability of their loan beneficiaries in order to lower the default rates for loans. The stiff competition between commercial banks and other financial institutions, combined with the moral hazard of serial defaulters, led to the urgent establishment of reliable mechanisms for exchanging credit information, (Odiwuor, 2016).

The total earning by the banks at the end of financial year and also the liquidity position of the bank at any point of time, describes the financial position of the bank. In addition to this systems and procedures on how the banks are maintaining their internal records. Where the banks documentation and other aspects are kept properly there will be lesser cases of internal frauds and this donates that banks have systems and procedure in their control. Other ways to measure the bank financial performance is through opening of new branches in new regions and this is enabled by considerations of the market research done by the CRB.

Mobile banking refers to the performance of a bank where consumers use smartphones to perform businesses such as tracking account balances, exchanging money between accounts and other institutions, bill paying and electronic lending

allowing the use of CRB credit scoring, it is because of this factor that managers are considering better means of doing business and thus boost their profits by adopting strategies including information sharing, scoring of credit and market research roles which ultimately aim to increase the profitability of banks by reducing losses by default (Hassan, 2014).

Proper assessment of credit worthiness of borrowers, introducing new products such as different account like junior accounts, good interest rates in fixed deposits, increase in loan portfolio and increase of customers in number also attribute to financial bank performance. It is considered as the measure of a firm or an organization, a process, an entire industry or even a nation (Jackson & Victor, 2011).

In Kenya, CRB's establishment, registration, administration, management and operations are performed through Kenya's central bank under the Banking Act, 2008. Credit check offices are licensed by Kenya's Central Bank (2013) to obtain and compile loan profiles on individuals and businesses and supply the details in the form of a credit report upon request (Githua, Musiega, Juma, and Alala, 2013) they also do credit scoring, market researh and compile and maintain database and generate reports for the banks. Most commercial banks face the risk of nonperforming loans and the larger the loans are, the more the risk of exposure. By banks determining how credit worthy a borrower is, there has been a huge reduction on loan default risk, (Jerzy, 2017).

The credit reference bureau services are expected to lower the levels of default in the banking sector of Kenya while increasing the loan books of commercial banks in the country. Banks also improve their financial performance through the expansion by

opening new branches and introducing various products such as mobile phone loans to attract more customers in order to increase their profits. In any business market research is necessary so as to align with client needs and satisfaction, the more the customer deposits the bank liquidity improves, CRB carry's market research for the banks in relation to this, (Jerzy, 2017).

Despite having CRB in place, commercial banks are still facing difficulties with non-performing loans. Study shows that in the years 2012 and 2013, the defaulting loans increased by almost a percentage of 35. This happened amid the strict steps most banks have taken to ensure adherence to the CRB rules. The study also suggested that exorbitant borrowing rates are the major reason for loan delinquencies and defaults, making it impossible to repay after the borrower takes a loan due to high rates charges (CBK, 2015).

In 2017 analysts at Renaissance Capital said that, the NPLs remain big threat to the Kenyan banking sector, besides the interest law that has fixed the lending rates at four percentage points above the Central Bank Rate and the introduction of CRB. The report indicated that the banks could post lower profits to high level of NPLs. Equity Bank experienced an increase of NPLs to Kshs 15 billion in 2016 from Kshs 6 billion in 2015. (Kennedy, 2017).

Also the report from The East African Magazine reveals that in Rwanda the volume of NPLs of the four banks listed in Rwanda Stock Exchange (RSE) Equity Bank, KCB, I&M and Bank of Kigali reportedly hit $43 million in year 2017. The KCB Group's gross NPLs increased from Kshs31.81 billion in 2016 to Kshs37.49 billion

in 2017 while that of Barclays bank increased from Kshs 11.47 billion in 2016 to Kshs 12.61 billion in 2017. (James, 2018).

1.2 Statement of the Problem

Credit reference bureau (CRB) plays a vital role in the world on financial intermediation process. Through information sharing among commercial banks and other lending firms, CRB has greatly helped in reducing the aspect of moral hazard and negative selection phenomenon that is common due to information asymmetry during the credit assessment process, (Nyangor, 2018). In Kenya, they gather, handle and disseminate information about customers to borrowers under a given regulatory structure, the banking CRB law, 2008 which began the activity in 2009. The shared knowledge helps borrowers make the lending assessments quicker and more precise. More so the information help to avoid the over indebtness among borrowers, maintain sound credit records and adapt prudent borrowing practices, therefore has an impact on the economy (Gachie, 2017).

In 80's and 90's banking sector was saddled with numerous loan defaults, this resulted to breakdown of some banking firms. One cause was the problem of repeat defaulters borrowing from money lending institutions in order to defult and fail to pay the borrowed amounts. The defaulters took advantage of the asymmetry information which the environment prevailed due to lack of mechanism for sharing information. In most developed and emerging economies, therefore, sustainable knowledge exchange network growth is recognized as a key factor in financial sector reforms (Gachie, 2017).

Despite the introduction of the CRB in financial sector, banks are still experiencing high default in loans from their customers. CBK survey statistics revealed that the ratio of gross NPL to gross loans got up 10.44% in September 2017 to 11.81% in March 2018. The East African magazine established that Equity Bank experienced an increase of NPLs to Kshs 15 billions in 2016 from Kshs 6 billion in 2015 and The KCB Group's gross NPLs increased from Kshs31.81 billion in 2016 to Kshs37.49 billion in 2017 while that of Barclays bank rose from Kshs 11.47 billion in 2016 to Kshs 12.61 billion the year 2017. (James, 2018). Since the rollout of the CRB in Kenyan banking sector there is no conclusive research conducted to establish the impact of CRB of commercial bank on loan portfolio and eliminate the issue of NPLs which has an effect on financial output of banking firms. Therefore, the analysis aimed to identify the connection between credit reference bureau services and commercial banks profitability in Meru County.

1.3 Main Objective

The main aim of the research was to determine the connection between credit reference bureau services and the financial performance of commercial banks in Meru County. Specific Objectives

i. To determine the effect of customer's information sharing on financial performance of commercial banks in Meru County.
ii. To determine the effect of credit scoring on financial performance of commercial banks in Meru County.
iii. To determine the effect of market research on financial performance of commercial banks in Meru County.

iv. To establish the reliability of information capital database on financial performance of commercial banks in Meru County

Research Hypotheses

$H0_1$ There is no significant relationship between cutomer's information sharing and financial performance of commercial banks in Meru-County.

$H0_2$ There is no significant relationship between credit sharing and financial

$H0_3$ There is no significant relationship between market researh and financial performance of commercial banks in Meru-County.

$H0_4$ There is no significant relationship between reliability of capital database for financial performance and financial performance of commercial banks in Meru-County.

1.4 Significance of the Study

The analysis may be beneficial to the prevailing body of knowledge especially for researchers who may upgrade their research by using this study in literature review, and the existing gaps establishment. Also commercial banks and other lending institutions would depend from it in constructing policies related the connection between credits reference bureaus' services and the commercial banks financial performance. This research can also be of considerable interest to financial-sector stakeholders. This thesis can be used as a starting point by academics and scholars when carrying out other studies.

1.5 Scope of the Study

The research focused on determining the connection between the crediting reference bureau services and the financial performance of commercial banks, in the 18 commercial banks operating in Meru County as at March 2018.

1.6 The study limitations

One of the study limitations is that, the respondent may not disclose to the researcher some of the information that they deem confidential. The study may also be limited by some respondents failing to submit questionnaires to the researcher on time. Therefore, making researcher unable to analyze the result of the project on scheduled time. This study will also be limited by distance of distribution of the commercial banks operating in Meru County; which makes it challenging for the researcher to visit all the sampled research population. Therefore, the researcher ensures proper scheduling to enhance enough time to visit all the sampled study commercial banks operating in Meru County as at March 2018.

1.7 Assumptions of the study

The study assumed that, banks do gather and make use of information from CRB when assessing their customers for credit. Further, the study assumed that all respondents will be supportive in answering the questions posed and they will answer questions correctively and truthfully.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter details study literature related to the connection between CRB services and commercial banks' performance. Theoretical review and conceptual framework are also outlined.

2.2 Theoretical Review

Theoretical review refers to the conceptual basis on which the work is carried out; it establishes the relation between the abstract elements and the functional components of the investigations undertaken. Thus theoretical structure analysis has an impact on any decision taken in the studies that tries to make a rational understanding of the relationship between factors and variables that are considered important to the study issue. It also provides the definition between the relationships of all variables in order to make them understood. For the purpose of this study, the study will review consumer behaviour theory, moral hazard theory and information sharing theory.

2.3 Information Sharing Theory

In 1970 George Akerlof presented asymmetry information theory in his paper entitled "Lemon" Price Volatility and the Function of the market. His point was that information symmetry offers the vendor an opportunity to deliver products of less than average market price. Due to information asymmetry, the guarantors do not know the loan applicant's background experience, attributes, or purpose (Jagongo & Kerage, 2015).

The factual information on the borrowers' credit score needs to be available to lenders to minimize loan defaults and write-offs. Information sharing reduces banks screening intensity and it softens competition between banks because they no longer fear to get a negative selection of applicants since their competitor has already picked all cherries (Boyd & Hakenes, 2013).

The existence of asymmetric information between borrower and lenders create confusion for players about credit lending. The availability of credit information is important to both parties, Lenders and lendees who assist in making educated decisions about how much and to whom a loan will be given. Where the banks exchange their clients 'creditworthiness knowledge, they may recognise the legitimate clients to reduce default rates. The lenders use the credit background to assess the collateral status of the borrowers (Chakazamba, Matanda & Dube, 2013). When the borrower gets a loan he makes the promise to pay within the stipulated time, information exchange is essential as it helps the lenders to create an information capital by compiling and maintaining database used to generate reports from customer information database, which assists in credit analysis, execution, administration and review. The background information on history and reputation of the borrower is important on credit evaluation (Simplice, Asongu & Jacinta Nwachukwu, 2018)

Due to CRB symmetric information, banks are able to use the credit score which is a predictor showing the scoring information including calculations. The credit score is developed to provide lenders with single assessment of the borrowers. The score is represented by number from 250 to 900 which also comprise of risk grade ranging

from A to E. essentially the higher the score the lower the risk. Lenders need to have adequate positive as well as negative information about the customer credit score while the borrowers need to know their capacities to avoid financial stress in loan repayment. Positive and negative exchange of the information produces the borrowers in three types. First, the borrowers exposed are the ones which different lenders have screened them, hence are inferior to their contract for perfect details. Second, are the borrowers who defaulted on earlier loans. The third group includes the borrowers with clear credit history, (Kerage, 2015).

