

# **ADOPTION OF CREDIT REFERENCE BUREAUS' REPORTS ON THE PERFORMANCE OF SACCOS IN KENYA: A CASE STUDY OF STIMA SACCO**

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## **ABSTRACT**

Due to the increased changes in the business world in terms of global competition, technology and generally business trends, for an organization to survive the need to assess factors affecting organization performance cannot be overlooked. The same applies to management of financial institutions like Sacco's portfolio. Good credit management provide Sacco's' with a reasonable and adequate return on loans and capital employed primarily through improvement in operations efficiency this generates adequate internal resources to finance the institution's growth. This study was conducted through a survey of Stima Sacco The main objective of the study was to assess the effect of Credit Reference Bureau on performance of Saccos in Kenya. The study used primary data obtained through the questionnaires provided to employees and management of Stima Sacco. Chapter one gave the background information about Credit Reference Bureaus, problem statement, objectives of the study, research questions to guide the researchers and justification of the research. Chapter two entailed study done in the past on Credit Reference Bureaus including its effects on various factors like on non-performing loans, cost of lending, appraisal methods and credit accessibility. It also included conceptual framework which indicates the variables relationship. It highlights the theories guiding the study which include the moral hazard theory, credit rationing theory, credit rationing theory and adverse selection theory. Chapter three gave a

preamble to the research design and methodology to be adopted, the research design, the target population was all the 124 employees at Stima Sacco. Data was collected using questionnaire method and analyzed using descriptive statistics. The study established that CRB ensures objectivity in loan write-offs to a very great extent. The study established that CRB affects the interest rate charged and the insurance costs related to lending by SACCOS. The study concludes that CRB reduces over reliance on collateral for loan appraisal and emphasizes cash flow and liquidity as a method of appraisal to a very great extent. The study concludes that CRB increases efficiency ratios, Use of CRB results to better liquidity position, CRBS increases the number of repeat customers hence increasing profitability and that CRB enhances repayment of loans written off loans. Therefore, this study recommends that Stima SACCO minimizes its involvement in non-performing loans. This can be achieved by carry out thorough background studies on loan applicants to ascertain that they will put good use of the funds. Collateral is what has been keeping very many people out of loan applications in SACCOS. Therefore, through CRB, the reliance on collateral is reduced and therefore loan uptake will increase. The study recommends that SACCOS liaise with CRB to ensure that the collateral in SACCOS becomes a thing of the past.

**Key Words:** *credit reference bureaus', performance, SACCOS, Kenya, Stima SACCO*

## **INTRODUCTION**

A main task of Saccos is to offer loans, and the main source of risk is credit risk, that is, the uncertainty associated with borrowers' repayment of these loans (Tiffany et al, 2010). Lending is a challenging proposition in any setting particularly in the developing world, where loan enforcement is weak, where information about the ability and willingness to repay of applicants is not readily available and where many of the prospective borrowers are from a poor household; many of whom have never borrowed before and cannot pledge collateral to guarantee repayment (Conning & Udry, 2007). Lending in Kenya is a direct showcase of the prevailing factors in developing and transitional economies.

The Credit Reference Bureau 2008 became effective in February 2009. The Regulations require licensed Saccos to share information on Non-Performing Loans (NPLs) through a Credit Reference Bureau (CRB) licensed by CBK. The role of licensed CRBs is to collect, collate and process data received from approved sources of information and generate credit reports to be used by lenders (CBK, 2010). Credit reporting is a system which enables financial institutions to share information about how borrowers repay their loans (CBK, 2010) where borrowers fail to repay their loans and default the financial institutions bear the cost. In order to remain in business financial institutions are forced to pass on the cost of defaults to other customers through increased interest rates and other fees. This means that the good borrowers are paying for the bad which is not an ideal situation. Credit reporting allows financial institutions to better distinguish between good and bad borrowers. Someone who has failed to pay their loan at one financial institution will not be able to walk to another institution to get another loan. Over time better information on potential borrowers means that it will be both cheaper and easier to obtain loans (CBK, 2010). When a customer has defaulted on a loan, then the financial institution must share this with all other financial institutions. This is called negative information. In Kenya, the law now requires that Saccos have to share negative information about their customers with other financial institutions. Any Sacco that provides such information is also free to request information from a credit reference bureau on a potential borrower (CBK, 2010).