Theory of information sharing suggests all credit information is accessible and exchanged with all participants. This is only possible with technical innovation but ignorance and analphabetism among players can impede successful sharing of credit information. This hypothesis is important to this study as it unravels lenders 'secret behavior through full, current, reliable and timely details about potential lenders' financial ability (Kusi, et.al, 2018). The theory anchors objective one and two to establish the connection between client information sharing, credit scoring and financial results of banks in Meru.

2.4 The Moral Hazard Theory

Moral hazard denotes the danger that a party to a deal may not have committed their good faith while entering in to contract by offering false details about its credit power, liabilities or properties or, alternatively, the party may take extraordinary risk desperation in effort to gain benefit prior to the contract expiry (Stone, 2011).

In the recent global financial crisis, there were a lot of moral hazards taking place. Economists present the argument that this inefficiency is inherent in the moral hazard

theory. The moral hazard theory suggests that the debtor have the right to default, and that its credit demand has consequences. (Hoppe & Kusterer, 2011) describes moral hazards as the problems linked to buyers 'failure to understand the seller's actions. In fact, it is difficult for service buyers to decide if the actions of the seller were appropriate and reasonable, since the quality of service is very difficult to assess. Because of the exogenous factors, the service is irreversible while the outcome of the service is uncertain.

The difference between problems in adverse selection and the moral hazard factor, is inherent in the lending activity. Amoral hazard emanates from the lack of ability by lenders to observe the actions of the borrower that affect the probability of loan repayment (Skala, 2011).

Lla and Pagano (1997) created a formula for loans efficacy are dependent on both the efficiency of the borrower, and his efforts. Every commercial bank at first has private knowledge about a borrower's credit worthiness. Since a borrower has been granted a loan, a creditor has the power to misuse the borrower's private details by attempting to prevent him or her from obtaining the loans to obtain rentals from him or her. Forestalling that the lender must take the gains of his or her effort, the creditor instead has a small motivation to bring ex-ante effort into this (McCaffrey, 2016).

2.5 Consumer Behaviour Theory

The definition as described by Capgemini (2014) is the analysis of people, organizations, or entities and the mechanism they use to pick, protect, and dispose of goods, concepts, interactions, or services in order to meet the demands and the impacts such processes have on the customer and the entire community. This is enabled by the

research conducted by CRB on consumer behavior and bank products which include loans, new accounts opening, mobile banking and mortgages. Consumers make different and many buying decisions every day, banks require market research when they want to expand their business through new branches, to acquire potential borrowers for mortgage loans. Mobile banking serves customers access to their accounts balances, money transfer to other accounts, cash withdrawals and mobile loans. Many banks are studying consumer purchasing choices to address the questions of what consumers purchase, how much they purchase, when they buy, what they buy, and where they buy. Marketers monitor this to ascertain the bevaviour of the client (James, 2018).

The marketing stimuli are made up of the four Ps, these are product, price, place, and promotion. In the buyer's setting, other factors include major forces and events: technical, political, economic, and cultural. Both these things join the black box of the buyer and have turned in to observed buyer responses. Brand preferences, commodity preference, buy amount and timing of purchase. The marketer needs to understand how inside the consumer's black box which has two sections the stimuli are transformed into a answer. First being the attributes of the consumer affect how he or she perceives the stimuli and responds to them. Second, the purchasers decision process itself influences the actions of the purchaser. This chapter first looks at buyer features as they influence purchasing behaviour, and then explores the buyer decision process.

The analysis of customer behavior is focused on consumer purchasing behaviour, where consumers play buyer, payer and user's three distinct positions. The work

carried out shows that customer behavior, even for industry experts, is hard to predict. Relationship marketing is an important factor for evaluating consumer behavior has a strong interest in finding the true nature of marketing by re-affirming consumer or buyer's value. Banking sector needs to understand the reaction of customers as far as banking matters are concerned, the economic activity of the focused customers , their technology level, availability of gadgets such as smart phones, and the affordability of the products. CRB conducts the survey to ascertain these. The customer experience management, client engagement, personalization, usability and one-to-one marketing are also of greater significance. Human functions can be classified as aspects of voluntary choice and welfare (Dorcas & Douglas, 2015). Market survey by CRB is of great importance for commercial banks' financial results.

2.6 Commercial Banks in Kenya

Among firms authorized by Kenyan law to lend money and receive money from individuals and businesses Commercial banks. They serve persons, businesses and organizations. The main aim why these banks are established is to make profit through its operations. The activities of these financial institutions are supervised, licensed and controlled by the central bank. Currently, in Kenya a total of forty four banks are in operation in Kenya. These banks are grouped as small, middle and large commercial banks. These commercial banks are either privately or publicly owned. In Kenya closure of 37 banking organizations were shut down between 1986 and 1998 due to financial crisis. Among these problems was poor credit asset performance. In order to create a rational and global competitive financial sector, credit referencing was introduced by Kenyan lenders.

Following efforts from different firms and organizations such as CBK, KBA and FSD–Kenya. The mechanism of sharing the information regarding credit amongst different lenders got launched in 2010. Due to banking Act of 2006 amendments, it was made mandatory for all financial institutions to share information pertaining non-performing loans. These was necessitated by credit reference bureaus which is licensed by the Central Bank of Kenya. The regulations on credit reference institutions, deals with sharing information between the banks should be the information about their customers' defaulted loans and customers bad information. Kenyan central bank has licensed three credit bureaus concerning credit namely CRB Africa Ltd, Transunion and Metropol CRB to deal with information sharing services in Kenya. According to Nyamongo and Temesgen (2013), this has resulted in sustainable growth and performance within the banking sector thus resulting to better performance.

Proper and effective credit reference bureaus are among crucial indicators of credit business success. These comprises of the assets quality, information authenticity, and facilities affordable to the borrowers. These are weighed between the gross loans and that of defaulted loans. Credit Reference Bureaus provides information on key challenges between borrowers and lenders. However, banks influence on borrower's information sharing on profitability performance has not been empirically examined.

2.7 Information sharing on financial performance of commercial banks

The sharing of information regarding the borrower's behavior and indebtedness has important effects on credit market activities (Tullio, Jappeli, Marco & Pagano, 2015). Information sharing enables the banks on knowing the borrowers characteristics in

order to permit more accurate predictions of their loans repayment possibilities. Also it helps the banks to reduce the information rents which they could extract from the customers. Third it eliminates the vice where customers could over indebt themselves by drawing credits simultaneously from different banks without being realized by the lenders. Finally, it can be used as a discipline device to the borrowers. According to (Chikalipah, 2017), Major obstacles facing attempts to curb the problem are problems of the adverse selection and that of moral hazard generated by the asymmetry of knowledge concerning borrowers to lenders. By understanding the information sharing it helps to shed lights on how to design the credit information system, which formulates the mechanisms on lending policies between banks and the customers. The mobility and heterogeneity of borrowers is determined by the incentive of lenders sharing of borrower's information (Asongu et al., 2016). Information sharing enables the banks to increase their volume on loan portfolio.

Information sharing results to various benefits to the lenders, borrowers and the economy in general. The CRB report helps banks to review the credit or loan application of the borrower more efficiently and effectively, remove the element of moral hazard, NPLs and improve the risk management processes of the bank. Through separating themselves from serial defaulters, consumers profit from knowledge sharing and therefore hold their credit credibility intact. It helps the borrower to obtain credit terms based on their successful loan repayment history, CRBs make this information available as evidence, this translates into lower credit rates, lower collateral stability and flexible repayment cycles. The borrower evades the costs associated with third party investigators who search for customer details and credit

performance. It's through the CRB report where paper work is reduced for the customers who apply for credit such as mobile loans and salary advance from various banks.

Credit information sharing (CIS) helps to create opportunity for the entire population to access credit including those who have no tangible collateral. Since introduction of mobile banking large population have been able to access the mobile soft loans from various banks. For instance, KCBMpesa, Coop Bank MCo-oPCash, CBA Loop, Family Bank PesaPap, and Equity Bank EazzyBanking. (Mohan, 2018).

2.8 Credit Scoring on Commercial bank's Financial Performance

Credit scoring is the tool used to determine loan applicants 'credit risk, using statistical methods and historical data. The credit scoring concept started in the 1960s, when the credit card industry standardized its decision-making process, credit scoring seeks to isolate the impact of the characteristics of different loan borrowers on loan default and delinquency (Crook, Delman & Thomas, 2017). The CRB undertakes the process of creating a "rate" that the banks use to rank applicants for their loans. The developer analyzes the historical data on the credit performance of the previously made loans in order to construct a scorecard or scoring model so as to assess the borrower's useful characteristics in determining whether the loan performed well or not. According to research (Ugirase, Josiane & Magnifique, 2013) conducted in Rwanda on the efficacy of credit scoring on commercial banks, credit scoring has been found to have importance in describing the financial performance of commercial banks.

Credit scoring has changed the way banks give credits to their customers, some banks and other institution enter the market through the use of credit scoring, by processing

mobile loans processing applications for mobile loans using automated and centralized systems provided by the CRBs study. Loan applications are approved over the phone and also some banks solicit borrowers through the short messages, as credit card lenders do. Banks not only use the credit scoring for loan approvals but also for loan pricing. The system has made the banks to improve their performance by giving more loans of smaller sizes than they could use the traditional methods of loans assessments thus increasing their profits (Goh & Lee, 2018).

According to Lyn, Thomas, Jonothan, crook, David & Eldelman, (2017), There are two primary methods to credit scoring: judgmental, and statistical. Both depend on information history related. The approach to assessment is a rational, evidence, and the approach based on customer experience, and the common sense of the credit committee consists of credit professionals who make credit risk decisions. This is achieved on the basis of checking and loaning the applicant's five Cs. First is the character which tests on credibility and honesty the dignity of the borrower and the property. Second is the Capital which compares the difference between the assets and liabilities of the borrower. Third is the collateral that is lent against the credit or loan. Forth is the capacity which measures the ability of the borrower to pay. Fifth C focuses on the factors that assess the circumstances of the borrower such as the market situation, competitive pressure and seasonal characteristics. When doing the knowledge analysis, the credit risk is measured qualitatively or subjectively.

In credit scoring, statistical approach has advantages over the judgmental approach in relation to bank performance. Firstly, it is faster and more accurate and secondly, it helps the lenders to make fast decisions on credits, mostly involving the mobile loans

are made quick and real time due to mathematical formula. In addition the model has consistency and reduction of loss of bad debts and operating costs, both of which contribute to improved bank performance (Bart, Daniel &Harald, 2016).

Good or poor bank performance is affected by the use of the credit scoring; there are a number of benefits reaped from the credit scoring regardless of individual credit score. First, the applicant receives the loan decision more quickly, and also the lenders speed up the loans decisions. Second, credit decisions are made fairer by lenders only focusing on facts related to credit risks. Third, accurate information contributes to improved lending incentives, using credit scoring banks allows the courage to accept further loans, as the credit score gives them accurate information about risk and other credit factors (Isaac, 2017).

2.9 Market research on financial performance of commercial banks

Market research is a key factor in banking industry; CRB conducts market research for the banks, the research involves collecting of data related to customers and target market. The research revealed that competition, customer likes and dislikes, number of customers willing to purchase products and size of business affected the market trends. It also helps one to improve your products and services. Market research is an important task in a business as it helps in launching new products, or improves the existing ones, you may believe that your products or services have ready market, but without market research you are left with guess work. (George, 2017)

Banks do market research through the CRBs, to know the viability of a region in terms of economic activities, technology level of an area or town, this helps them determine whether the place is good to open a branch, or if there is an existing one introduce

various products such as mortgage loans, if there are employed customers introduce a non-collateral loans, salary advances and linking of customer accounts to their mobile phones. Studies by Ensor and Wannamaker (2015) argued that improving mobile application technology has helped individuals to transact banking services any time. Since its introduction in the Philippines, the latest banking paradigms have been altered in banking, where new products and services and a new point of contact between banks and their customers.

Banks have historically been seen as wealth-holders, but later changed their position as wealth creators. While diverse marketing research and strategies have expanded the reach of banks today, the banks are now seen as suppliers of finance across the country. Sound banking system is the life-blood of every emerging economy, representing growth in the economy. There are five main stages in the creation of banking marketing that demonstrate the basic aspects of banking marketing, closely dealing with the characteristics of banking services and the industry, in which bank behave respectfully. External environment dynamic shifts assess exceptional demands on banks 'strategic thinking and their creative orientation. (Winfred &. Mthengi, 2015)

The real and anticipated developments in the global business environment should be expressed mainly in one area of banks 'strategic management. Marketing mix techniques are used during the implementation of bank strategies, in connection with the goods, market, target determination and segmentation. In addition, the marketing mix tools are related to the seven service characteristics consisting of, Product, Size, Location, Promotion, Staff, Process and Physical Proof, banks are customer-oriented

by trying to meet their needs. The achievement of this goal is by gathering enough information regarding their customers, what their needs are and how to reach them (Kazik, 2017).

In banking industry, there are various benefits in regard to performance which arises from market research done by the CRB. Market research helps the bank to increase their profit consciences through increasing of credit portfolio, service charges through the mobile banking, as well as increasing their liquidity through the customer deposits. Also marketing help the bank improve their services hence performance by giving loans within the shortest time possible, improve their customer relations and venture in new markets through opening of new branches to reach more customers.

2.10 Information capital on financial performance of commercial banks.

Globalization has provided diverse advantages to contemporary businesses, especially in facilitating business projects on the international markets. In this new global economic time, Information database resources like customer relations and human capital have become imperative in the success factor of many businesses and significant in sustaining a competitive advantage and creation of value in an organization. Information capital consists of systems, databases, and networks which makes information and knowledge available to the banks. While the banks are focused in improving their performance's, through loan process improvement, quality work and workforce productivity. The potential of an organization creating a value based long term on competitive advantage on the premise of efficient management of capital Information with comparisons of tangible assets. Knowledge-based industries include

financial industries such as banks where resources are intellectual in nature and non-tangible (Al-Musali & Ismail, 2016)

Ahujaand Ahuja (2012) assert that effective utilization of information capital is more essential in the banking sector success than other sectors. For a bank to deliver high quality services, it is dependent on the investments it has made in relation to information capital as its brand building, systems and processes and human resource. Despite physical capital being crucial for bank everyday operation, Information capital is what determines the quality of services offered to the customers hence, it becomes imperative that Information capital is managed by the bank (Jordan et.al., 2017).

Considering the banks' primary resources is both intangible and intellectual in situation of which they participate in the more vital process which is creation of value, so that they can maintain a sustainable competitive advantage over their rivals, it is important for the researcher to investigate the banking sector upgrade in efficiency and check on how efficiently Information capital factors are managed. Information capital can be classified into three categories; structural capital, human capital, and relational capital. Information capital is the sole strategic asset in organizations and this plays a vital role in creating and maintaining organizations' competitive advantage and its performance (Al-Musali & Ismail, 2016).

2.11 Review of Empirical Studies

This section reviews the findings of empirical studies done to determine the connection between the CRB services in comparison to financial performance of commercial banks.

Transaction costs

According to Rotke and Gentgen (2018), transaction cost is cost of undertaking transactions through exchanges on open market. It also involves division of labour. Transaction costs are not easy to measure in empirical studies. However, different variables such as frequency in transactions, uncertainty,specifity in assets and orpotunities which are used as they are predicated to greatly impact on transaction costs according to (Pesali, 2016). According to studies by Polski and Kearney (2011), these costs show the position of firm both inside and outside the organization. Transaction costs enables in the measurement of efficiency of various institutional formats in the achievement of economic objectives in a given environment.

International financial institutions in collaboration with many government institutions have put a lot of effort to cater for the of increasing transaction costs. Studies by Williamson (2015) showed that presence in loan market transaction cost existence made many banking institutions active to participate in activity monitoring as financial firms invest good amounts of money in business organizations. Studies by Brown and Zehnder (2014) found that CRBs encouraged borrowers to repay their loans by lowering the transaction costs. By lowering the interest rates, use of CRBs through credit scoring reduces the lendering risks. This enhances customers to access more affordable loans as well as reducing default. Credit bureau data statistics shows that credit reporting information minimizes the lending costs which allow them in prediction of personal information regarding loan default.

According to studies by Jappelli and Pagano (2012), banks lend the private sector heavily and rates in defaulters are minimal in nations customers credit information is established and effectively shared. In those Nations, lending organizations have confident on their customers on the bases of their credit worthiness history gotten from crediting bureaus reference. Because borrowers yearn to borrow more and more, they usually make efforts to repay borrowed loans. Research by Chikalipah (2017) depicted that business transactions have been simplified by electronic financial services. This has led to increased efficiency, convenience, effectiveness to businesses.

Existence of CRBs lowers the monopoly of information among lenders and borrowers and as a result, these leads to reduction on more rents that lenders would charge their customers (Getenga, 2014). During loan credit application, most of the banks considers approximate degree of recovery (Getenga, 2014). Transaction costs of lending comprises of coordination costs, cost of administering credit and costs of risk of default. According to studies by Saito & (Villanueva, 2013), admin cost get attributed directly in administering process and delivering of loans processes. Where the resources are involved in coordination cost, financial firms sets aside in ensuring that customers follow the terms stipulated in loan contracts. Banking activities results to two kinds of transaction costs subject to different economic and political influences. These are interest expense which deals with costs for banking activities and noninterest expense which are costs on co-ordination and information (Polski & Kearney, 2011).

According to Shankar (2017), transaction costs are further divided into direct and indirect costs. Indirect transaction costs consist of allocated fixed costs of institutions such as branch office, head office and that of regions and cost of taxation. Direct transaction costs include administrative direct cost in tasks, training costs and cost of monitoring. Sharing information between banks minimizes the informational rents extraction by banks thus ensuring no overstraining between banks and customers. The analysis of transactions reflects the institution of structure in government.

According to Williamson (2018), there are three core pivotal dimensions in commercial transactions study, which include the uncertainty and the occurrence frequency of the transactions, and the condition of asset specificity. According to Husted &Folger (2014), asset specificity is a condition in which human or physical invested resources in aid of a given transaction can't be detected the loss or redeployed to other uses. Information sharing among banks leads to different consequences on credit availability for different institutions. The associating the credit bureaus owned privately, little predicated financial constraints and increased financing bank shares and the correlation between is strong on young and small institutions.

CRB worldwide should not stand on its laurels; it should come up with services of innovations counteract the increasing of their valued clients' needs so as to be competitive. For instance, according to Tumusiime-Mutebile (2011), in Uganda, Credit Reference Bureau currently introduced Credit Scoring System with the intention of facilitating better and quicker decision making through participating

of financial institutions. Credit rating on financial markets is important policy which has been adopted by many international financial institutions.

According to studies by Brown and Zehnder (2017), among factors that would led to the collapse of the lending market were credit risk characterized by absence of information sharing among institutions as well as reputational banking. In addition, their study found out that coming up with the encouragement from bureaus checking on credits of clients to repay their loans. This was achieved as credit reference bureaus allowed lenders to point out customers with good history concerning credit. From the researh, it was noted that sharing of information, among institutions positively influenced market of credit in different areas: in absence of credit reference bureaus, borrowers would repay loans under condition to maintain lending relationship.