### **Global Perspective**

In the United States a Credit Reference Agency or Credit Bureau is a Credit Reporting Agency is an organization that collects and collates personal financial data on individuals, from financial institutions with which they have a relationship with. The data is aggregated and the resulting information in the form of credit reports is made available on request to contributing companies for the purposes of credit assessment and rating. Standard and Poor, one of the world's leading credit rating agencies, defines credit rating as a current opinion of the creditworthiness of an obligor with respect to a specific financial obligation. Credit report is an accumulation of information about how you pay your bills and repays loans, how much credit you have available, what your monthly debts are, and other types of information that can help a potential lender decide whether you are a good credit risk or a bad credit risk (Dankwah, 2012).

The report itself does not say whether you are a good or bad credit risk; it provides lenders with the data, which allows them to take the decision themselves. Lenders make their decisions based on their risk-reward trade-off. Having all the needed information helps the lenders ensure that they are making the right decision with regards to the assessment of the borrower's creditworthiness (Dankwah, 2012). Basically, the credit report would reflect the reputation collateral of that customer in some sense. The logic underlying the existence of credit reference bureau is to solve the problem of the informative asymmetry between lenders and borrowers regarding the creditworthiness of the latter. Issuers with lower credit ratings pay higher interest rates embodying larger risk premiums than higher rated issuers (Dankwah, 2012).

Recent research based on information from several countries across the globe. For example, Singapore, Iraq, China, Romania, Vietnam, Cambodia, Brazil and Hong Kong, show that the existence of credit registries is associated with increased lending volume, growth of consumer lending, improved access to financing and a more stable banking sector (Larrain, Reisen & von Maltzan, 2011; Reisen & von Maltzan, 2011). In the U.S., credit bureaus collect and collate personal information, financial data, and alternative data on individuals from a variety of sources called data furnishers with which the bureaus have a relationship (Dankwah, 2012).

Data furnishers are typically creditors, lenders, utilities, debt collection agencies and the courts, for instance public records that a consumer has had a relationship or experience with. Data furnishers report their payment experience with the consumer to the credit bureaus. The data provided by the furnishers as well as collected by the bureaus are then aggregated into the credit bureau's data repository or files. The resulting information is made available on request to customers of the credit bureau for the purposes of credit assessment, credit scoring or for other purposes such as employment consideration or leasing an apartment (Dankwah, 2012).

### **Regional Perspective**

Dankwah (2012) observes that organizations secure credit funds mostly from the Banks or Financial institutions in Ghana. Again, a little over half of all the consumer respondents had applied for loans or overdraft facility from their Banks. Majority of consumers in had stayed away from loans because of they did not have the needed collateral to cover their requested amount, higher interest rates and other personal reasons. Other also stayed away because they simply did not were not interested. In spite low numbers of loan applicant in the financial industry in Ghana, there is a higher number of unsuccessful loan applications. The reasons ascribed to the high unsuccessful loan application rate have been no security or collateral to pledge, too small equity base especially for organizations. Also, the lack experience board and management was one of the reasons organizational respondents were denied credit facility. Lastly, most of the respondents also said no sufficient deposits were enough justification by the bank of financial institution to deny them access to credit.

Most people in Ghana consumers do not know about the existence of Credit Reference Bureaus (CRBs). The findings of Dankwah's study showed 73% of the respondents did not know about the existence of the credit reference bureaus. 27% of the respondents said they are aware of the existence of the Credit Reference Agencies or Bureaus (CRBs). This could be blamed on the fact the CRBs are fairly new in the Ghanaian financial industry (Dankwah, 2012).