The study also found out that in Nations with the information sharing on credit, there was a likelihood of borrowers on their loans repayments irrespective to need of weighing yes or no to extent their current relationship in lending. According to Collins et al. (2011), Financial firms facilitation in mobilizing individual saves, the pooling of risks allocation and diversification of of resources. Banks incur costs as deposits receipts and loans are not harmonized. In accordance to Rhyne (2012) the lending net return compared to the borrowing gross costs, gives a clear definition of costs on intermediary, and it include administration costs, information costs, cost on operations as well as that of the defaults and transaction costs.

According to Schreiner (2010), financial organizations are facing a great risk of nonperforming loans (NPLs). Huge loans have a high degree risk exposure and therefore variable costs per-dollar is a bit higher. lenders should be careful to minimize issues of loan defaulters. Institutions should monitor the behavior of their (clients) borrowers in order to do away with the problem of NPLs. CRB was established to help banks asses their customers credit worthiness that is; enterprises, individuals and groups thus minimizing chances of loan default risk. CRB aids in sharing information on default among banks, curtailing corrupt customers and provide commercial professional credit reference. Loans outstanding balance is measured by rates of portfolio at risk that are not being paid on time against the outstanding balance of total loans according to (Brown, 2016).

The index used in determining delinquency on bank loans, the potifolio at rist is involved, (Grosvenor et al., 2010) revealed that the current financial global crisis which emanated in the US, was linked to the August 2007 downfall in banks with higher appetite of risks mortgage market subprime and willing to offer credits with greater probability of nonpayment's recorded high degree of the loss. This research also found that the level of NPLs in US commenced increasing gradually in all sectors early year 2006. Non payed loans manifests the banks risks of credit increasing from issues such as overstrained conditions of economy and or poor lending decisions.

Assets quality of the banks and that of soundness in financials are indicated by the ratio of NPLs to assets. When banks record high financial turmoil, this is a clear indicator regarding healthiness of the bank as there is remarkableness in exposure

in the challenge origin. Controlling NPLs is vital for achievement of environment on economy and financial on individual bank. In order to minimize default rate, lenders should provide complex information for the borrower in relation to prediction model of the default. According to studies by Powell et al. (2004), in Brazil, it was established that default rate decreases based on availability of borrowers' information.

Studies by Sigei (2010) in Kenya, showed that CRBs plays a pivotal task in alleviating loan defaulters from accessing credits from financial firms. Research by Nganga (2011) revealed that, many people worked effortlessly to clear their loans so as to avoid being listed in CRBs as well as securing their reputation. According to Galindo and Miller (2011), information sharing lowers credit constraints in an organization. Based on their study, there was positive relationship between credit access and the degree of information sharing. Researches by Doblas Madrid and Minetti (2016) revealed repayment performance of borrowers improved if lenders enter credit information sharing institution or if lenders threaten clients by blacklisting them. According to Grosvenor et al. (2010), the core task of lending banks they give credit considering credit risk as their risk source.

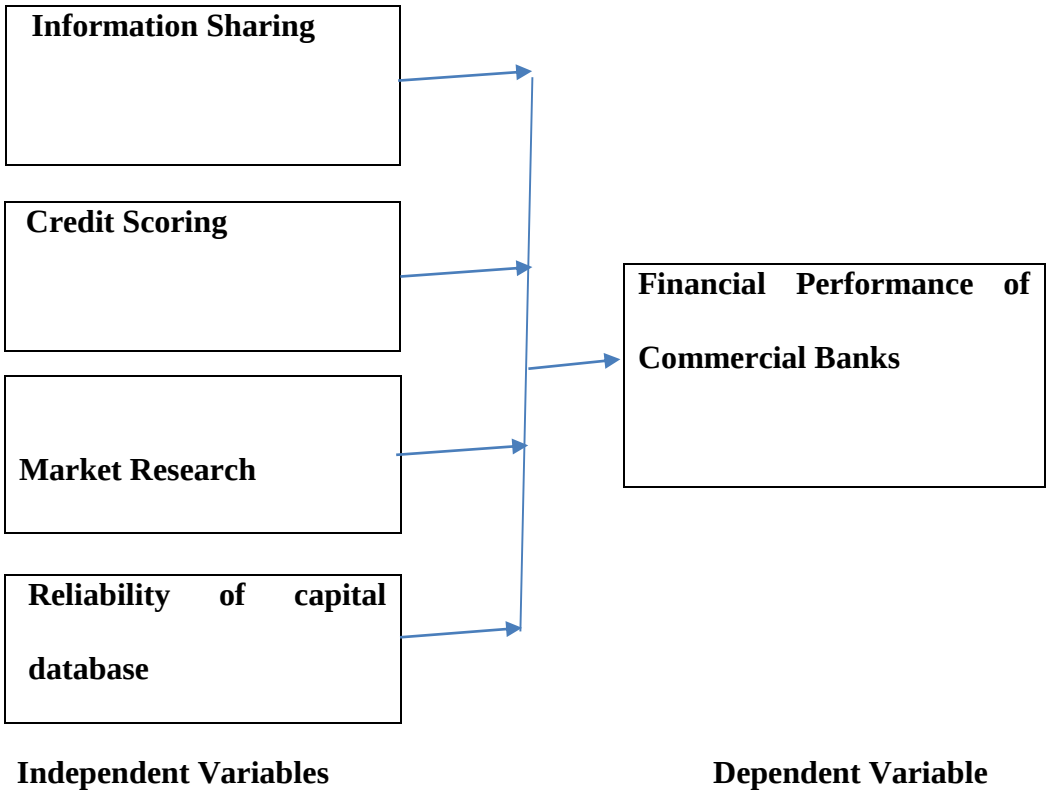
All authorized banks are required to give information about loans which are defaulted through CRB licensed by CBK. CRBs collects, collates and processes data acquired from certified sources of information in order to come up with credit reports which are useful by lenders.

Information from several countries in the world showed that presence of credit registries was related with increment in lending volume, stable banking sector, improved access to financing growth of consumer lending (Armstrong, 2018). Although borrowers' purpose to repay their loans they aren't rewarded as due to poor information sharing. Unfortunately, when borrowers are not able to repay their credits the banks use interest rate to cover the defaulters at expense of other customers.

According to Herausgeber (2011), among factors hindering the access to credit for small enterprises is little data on risks are likely to pose to the intermediaries of finance. Therefore, lender banks have to ensure a huge trials to have complete information required to aid them make clear decisions on the credit requests and increment on their operational costs. According to Andrew Powell et al. (2014), banks should collect the information in order to get the correlations with the customers so as to eliminate the bottlenecks.

2.12 Conceptual Framework

Figure 2.1

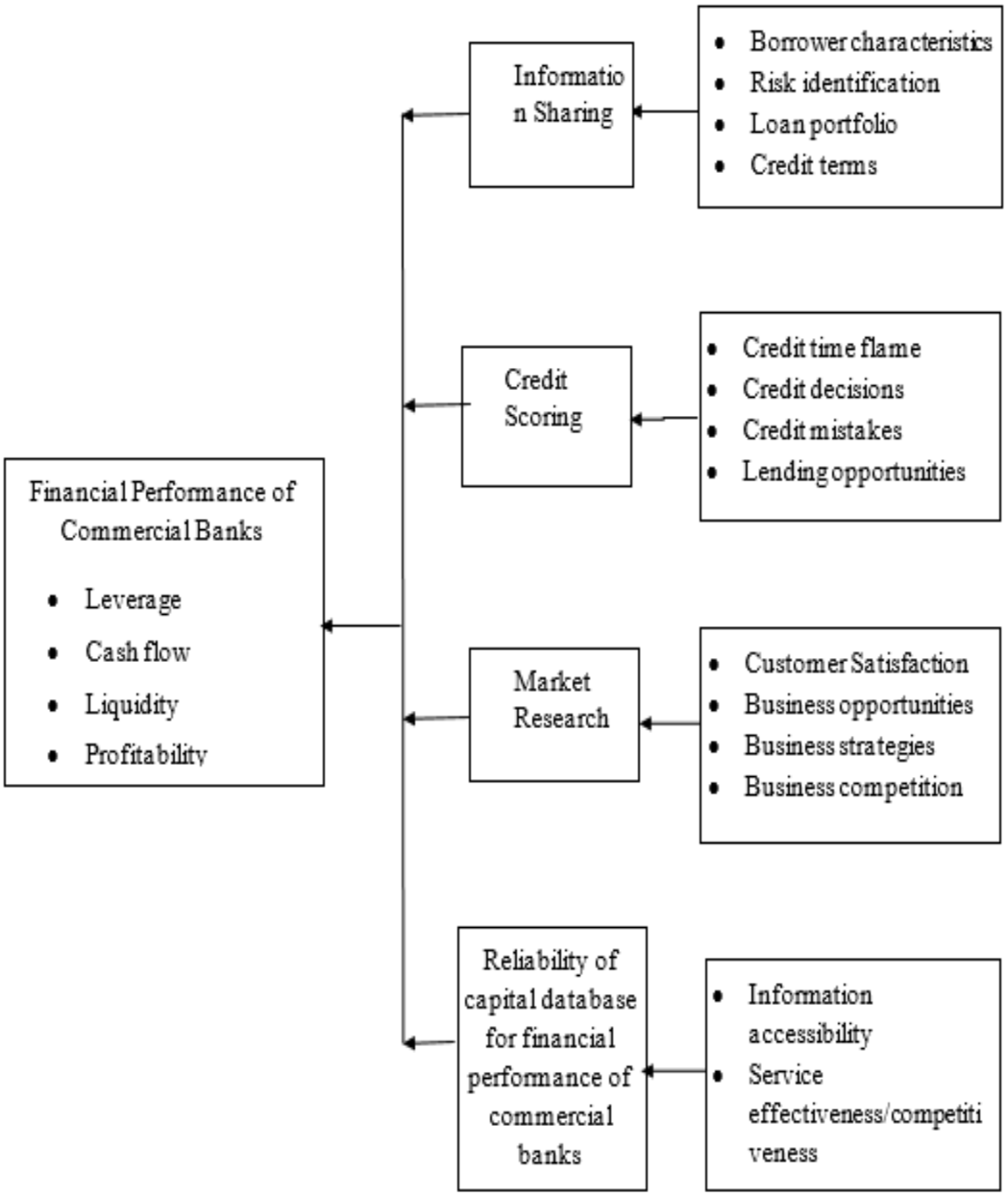


Credit Reference Bureaus play a critical role in information sharing with regard to borrower's positive or negative information to commercial banks and in turn boost their financial performance. Credit Scoring is one of the main tasks CRBs carry out and this lowers risks associated with moral hazard and adverse selection leading to accumulation of nonperforming loans. When a borrower's creditworthiness is professionally assessed, it decreases the chances of lending money to a borrower who has neither the capability nor the will to pay the loan hence, commercial banks' performance increases so does the business. Development of information capital

ensures lenders have database regarding the borrowers information on credit performance, accurate information regarding borrowers in an efficient and timely manner ultimately lower the risk of default and boosting the bank's profitability as well as financial performance. Market research enables the bank to expand their territories as well as introducing new products to customers to increase their liquidity, loan portfolio and better and quick services to the customers.

Figure 2.2 Operationalization framework.

Performance of Commercial Banks Leverage,Cash flow,Liquidity and profitability



Dependent Variable **Independent Variables**

Fig 2.2. Operationalization of Variables

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter details the applied procedures while conducting the research. This includes the study design, target population, sample design, data gathering instrument and guidelines and the techniques in data analysis.

3.2 Research Design

The design is a systematic inquiry where the researcher lacks straight control of study occurrence on independent variable due to their manifestations. According to Orodho (2004), the design of the study is the procedures which the researcher has selected to study certain questions in particular or hypothesis. The research used correlational and descriptive designs. Correlational research involves gathering data to assess if there is a association between two or more quantifiable variables, and to what degree. The degree of relation is expressed as a co-efficient of correlation (Mugenda & Mugenda, 2009). When researching the relationships between naturally occurring variables and examining human variations, correlational analysis is used. In this analysis, the relationship between CRB services and commercial bank output occurs naturally, and can only be interpreted for purposes of prediction. Descriptive study designs, according to Mills, Albert, Gabrielle, and Wiebe (2018), help provide answers to the questions of who, what, why, where, and how relevant to a specific research.

The goal of this study was to develop the relationship between CRB services and commercial bank performance in Meru County. Usually, descriptive research is designed and developed specifically to quantify the characteristics defined in a study

objective. This analysis concentrated on correlation of credit bureau office services and commercial bank performance in Meru County. Banks' profitability was compared against customer's information sharing, credit scoring, market research, and information capital.

3.3 Location of the Research

The study location was Meru County. The County borders Laikipia County, Isiolo County, Embu County and Tharaka Nithi County. In Meru County, the main economic activity is agriculture which is favored by the fact that a significant part of Meru County is on the slopes on Mount Kenya with rivers and streams as the main source of water.

3.4 Targeted Population

This refers to set of objects or population or events results which are generalized by researcher with (Wan, 2010). This research targeted management of 18 banks within Meru County as at March 2018. In each bank, both the bank manager and the head of credit department was included for the study; hence the study population was 18 officers in charge of the credit departments and 18 bank managers in the in their respective bank.

3.5 Sample Size and Sampling Procedure

Stratified technique was used in the sample to get 18 commercial banks. According to Mugenda and Mugenda (2003), for a descriptive study 10% of the accessible population was enough. Purposive sampling was used to select the 1 bank manager and 1 head of credit department, respectively. A random sample was involved to make

sure the targeted members of population had the same chance independently for inclusion in the sample. Thus the research size consisted of 36 participants.

3.6 Sample Population Grid

Table 3.1

Sample Population Grid

population category	**Total targeted population**	**procedure for sampling**	**size of sample**
Bank manager	18	Purposive	18
Head of credit department	18	Purposive	18
Total	36		36

Source: Researcher 2018

3.7 Sample Design

Census was conducted involving all the eighteen banks operating Meru County. All population items are protected in such an investigation, so no factor of chance is left and the highest accuracy is obtained (Kothari, 2008).

3.8 Research Instruments

Structured questionnaires were used to obtain the data which are self-administered. Orodho (2009) cites that the questionnaires are widely used instruments for gathering essential population information. Questionnaires are ideal for survey research and are

widely used to collect details about current situations and practices, and to inquire about perceptions and views easily and accurately (Mugenda & Mugenda, 2009). In order to obtain information on CRB services and performance of commercial banks in Meru County a questionnaire was created. The questions were formulated with respect to each research objective.

3.9 Pre-test Study

According to Cohen, Manion and Morrison (2011), the best fit pilot sample should constitute at least 10 per cent of the study sample. Three banks were used for the pre-test in neighboring Embu County which is around 16 percent of the sample size. The 16 per cent was obtained by purposeful sampling. Piloting assists the researcher in assessing the quality and whether to rely on instruments items.

3.10 Research instrument validity

Different scholars have established a coherent definition for research instrument validity. Validity is exposing the instruments to a smaller number of respondents to test its suitability how to well test measures, what is supposed to be measured. (Mugenda & Mugenda, 2003).It can also be considered as the measures of the test on how it's supposed to measure (Kothari, 2005). This work is based on the definitive definition of validity provided by (Orodho, 2009) that, instrument validity refers to the extent to which the findings derived from data analysis reflect the phenomenon under review is true. It is the consistency and importance of inferences that are founded on the findings of the study. Also validity refers to degree to which the findings derived from the data analysis accurately reflect the under research phenomena. If validity is strong, the inferences will be accurate and meaningful, based

on these data, Cresswell (2014) argues that if it calculates what it was intended to measure, a behavioral test is considered to be accurate. Validity of content or validity of sampling would be ensured by providing a range of items which measured both the dependent variable and independent variables. The results of the pilot study were also used to enhance validity of the content. The supervisors should guide during the presentation of the proposal which will help to enhance the quality of the material. The requisite changes are then made to improve validity on the instrument.

3.11 The research instrument reliability

Reliability on internal accuracy was used to calculate the reliability of items in the instrument. For instance, items developed to measure constructs such as capital for knowledge. To assume high instrument reliability, certain items produced must be strongly correlated with these constructs. Internal accuracy is measured using the Alpha Coefficient from the Cronbach (Mugenda and Mugenda, 2009). A cut-off of r = .70 is the appropriate correlation coefficient (Siegle, 2011).

3.12 Data Collection Techniques

The investigator sought a research permit from NACOSTI. This authorized him to conduct the survey in the Banks. The investigator also sought permission from the bank managers of the respective banks. The questionnaires were distributed to the participants and collected at a later date.

3.13 Data Analysis

Data was appropriately coded according to the answers to the various questions. SPSS software was used as an aid for the quantitative data analysis. The data was analyzed by use of descriptive statistics and the multiple linear regression models.

The multiple regression function will be expressed as $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + e$

Where; Y = Dependent variable

X_1, X_2, X_3, X_4, = Independent variables

X_1 = Information sharing

X_2 = Credit scoring

X_3 = Market research

X_4 = Information capital

β_0 = Intercept

β_1, β_2, β_3, β_4 refers to Regression coefficients

e = the error term

3.14 Logistical and Ethical Considerations

The researcher received got a introduction letter from Kenya Methodist University. Using that letter, he obtained a NACOSTI study permit. The researcher also obtained the approval of the respective bank managers. The questionnaires were sent to the participants. The researcher explained the purpose of the analysis to the respondents. The respondents were guaranteed of confidentiality in regard to information they provided. Anonymity of the participants was also maintained.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter provides the findings analysis, interpretation and discussion. Descriptive statistics and multiple regression analyses were used to establish the relations of credit reference bureau services and profits made by Kenyan commercial banks.

4.2 Data Collection and Analysis

Data collection was done using the questionnaires that were administered to the bank managers and credit managers involved in commercial banks in Meru. The got obtained from 36 banks. The findings of the study were analyzed using SPSS software and presented in frequency tables.

4.3 Reliability of the Test

According to Nunnally (1978), reliability of 0.70 and above is a sufficient measure of reliability; in this regard, the instruments were deemed suitable for data collection since they met the 0.7 minimum threshold.

4.4 Descriptive Statistics

The participants' information: age, education level, and the duration the employee has been in the commercial bank in Meru are presented below.

4.5 Distribution of Respondents by Age Group

The Table 4.1 gives the summary descriptive statistics in the age group of the respondents.

Table 4.1

Age group of the managers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-25	3	8.3	8.3	8.3
	26-35	12	33.3	33.3	41.7
	36-45	17	47.2	47.2	88.9
	46-55	4	11.1	11.1	100.0
	Total	36	100.0	100.0	

The table results 4.1, showed the results of age group. The findings established most of the majority respondents, (47.2%) fell between age group of 36-45, 33.3% were between 26-35, 11.1% were between 46-55 and 8.3% were between 0- 25.This result signifies that most of the respondents were of middle age.

4.6 Distribution of Respondents by Level of Education

The Table 4.2 gives the summary descriptive statistics of the level of education of the respondents.

Table 4.2

Level of Education for the managers.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	2	5.6	5.6	5.6
	Graduate level	23	63.9	63.9	69.4
	Postgraduate Level	11	30.6	30.6	100.0
	Total	36	100.0	100.0	

The findings reveal that most of the participants (63.9%) were graduates, 30.6% were between postgraduates and only 5.6% had diplomas. This result signifies that most of the respondents were graduates and postgraduates and only 2 had diplomas. Hence, the managers and credit managers working in the commercial banks were well educated.

4.7 Distribution of Respondents by Period Served in Credit Administration

The table 4.3 gives a summary of descriptive statistics of the period served in credit administration of the respondents.

Table 4.3

Period Served in Credit Administration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<3 years	8	22.2	22.2	22.2
	3-5 years	19	52.8	52.8	75.0
	6-8 years	1	2.8	2.8	77.8
	9-11 years	2	5.6	5.6	83.3
	>11 years	6	16.7	16.7	100.0
	Total	36	100.0	100.0	

The results in the table shows that majority of credit managers have only worked for 3-5 years (52.8%), others less than 3 years (22.2%), 16.75 have worked for more than 11 years which was a good number to give a better history of credit in banks.