### **Local Perspective**

The central bank of Kenya has licensed two credit reference bureaus; Metropol CRB and CRB Africa ltd to offer banking sector credit information sharing services in Kenya. One of the key indicators of the success of credit market is the proper and effective credit reference bureaus which includes the availability of quality information, affordable credit facilities, and quality of assets; measured as a proportion of net non-performing loans to gross loans, in this case, stock of gross non-performing loans declining, leading to decline on provision for bad debts and hence profitability. Credit Reference Bureaus are a typical response to information asymmetry problems between lenders and borrowers. A Credit Reference Bureau is an institution that is either publicly or privately owned entity that consolidates information on borrowers from lenders.

In turn, more Kenyans will be able to access credit from institutions and the building of information capital should also serve as a key substitute to physical collateral (CBK 2010). Credit Reference bureaus complement the central role played by banks and other financial institutions in extending financial services within an economy. CRBs help lenders make faster and more accurate credit decisions. CRBs collect, manage and disseminate customer information to lenders in the form of credit reports. Credit reports help lenders to decide whether to extend an applicant a loan, credit card, overdraft facility or extend any other product, which is dependent on customer's ability to repay at a determined cost. Credit bureaus assist in making credit accessible to more people, and enabling lenders and businesses reduce risk and fraud. Sharing of information between financial institutions in respect of customer credit behavior, therefore, has a positive economic impact. The Credit Reference Bureau, 2008 provides that the information to be shared among the banks is any customer information concerning their customers' non-performing loans (NPLs) as well any other adverse information relating to a customer (negative information

### **STATEMENT OF THE PROBLEM**

The Kenyan financial sector was in the 80's and 90's saddled with a momentous Non-Performing Loans portfolio (Dankwah, 2012). Between 1998 and 2000, NPLs in Kenyan banks rose from 57,000 million to 90,000 million (Muasya, 2008). This led to the collapse of some banks. One of the catalysts in this scenario was Serial defaulters, who borrowed from various banks with no intention of repaying the loans (Dankwah, 2012). Defaulters thrived in the information asymmetry environment that prevailed due to lack of a credit information sharing mechanism and escalated non-performing loans.

Non-performing loans have a direct effect in increasing the cost of lending and high collateral requirements (Gaitho, 2013). Saccos have recently faced many challenges among them misappropriation of funds and high default rates (Sigei, 2010). This can be attributed to customers who were taking advantage of the information asymmetry in Saccos since Saccos were not sharing their credit information like banks (Sigei, 2010).

In Kenya there are 215 SACCO's registered with SASRA. Out of these only 50 are registered with CRB, (CRB Africa, 2014).SACCOS have just recently embraced the concept of credit rating and credit reference bureau. CRBS have mostly been originated by banks and the result is that the serial defaulters run to SACCOS and other Micro finance institutions where they can borrow without disclosing their credit history. As a result this causes the SACCOs to have bad loan portfolios thus reducing their efficiency and increasing default. The issuance of credit reference bureau licenses by the CBK has heightened general interest in the credit rating industry in the country. According to the February 2011 CBK monthly review, the level of non-performing loans decreased compared to a similar period in 2010.

Even though many conducted studies outside the jurisdiction of Africa suggest that the existence of CRB leads to a bigger credit market, lower default and interest rates, improved profitability and increased competitiveness within the industry, none of the studies have critically examined the relevance of the CRBs and its effect on Saccos performance in Kenya. Many of the studies focus on banks in Kenya but a significant gap has been in Sacco's e.g. research done in KCB by Nganga (2011) carried on stakeholder perception of credit reference bureau service in Kenya credit market and another study by Gaitho (2010) on the role of credit reference bureau on credit access, a survey of commercial banks in Kenya. This study therefore filled this noticeable gap by examining the effect of CRB on the performance of Stima SACCOS.