4.8 Customers Information Sharing on Financial Performance

The analysis tried to determine whether the respondents agreed with different consumer information sharing claims about the commercial banks profitability in Meru. The outcomes are set out in table 4.4.

Table 4.4

One-Sample Statistics on customer information sharing

	N	Mean	Std. Deviation	Std. Error Mean
Borrower over-indebtness	36	1.2222	.48469	.08078
Risk Identification	36	1.1389	.35074	.05846
Non performing Loans	36	1.7778	3.49785	.58297
Good Credit Terms	36	1.1667	.44721	.07454
Loan Protofolio	36	1.2500	.64918	.10820
Loan Repayment Possibilities	36	1.2222	.48469	.08078
Credit Draw	36	1.1667	.37796	.06299
Descipline Device	36	1.1389	.35074	.05846
Customers categorization	36	1.1667	.44721	.07454
Lending Deisions	36	1.1944	.46718	.07786
Loan Application Review	36	1.2778	.45426	.07571
Credit Terms Decision	36	1.2500	.60356	.10059
Borrowers Propotions	36	1.4722	.77408	.12901

From Table 4.4 it was found that majority of the respondents believed that all factors contributing to the customer's information that affects financial performance of the banks.

4.9 Information Sharing on commercial banks financial performance

Table 4.5

Summary on customer information sharing

Model	R	R Square	Adjusted R Square	Std.Error of the Estimate
1	.880[a]	.774	.655	.23560

a. Predictors: (Constant), Borrowers Proportions, Loan Portfolio, Non-performing Loans, Credit Terms Decision, Loan Application Review, Loan Repayment Possibilities, Lending Decisions, Discipline Device, Risk Identification, Borrower over- indebtness, Credit Draw, Customers categorization

The value in the R column, r = .880 indicates the existence of a strong correlation between credits reference bureaus services and the financial outcomes of commercial banks. R^2 column indicates the proportion of the outcome variables that can be explained by the model. The result indicates that 77.4% of the variation in independent variables, that can be explained by financial performance of commercial banks. This indicated that most factors were significant while others were not significant. The R-squared (co-efficient of determination) was 77.4%, implying that the predictor variables accounts for 77.4% of the variation of financial performance. This is a good regression fit model.

Table 4.6

Coefficients[a] of customer information sharing.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std.Error	Beta		
1	(Constant)	.082	.179		.456	.653
	Borrower over-indebtness	-.263	.290	-.318	-.908	.373
	Risk Identification	.013	.295	.011	.043	.966
	Non performing Loans	.010	.023	.083	.408	.687
	Loan Protofolio	-.015	.081	-.024	-.183	.856
	Loan Repayment Possibilities	-.186	.240	-.225	-.773	.447
	Credit Draw	.813	.320	.766	2.545	.018
	Descipline Device	-.187	.204	-.164	-.917	.369
	Customers categorization	.519	.453	.578	1.145	.264
	Lending Deisions	.412	.150	.480	2.750	.011
	Loan Application Review	-.050	.149	-.057	-.335	.740
	Credit Terms Decision	-.138	.146	-.207	-.940	.357
	Borrowers Propotions	.035	.060	.067	.585	.564

a. Dependent Variable: Financial Performance

From table 4.6, all factors contributing to credit scoring were strongly agreed on by all respondents to have an effect on performance of banks.

4.10 Credit Scoring on Financial Performance

The researcher aim was to establish participants' agreement with various assertions about credit scoring on bank performance in Meru. The outcomes were summarized in below table.

Table 4.7

One-Sample Statistics on credit scoring

	N	Mean	Std. Deviation	Std. Error Mean
Instant Credit Decision	36	1.1667	.37796	.06299
Unbiased Credit Decision	36	1.1389	.35074	.05846
Reduction of Creit Mistakes	36	1.1944	.46718	.07786
Lending Opportunities	36	1.3611	.72320	.12053
Customer Credit Assessments	36	1.2500	.64918	.10820
Borrowere Honesty	36	1.2500	.43916	.07319
Loan Repayment Period	36	1.5556	.84327	.14055
Borrowers ability to pay	36	1.4167	.60356	.10059
Reduction of Paperwork	36	1.3611	.48714	.08119

All factors contributing to credit scoring were strongly agreed on by all respondents to have an effect on performance of banks.

4.11 Credit Scoring on Performance of Commercial Banks

Table 4.8

summary on credit scoring model

Model	R	R Square	Adjusted R Square	The estimate standard error
1	.722[a]	.521	.355	.47015

a. Predictors: (Constant), Reduction of Paperwork, Lending Opportunities, Borrowere Honesty, Loan Repayment Period, Borrowers ability to pay, Unbiased Credit Decision, Instant Credit Decision, Customer Credit Assessments, Reduction of Creit Mistakes

The value in the R column, r = .722 indicates the existence of a strong correlation between credit reference bureau services and the financial profitability of commercial banks. The R^2 column indicates the proportion of the outcome variables that can be explained by the model. The result indicates that 52.1% of the variation in independent variables, that can be explained by financial performance of commercial banks. This indicated that most factors were significant while others were not significant. The R-squared (co-efficient of determination) was 52.1%, implying that the predictor variables accounts for 52.1% of the variation of financial performance. This is a good regression fit model.

Table 4.9

Coefficients[a] of credit scoring

Model		Coefficients not standardized		Standardized Coefficients	t	Sig
		B	Std. Error	Beta		
1	(The Constant)	.227	.379		.600	.554
	Instant Credit Decision	.661	.336	.427	1.971	.060
	Unbiased Credit Decision	-.237	.377	-.142	-.630	.534
	Reduction of Creit Mistakes	-.130	.341	-.104	-.382	.706
	Lending Opportunities	.088	.198	.109	.448	.658
	Customer Credit Assessments	.305	.243	.339	1.257	.220
	Borrowere Honesty	.261	.246	.196	1.059	.299
	Loan Repayment Period	-.075	.109	-.108	-.689	.497
	Borrowers ability to pay	-.079	.180	-.082	-.440	.663
	Reduction of Paperwork	.118	.215	.098	.551	.587

a. Dependent Variable: Financial Performance

From table 4.9 most factors are not significant though they are positively contributing to financial performance. Unbiased credit decision, reduction of credit mistakes, loan repayment period and borrower's ability to pay have negative impacts on the financial performance. R-squared (co-efficient of determination) is 52.1% implying that the predictor variables account for variation of financial performance by 52.1%. This is a good regression fit model.

4.12 Market Research on Financial Performance

The aim was to assess whether the participants agreed with various assertions relating to market research on performance of banks found in Meru. The below table represent the results.

Table 4.10

One-Sample Statistics on market research

	N	Mean	Std. Deviation	Std. Error Mean
Customers Satisfaction	36	1.5833	.50000	.08333
New Product Development	36	1.6111	.59894	.09982
Business expansion	36	1.6944	.52478	.08746
Competition Encounter	36	1.6389	.54263	.09044
Introduction and Improvements of new Products	36	1.6389	.54263	.09044
Credit Protofolio	35	3.1714	7.14754	1.20816
Customers Relation	36	2.0278	.69636	.11606
Bank Expansion	36	2.0556	.79082	.13180

In table 4.10 respondents were neutral on the issue of credit portfolio as a factor of market research but majority strongly agreed and agreed that these factors of market research affects financial performance.

4.13 Market Research effects on Commercial Banks performance

Table 4.11

Model Summary on market research

=Model	R	R. Square	R square adjusted	The Estimated std Error
1	.756[a]	.571	.439	.42538

a. Predictors: (Constant), Bank Expansion, Credit Protofolio, Customers Satisfaction, Customers Relation, Introduction and Improvements of new Products, Business expansion, Competition Encounter, New Product Development.

Table 4.12

Coeficients[a] of market research.

Model=		Coefficients not standardised		Standardised Coeficients	t	Sig.
		B	Std. Error	Beta		
1	(The Constant)	.358	.378		.946	.353
	Customers Satisfaction	.121	.228	.107	.529	.601
	New Product Development	-.109	.254	-.115	-.430	.671

	Business expansion	.020	.277	.019	.072	.943
	Competition Encounter	.308	.210	.297	1.471	.153
	Introduction and Improvements of new Products	-.118	.176	-.114	-.673	.507
	Credit Protofolio	.005	.010	.065	.500	.621
	Customers Relation	.279	.120	.336	2.321	.028
	Bank Expansion	.255	.114	.360	2.245	.033

a. Dependent Variable: bank financial performance

From table 4.12 most factors are not significant though they are positively contributing to financial performance on market research. New product development and improvement of new products are market research factors contributing negatively to bank profitability in Meru County.

4.14 Information Capital on Financial Performance

The researcher aim was to establish the participants' agreement with various assertions relating to information capital on performance of banks. The table below shows the findings as per the results.

Table 4.2

One-Sample Statistics on information capital

	N	Mean	Std. Deviation	Std. Error Mean
Timely access of information	36	1.8611	.72320	.12053
making decisions	36	1.7778	.54043	.09007
Information Accuracy	36	2.0556	.67377	.11230
Credit Cost	36	3.5278	6.98769	1.16461
Decision Making	36	2.1667	.87831	.14639
Improvement on Everyday Opertions	36	2.2778	.81455	.13576
Competitive Advantage	36	1.9167	.50000	.08333

Table 4.13 shows that the respondents agreed on all factors contributing to information capital. Majority were neutral on the matters of credit cost while majority agreed that making decisions has much effects on Financial performance.

4.15 Information Capital on Commercial Banks performance.

The value in the R column, r = .677 indicates the existence of a strong correlation between credit reference bureau services and that of financial outcomes of commercial banks. The R^2 column indicates that proportion on the outcome variables that can be explained by the model. The result indicates that 45.9% of the variation in independent variables, that can be explained by financial performance of commercial banks. This indicated that most factors were significant while others were not significant. The R-

squared (co-efficient of determination) was 45.9%, implying that the predictor variables accounts for 45.9% of the variation of financial performance. This is a good regression fit model.