## **OBJECTIVES OF THE STUDY**

1. To identify the effect of non-performing loans on the performance of Stima SACCO
2. To find out the effect of cost of lending on the performance of Stima SACCO
3. To establish the effect of appraisal method employed on the performance of Stima SACCO
4. To determine the effect of credit accessibility on the performance of Stima SACCO

## **LITERATURE REVIEW**

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

The first countries to establish public credit registries were in Western Europe – Germany in 1934 followed by France in 1946. By the mid-1960s, three other European countries – Italy, Spain and Belgium – had also established PCRs. Early adopters included the former French colonies in Western Africa which formed the West African Monetary Union in 1962 and immediately established public credit reporting following the French example. Also several Middle Eastern and North African nations adopted PCRs in the 1950s and 1960s (Egypt, 1957; Tunisia, 1958; Morocco, 1966; Jordan, 1966; and Turkey, 1951). The PCRs in Argentina and Brazil were established in the 1990s in response to financial crises also with the primary goal of supporting banking supervision. Over time, though, these registries were transformed to also enhance the information to private financial institutions.

Throughout the developing world, the growing availability of consumer credit and the growing competition between Financial institutions have made the necessity of credit information sharing all the more apparent. However, the extent and efficiency of information sharing mechanisms vary greatly between countries and continents. Africa remains the region of the world with the least developed credit information systems, yet the exploding financial sectors in many African countries have sparked interest in the feasibility of the creation of credit bureaus to help manage borrower risk under heightened competition. Latin America arguably has the most extensive coverage of credit information systems among developing regions, with credit information sharing recently being extended even into the microfinance sector. A pertinent example is Bolivia. Prior to 1999 Bolivian law forbade the existence of private credit bureaus (Campion, 2014), believing credit data was too sensitive and important a topic to entrust to the private sector.

The operations, establishment, licensing, governance and management of CRBs in Kenya, is provided through the banking (Credit Reference Bureau) regulations, 2008. Establishment and licensing of credit reference bureaus in Kenya, is through an entity incorporated as a limited company under the companies Act and application for a license is made through the central bank of Kenya. A bureau licensed may engage activities such as: store and update the customer information maintain database and generate reports and assess the creditworthiness of a customer. In addition; may carry out market and statistical research and sell to institutions specialized literature.

The Central Bank of Kenya has been mandated by law to license and supervise the operations of such bureaus; many borrowers make a lot of effort to repay their loans, but do not get rewarded for it because this good repayment history is not available to the bank that they approach for new loans. It involves credit reports; in this case a report is generated by the Credit Reference Bureau, containing detailed information on a person's credit history, including information on their identity, credit accounts and loans, bankruptcies and late payments, and recent enquiries. It can be obtained by prospective lenders only when they have permissible reason as defined in law, to determine his or her creditworthiness. Credit reporting allows banks to better distinguish between good and bad borrowers. Someone who has failed to pay their loan at one bank will not be able to walk to another bank to get another

loan without the banks knowing about it. Over time better information on potential borrowers should mean that it will be both cheaper and easier to obtain loans.

These credit reports provide a credit score that is unique to a customer's character. This credit score is a measure of credit risk calculated from a credit report using a standardized formula. A positive score is characterized by frequently paid bills; lack of defaults on outstanding balances; maintaining steady employment; On the other hand, a negative credit score is characterized by late payments; bankruptcy; fraud charges; liens or foreclosures; loss of employment. It is worth noting that sharing of negative credit information does not amount to blacklisting. However, such information is expected to be taken into account by banks while assessing applications for loans and other bank facilities (Dankwah, 2012).

### **Credit reference bureaus and non-performing loans in SACCOs**

The magnitude of non-performing loans is a key element in the initiation and progression of financial and banking crises (Tiffany & Greenidge, 2010). The loan portfolio at risk is defined as the value of the outstanding principal of all loans in arrears, expressed as a percentage of the total loan portfolio currently outstanding. Portfolio at Risk (PAR) is a standard international measure of portfolio quality that measures the portion of a portfolio which is deemed at risk because payments are overdue. For example; PAR 30 means the portion of the portfolio whose payments are more than 30 days past due. PAR 30 above 5 or 10% is a sign of trouble in microfinance. High delinquency makes financial sustainable impossible for an institution. Portfolio at risk rates measure the outstanding balance of loans that are not being paid on time against the outstanding balance of total loans (Brown, 2013). McIntosh and Wydick (2004) conclude that credit information systems first create a screening effect that improves risk assessment of loan applicants, thereby raising portfolio quality, which in turn reduces rates of arrears.