Table 4.3

Model Summary on information capital

Model	R	R. Square	Adjusted R Square	Stnd. Estimated error
1	0.677[a]	0.459	0.319	.44768

The Predictors (Constant), Competitive Advantage, Timely access of information, Improvement on Everyday Opertions, making decisions, Decision Making, Credit Cost, Information Accuracy

Table 4.4

Coefficients[a] of information capital.

.Model.		Unstadardised Coeficient		Stadardised Coeficients	t	Sig
		B	Stnd. Error	=Beta		
	(The Constant)	.907	.445		2.040	.051
	Timely access of information	-.250	.142	-.338	-1.757	.090

	making decisions	.108	.194	.109	.558	.581
	Information Accuracy	.401	.208	.491	1.924	.065
	Credit Cost	.018	.014	.231	1.240	.225
	Decision Making	.081	.109	.132	.750	.460
	Improvement on Everyday Opertions	.031	.113	.045	.278	.783
	Competitive Advantage	.128	.164	.120	.784	.440

a. Dependent Variable: Financial Performance

Table 4.15, It was found that the all the factors were significant except for decision making and everyday improvement. All the factors were positively affecting the financial performance except for the timely access of the information. R-squared is 45.9% implying that the predictor variables account for the variation of financial performance by 45.9%.

4.16 Effect of variables on commercial banks financial performance

Table 4.5

Model Summary of the variables.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.778[a]	.605	.554	.26798

a. Predictors:(constant), Customers Information, Credit Scoring, Market Research, Information Capital

From table 4.16 R-squared is 60.5% implying that the predictor variables account for the variation of financial performance by 60.5%. Therefore, the regression model has a good fit.

Table 4.6

Coefficients[a] of the variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.295	.169		1.744	.091
	Customers Information	-.080	.272	-.096	-.293	.042
	Credit Scoring	.266	.286	.232	.928	.030
	Market Research	-.013	.023	-.113	-.576	.569
	Information Capital	.614	.319	.684	1.928	.063

a. Dependent Variable: Financial Performance

$H0_1$ There is no significance established relationship between cutomer's sharing of information and financial performance of commercial banks in Meru-County.

Customer information had a confidence of -0.080 and a significance value of 0.042. At 95%, the null hypothesis is rejected and hence customer information had a significant relationship on Kenya commercial banks found in meru county.

$H0_2$ No established significance relationship between credit sharing and financial performance of commercial banks in Meru-County.

Credit scoring had a confidence of 0.266 and a significance value of 0.030. At 95%, we reject the null hypothesis and hence credit scoring had significant effect on financial performance of commercial banks in Meru.

$H0_3$ There is no significant relationship between market researh and financial performance of commercial banks in Meru-County.

Market research had a confidence of -0.013 and a significance value of 0.569. At 95%, so we fail to reject the null hypothesis and hence market research had no significant effect on financial performance of commercial banks in Meru.

$H0_4$ There is no significant relationship between reliability of capital database for financial performance and financial performance of commercial banks in Meru-County.

Reliability of capital database for financial performance had a confidence of 0.614 and a significance value of 0.063. At 95%, so we fail to reject the null hypothesis and hence Reliability of capital database for financial performance had no significant effect on financial performance of commercial banks in Meru County.

4.17 Respondents Distribution by Age

The analysis established that 47.2% of the respondents were in the age group of 36-45, 33.3% were between 26-35, 11.1% were between 46-55 and 8.3% were between 0- 25.

4.18 Respondents Distribution by Education Level

The findings revealed that 63.9% of the participants were graduates, 30.6% were between postgraduates and only 5.6% had diplomas.

4.19 Respondents Distribution by Period Served in Credit Administration

The results showed that majority of credit managers have only worked for 3-5 years (52.8%), others less than 3 years (22.2%), while 16.75% had worked for more than 11 years which was a good number to give a better history of credit in banks.

4.20 Information sharing on commercial bank's financial performance.

The study sought to the effect of customer's information sharing on financial performance of commercial banks in Meru County. The analysis results established that a repressor value of r = .880 was obtained in relations to customer's information sharing and commercial banks profitability The R=.880 was an indication that there exists a strong correlation between credits referencing bureau services and the financial profitability of money institutions, in Meru County. This R2 column indicated the proportion of the outcome variables that can be explained by the model. The result indicated that 77.4% of the variation in independent variables, could be explained by financial performance of commercial banks. This indicated that most factors were significant while others were not significant. The R-squared (co-efficient of determination) was 77.4%, implying that the predictor variables accounted for 77.4% of the variation of financial performance. This is a good regression fit model.

4.21 Credit Scoring effects on commercial bank's financial performance.

The researcher wanted to examine the relationship of credit scoring on financial outcomes of commercial banks in Meru County, using a regression model. A regression output of R = .722 was obtained between credit scoring on financial performance. The R-Value indicated the existence of a strong correlation between credit reference bureau services and that of financial profitability of commercial

banks. The R2 column indicated the proportion of the outcome variables that could be explained by the model. The R2 result indicated that 52.1% of the variation in independent variables, that can be explained by financial performance of commercial banks. This indicated that most factors were significant while others were not significant. The R-squared (co-efficient of determination) was 52.1%, implying that the predictor variables accounted for 52.1% of the variation of financial performance. Thus it could be concluded that the regression was a good regression fit model. Analysis based on credit decision, reduction of credit mistakes, loan repayment period and borrower's ability to pay; projected negative impacts on the financial performance. R-squared (co-efficient of determination) at 52.1% implies that the predictor variables accounted for variation of financial performance by 52.1%.

4.22 Market Research on commercial bank's financial performance.

The researcher sought to examine the relationship of market research on financial performance of commercial banks in Meru County. The regression model projected a regression R-value of r = .756. The R value indicated the existence of a strong correlation between credit reference bureau services and the financial performance of commercial banks. The R2 column indicated the proportion of the outcome variables that the model can explain. The result indicated that 57.1% of the variation in independent variables, that can be explained by financial performance of commercial banks. This indicated that most factors were significant while others were not significant. The R-squared (co-efficient of determination) value of 57.1%, projected that the predictor variables accounts for 57.1% of the variation of financial performance, in respect to the regression model. Coefficient correlation analysis

established that most factors were not significant though they were positively contributing to financial performance on market research. New product development and improvement of new products are market research factors which showed negative contribution to bank profitability in Meru County.

4.23 Information Capital on commercial banks financial performance

The study also sought to examine the reliability of capital database for financial performance of commercial banks in Meru County. The regression model projected a regression value of r =.677 indicating the existence of a strong correlation between credits referencing bureau services with the financial profitability of commercial banks. That R2 value column indicated the proportion of the outcome variables that can be explained by the model. The result showed that 45.9% of the variation in independent variables, that were explainable using financial performance of commercial banks. It was also found It was found that the all the factors were significant except for decision making and everyday improvement. All the factors were positively affecting the financial performance except for the timely access of the information. The R-squared (co-efficient of determination) was 45.9%, implying that the predictor variables accounts for 45.9% of the variation of financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, conclusion and recommendations for further research. The responses arrived at were based on the objectives of study. The research explored the relationship between credit reference bureau services and financial performance of the commercial banks in Meru**.** This study investigated the effect of customer's information, credit scoring, market research and information capital on banks' financial outcome in Meru.

5.2 Summary of the Findings

Descriptive statistics analysis showed that respondents details on the age, education level, and the duration the respondents has been working in the bank. It was established that the majority of the employees (47.2%) were in the age group of 36-45. Majority of the respondents were graduates and the majority of credit managers have only worked for 3-5 years (52.8%).

From the linear regression model, it was found that; Customers Information had meaningful impact on banks profitability in Meru, Market Research had no meaningful impact on banks profitability in Meru and reliability of capital database for financial performance had no meaningful impact on banks profitability in Meru.

5.3 Information Sharing on Financial Performance of Commercial Banks.

In regard to the first objective, the study sought to the effect of information sharing on customers and financial profitability of registered banks in Meru County. A repressor value of r = .880 was obtained in relations between customer's information sharing on financial performance of commercial banks. The R=.880 was an indication that there exists a strong correlation between credit reference bureau services and the financial performance of commercial banks, in Meru County. The study concluded that the regression model was a good fit model. In regard to the correlation coefficients, it was established that customer information had a confidence of -0.080 and a significance value of 0.042. Hence, at 95%, customer information had significant effect on financial performance of commercial banks in Meru. Therefore the null hypothesis that there is no significant relationship between cutomer's information sharing and financial performance of commercial banks in Meru-County was rejected.

5.4 Credit Scoring On Financial Performance of Commercial Banks.

The study also sought to examine the effect of credit scoring on financial performance of commercial banks in Meru County, using a regression model. A regression output of R = .722 was obtained between credit scoring on financial performance. The R-Value indicated the existence of a strong correlation between credit reference bureau services and the financial performance of commercial banks. Thus, it could be established that the regressor was a good regression fit model. Analysis based on credit decision, reduction of credit mistakes, loan repayment period and borrower's ability to pay; projected negative impacts on the financial performance. In regard to

Correlation coefficient tests, the study concluded that credit scoring had a confidence of 0.266 and a significance value of 0.030, at 95% confidence. Hence credit scoring had significant effect on financial performance of commercial banks in Meru. Therefore the null hypothesis that there is no significant relationship between credit sharing and financial performance of commercial banks in Meru-County was rejected.

5.5 Market Research on Financial Performance of Commercial Banks

Considering the effect of market research, the study sought examine the effect of market research on financial performance of commercial banks in Meru County. The regression model projected a recession R-value of r = .756. The R value indicated the existence of a strong correlation between credits refference bureau services with the financial performance of commercial banks. The coefficient correlation analysis suggested that most factors were not noteworthy though they were positively contributing to financial performance on market research. New product development and improvement of new products are market research factors which showed negative contribution to bank profitability in Meru County. In regard to Correlation coefficients, it was found that market research had a confidence of -0.013 and a significance value of 0.569, at 95%confidence. Hence market research had had no significant effect on financial performance of commercial banks in Meru County. Therefore the null hypothesis showing that no significant relationship between market researh and outcome performance of commercial banks in Meru-County was retained.