Grosvenor et al (2010) observed that, the current global financial crisis, which began in the United States, is attributed to the August 2007 collapse of the sub-prime mortgage market and that commercial banks with greater risk appetite and that are more willing to make loans with a higher probability of default, tend to record higher losses Further, that the level of NPLs in the US started to increase substantially in early 2013 in all sectors. NPLs are therefore a measure of the stability of the banking system, and thereby the financial stability of a country. From the above, it is clear to see and appreciate why the ability to forecast, monitor and manage non-performing loans is important.

The ratio of NPLs to assets is an indicator of a bank's asset quality and financial soundness. In the case of the current financial turmoil, a high ratio may indicate that banks are not healthy since they have significant exposure to the origins of the problem. According to Ng'etich (2014), controlling NPAs is very important for both the performance of an individual bank and the economy's financial environment. Due to the nature of their business, commercial banks expose themselves to the risks of default from borrowers. Prudent credit risk assessment and creation of adequate provisions for bad and doubtful debts can cushion the banks risk.

### **Credit reference bureaus and the cost of lending by SACCOs**

A credit score is a numerical expression based on a statistical analysis of a person's credit files, to represent the creditworthiness of that person. The term "credit reputation" can either be used synonymous to credit history or to credit score. A credit score is a numerical expression based on a statistical analysis of a person's credit files, to represent the creditworthiness of that person. A credit score is primarily based on credit report information typically sourced from credit bureaus (Sinclair, 2009).

The factors which may influence a person's credit rating are: ability to pay a loan, interest and amount of credit used, saving patterns, spending patterns and debt. Given the large number of consumer borrowers, these credit scores tend to be mechanistic. Credit bureaus apply a mathematical algorithm to provide a score the customer can use to more rapidly assess the likelihood that an individual will repay a given debt given the frequency that other individuals in similar situations have defaulted. This means there is no one credit score, but several (or more): each credit bureau creates their own credit score for each individual (Sinclair, 2009).

### **Credit reference bureaus and appraisal methods employed by SACCOs**

Credit administration is critical in ensuring the soundness of the credit portfolio. It is the responsibility of management to set up a credit administration team to ensure that once a credit is granted it is properly maintained and administered. Credit reporting is a critical part of the financial system in most developed economies but is often weak or absent in developing countries. It addresses a fundamental problem of credit markets: asymmetric information between borrowers and lenders that can lead to adverse selection and moral hazard.

The importance of a credit report is the record it provides of an individual's or a firm's payment history, which enables lenders to evaluate credit risk more accurately and lower loan processing time and costs. Credit reports also strengthen borrower discipline, since non-payment with one institution results in sanctions with others. Credit reporting, it shows, significantly contributes to predicting default risk of potential borrowers, which promotes increased lending activity (Miller, 2003)

### **Credit reference bureaus and credit accessibility of SACCOs in Kenya**

Kenya adopted the Banking (Credit Reference Bureau) Regulation 2008 and consequently licensed three CRBs namely Credit Reference Bureau Africa Limited in February, 2010, Metropol Credit Reference Bureau Limited in April 2011 and Creditinfo Credit Reference Bureau Limited licensed in April 2015. Accessing bank loans in Kenya is characterized by furnishing collateral such as a land title deed or logbook and a certain down payment of the loan applied for. In addition, it is only the mainstream banks that have been obligated into information sharing under the CRBs. Therefore, majority of borrowers who deal with SACCOs and Micro Finance Institutions (MFIs) are left out on this process thus giving the

banks a competitive edge over MFIs. Anderson (2007) noted that SCCOs provide the financial access to the poorest who form the largest proportion of borrowers.