5.6 Information Capital on Financial Performance of Commercial Banks

Finally, the study also sought to examine the reliability of capital database for financial performance of commercial banks in Meru County. The regression model projected a regression value of r =.677 indicating the existence of a strong correlation between credits referencing bureaus services and that of the financial outcomes of commercial banks. It was also found It was found that the all the factors were significant except for decision making and everyday improvement. All the factors were positively affecting the financial performance except for the timely access of the information. The R^2 (co-efficient of determination) was 45.9%, implying that the predictor variables accounts for 45.9% of the variation of financial performance. Coefficient correlation analysis found that reliability of capital database for financial performance had a confidence of 0.614 and a significance value of 0.063, at 95% confidence. Thus null hypothesis is that no found relationship between reliability on capital database for financial performance and financial performance of commercial banks in Meru-County, was retained.

5.7 Conclusions

The first aim of the research was set to establish the effect of customer's sharing of information on performance of lending banks in Meru County. The results revealed that customer's information sharing has meaningful effect on banks financial outcome.

The second objective of the study was to determine the effect of credit scoring on performance of commercial banks in Meru County. Results revealed that credit scoring has meaningful effect on banks financial outcome.

The third objective of the study was to determine the effect of market research on performance of commercial banks in Meru County. Results showed market research has no meaningful effect on banks financial outcome.

The fourth objective of the study was to examine the reliability of capital database for financial performance of commercial banks in Meru County. Findings on the information capital showed that it has no meaningful effect on banks financial outcome.

5.8 Recommendations

The study recommends that for commercial banks to increase the performance of their financial status, they need to improve on the way of acquiring market research and capital information.

The linear regression model was more suitable for the study of the profitability of commercial banks as it considers both the independent and dependent variable.

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APPENDICIES.

LETTER OF INTRODUCTION

Kenya Methodist University

Faculty of Business Administration

P.O.Box 267-60200

Meru.

Dear Respondent,

RE: REQUEST TO GATHER EDUCATION DATA

This is to introduce you to the academic based research study being conducted by Samwel Kaugi. The aim of the study is to document the relationship between credit reference bureau services and financial performance of the commercial banks in Kenya. Enclosed please find a detailed self-explanatory questionnaire for you to complete. Upon the completion of the study, copy of the report regarding the research will be availed to senior management for information purposes. Kindly complete the questionnaire as carefully and as truthfully as possible.

Once again I assure you that the information you will provide will be treated with strict confidence.

I thank you very much and I look forward to your kind cooperation and support.

Yours sincerely,

SAMWEL KAUGI

BANK EMPLOYEE'S QUESTIONNAIRE

The purpose of this study is to collect data on the relationship between credit reference bureau services and the financial performance of commercial banks in Meru County. Thank you for agreeing to complete this anonymous survey which should take less than 15 minutes.

Participant's Consent

I have read the details about the purpose of this study. By submitting the completed questionnaire to the researcher, I give my consent for the outcomes to be used in the research. I am aware that this survey is anonymous and does not contain any information which may personally identify me.

I know that I may change my mind and withdraw my consent at any time; and I acknowledge that once my questionnaire has been submitted it may not be possible to withdraw my data.

I appreciate that the scholar will treat all information I provide confidential and will not release it to a third party unless if required so by the law.

Instructions

- Writing your name on the questionnaire is optional.
- Answer all questions to the best of your ability and knowledge.
- Indicate with a tick in the space provided your choice of response.

Section A: General Information

1. Tick your age group

a) Up to 25 Years ☐

b) 26 – 35 Years ☐

c) 36 – 45 Years ☐

d) 46 – 55 Years ☐

e) Above 55 Years ☐

2. What is your level of Education?

a) Certificate level ☐

b) Diploma level ☐

c) Graduate level ☐

d) Post graduate level ☐

3. How long have you served in the credit administration unit in this bank?

a. Less than 3 years ☐

b. 3 to 5 years ☐

c. 6 to 8 years ☐

d. 9 to 11 years ☐

e. More than 10 years ☐

Section B: Effect of Customer's Information Sharing on Financial Performance of Commercial Banks

4. Rate the following items in relation to customer information sharing. (*Where; 5 = Strongly disagree, 4 = Disagree, 3 = Neutral, 2 = Agree, 1 = Strongly agree*)

S/N	Item	1	2	3	4	5
1	Customer information sharing reduces borrower over-indebtedness?					
2	Customer information sharing enhances risk identification?					
3	Customer information sharing helps to reduce non-performing loans?					
4	Customer information sharing enhances good credit terms?					
5	Customer information sharing enables your bank to increase your loan portfolio?					
6	Customer information sharing enhances accurate prediction on loan repayment possibilities?					
7	Customer information sharing eliminates the possibility of customers to draw credit simultaneously from different banks without being realized?					
8	Information sharing has been adopted as a discipline device to the borrowers?					
9	Information sharing enables your bank to categorize the customers in terms of lending percentages?					
10	Your bank always utilizes CRB reports to make lending decisions?					

11	Due to CRB report client loan application is reviewed faster?					
12	Information sharing enables your bank to decide on credit terms to the borrowers?					
13	Customer information sharing has increased the proportion of borrowers seeking credit with no tangible collateral?					

5. In your opinion, the customer information sharing has influenced financial performance of your bank?
    a. Strongly agree [ ]
    b. Agree [ ]
    c. Undecided [ ]
    d. Disagree [ ]
    e. Strongly disagree [ ]

Section C: Effect Credit Scoring on Financial Performance of Commercial Banks

6. Rate the following items in relation to credit scoring (*Where; 5 = Strongly disagree, 4 = Disagree, 3 = Neutral, 2 = Agree, 1 = Strongly agree*)

S/N	Item	1	2	3	4	5

1	Credit scoring enables your bank to make instant credit decisions?					
2	Credit scoring enhances your bank to make unbiased credit decisions?					
3	Use of credit scoring helps to reduce credit mistakes?					
4	The credit scoring helps to increase lending opportunities in your bank?					
5	Your bank has adopted credit scoring as a way of assessing customer credit?					
6	Credit scoring helps your bank to measure borrower's honesty?					
7	Credit scoring helps to determine borrower’s loan repayment period?					
8	Credit scoring helps your bank in measuring the borrower's ability to pay?					
9	Use of credit scoring has reduced paper work in credit assessment process?					

7. In your opinion, credit scoring has influence in financial performance of your bank?

    a. Strongly agree [ ]

b. Agree [ ]

c. Undecided [ ]

d. Disagree [ ]

e. Strongly disagree [ ]

Section D: Effect Market Research on Financial Performance of Commercial Banks

8. Rate the following items in relation to market research by CRB. (*Where; 5 = Strongly disagree, 4 = Disagree, 3 = Neutral, 2 = Agree, 1 = Strongly agree*)

S/N	Item	1	2	3	4	5
1	Market research by CRB enhances more understanding about customers' satisfaction in your bank?					
2	CRB market research enhances new product development in your bank?					
3	Through CRB market research your bank has expanded its business?					
4	The output of market research by CRB enables your bank to plan how to counter competition?					
5	Through market research by CRB, your bank is able to improve the existing products and introduce new ones?					
6	Through the output of market research by CRB, your bank has increased the credit portfolio?					

7	The output of market research by CRB enhances your bank to improve in customer relations?					
8	The output of market research by CRB has enabled your bank to open new branches?					

9. CRB market research has influenced your bank financial performance?
    a. Strongly agree [ ]
    b. Agree [ ]
    c. Undecided [ ]
    d. Disagree [ ]
    e. Strongly disagree [ ]

Section E: Influence of Information Capital on Performance of Commercial Banks

10. Rate the following items in relation to information capital. (*Where; 5 = Strongly disagree, 4 = Disagree, 3 = Neutral, 2 = Agree, 1 = Strongly agree*)

S/N	Item	1	2	3	4	5
1	Utilization of information capital, enhances timely access of information in your bank?					
2	Use of information capital helps your bank to make right decisions at the right time?					
3	Utilization of information capital enhances information accuracy in your bank?					

4	Use of information capital lowers credit costs in your bank?					
5	Use of information capital has a positive effects on decision making in your bank?					
6	Use of information capital helps in improving everyday operations in your bank?					
7	Use of information capital, has enabled your bank to achieve competitive advantage?					

11. In your opinion, information capital has influence on financial performance of your bank?

    a. Strongly agree [ ]
    b. Agree [ ]
    c. Undecided [ ]
    d. Disagree [ ]
    e. Strongly disagree [ ]

Section F: Financial Performance of Commercial Banks

Leverage Details

12. Please provide the following statistics as at March 2018 financial statements

	2015	2016	2017
	Kshs	Kshs	Kshs
Total Liabilities			
Total Assets			

Liquidity Details

13. Please provide the following statistics as at March 2018 financial statements

	2015	2016	2017
	Kshs	Kshs	Kshs
Total current liabilities			
Total current assets			

Profitability Details

14. Please provide the following statistics as at March 2018 financial statements

	2015	2016	2017
	Kshs	Kshs	Kshs
Net Profit			
Total Equity			

List of Commercial Banks in Meru County

1	Commercial Bank of Africa Ltd
2	Equity Bank Ltd
3	Co-operative Bank of Kenya Ltd
4	Kenya Commercial Bank Ltd
5	Barclays Bank of Kenya Ltd
6	Standard Chartered Bank Ltd
7	Family Bank Ltd
8	Diamond Trust Bank Kenya Ltd
9	National Bank of Kenya Ltd
10	CFC Stanbic Bank Ltd
11	I & M Bank Ltd
12	NIC Bank Ltd
13	Housing Finance Company of Kenya Ltd
14	Bank of Africa Kenya Ltd
15	Ecobank Ltd
16	Sidian Bank Ltd
17	Consolidated Bank of Kenya Ltd
18	African Banking Co-operation Ltd

Source: Researcher (2018)