Pagano and Jappelli (2014) show that information sharing reduces adverse selection by improving bank's information on credit applicants. In their model, each bank has private information about local credit applicants, but has no information about non-local applicants. If banks exchange information about client's credit worthiness, assessing the quality of non-local credit seekers is possible, and banks can lend to the non-local clients as safely as they do with local clients. Information sharing can also create incentives for borrowers to perform in line with banks' interest. Klein (2013) shows that information sharing can motivate borrowers to repay loans, when the legal environment makes it difficult for banks to enforce credit contracts. In Klein's model borrowers repay loans because in the awareness that defaulters will be blacklisted, reducing external finance in future. The profitability of an institution is affected by its efficiency (Pagano & Jappelli 2014). As such efficiency is pertinent in establishing how much income and organization uses as expenses to operate.

## **RESEARCH METHODOLOGY**

A descriptive research design was used in this study. A descriptive research design describes a phenomenon as is without any manipulation. Descriptive design was considered appropriate in this study since it described what was happening at present and the research only reported what was happening as pertains the effects of CRB on Saccos performance in Kenya. The population of study comprised of employees of Stima Sacco. The Sacco has a total population of 124 staff members. The study involved staff in the management, credit, finance and operation sections because they bare the most relevant to the study. In this study, all the 124 employees were included in the sample. This research utilized the census approach since it entailed the entire population of the in the management, credit, finance and operation sections of Stima Sacco. The questionnaires were used to collect primary data for the study. Follow ups were made to ensure success of the procedure.

All data collected, was checked for completeness, consistency, coded and tabulated. It was then analyzed using descriptive statistics which includes frequency tables and percentages which enabled conclusions and inferences to be drawn from the sample results to the population. Quantitative data was used to present the results in the form of frequency tables according to the objectives and research questions of the study. Inferential statistics including ANOVA tables and Regression analysis were to interpret the data and test its reliability and validity. A simple linear regression model was used to analyze the relationship between the independent and dependent variables. The regression equation estimation was employed to analyze how the independent variable affected the dependent variable. The regression equation was:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

**Where** Y- Performance of Stima Sacco, X<sub>1</sub>–non-performing loans, X<sub>2</sub>- cost of lending, X<sub>3</sub>- Appraisal methods, X<sub>4</sub>-Credit accessibility while  $\varepsilon$  – Error term.

## **RESEARCH RESULTS**

### **Reliability Analysis**

A pilot study was carried out to determine reliability of the questionnaires. The pilot study involved the sample respondents from staff working in the SACCO. Reliability analysis was subsequently done using Cronbach's Alpha which measures the internal consistency by establishing if certain item within a scale measures the same construct. Coefficient of 0.7 is a commonly accepted rule of thumb that indicates acceptable reliability and 0.8 or higher indicated good reliability (Cooper & Schindler, 2003), thus forming the study's benchmarked. Cronbach Alpha was established for every objective which formed a scale. The table shows that all the four variables were reliable as their reliability values exceeded the prescribed threshold of 0.7.

**Table 1: Reliability Analysis**

<b>Scale</b>	<b>Cronbach's Alpha</b>	<b>Number of Items</b>
Non-performing loans	0.835	6
Cost of lending	0.819	7
Appraisal methods	0.798	5
Credit accessibility	0.915	5
Performance of Stima Sacco	0.734	7

### **Multicollinearity Test**

Problem may arise when two or more predictor variables are correlated. Heteroscedasticity means that previous error terms are influencing other error terms and this violates the statistical assumption that the error terms have a constant variance. Greene (2003) argues that the prediction is not affected, but interpretation of, and conclusions based on, the size of the regression coefficients, their standard errors, or the associated z-tests, may be misleading because of the potentially confounding effects of multi collinearity. In the presence of multi collinearity, the coefficient estimates may change erratically in response to small changes in the model or the data. However, the decision to finally drop an item also depends on a second step, where the variance inflation factor (VIF) is applied. The VIF detects multicollinearity by measuring the degree to which the variance has been inflated. A VIF greater than 10 is thought to signal harmful multicollinearity as suggested by Baum (2013).

The Variance inflation factor (VIF) was checked in all the analysis which is not a cause of concern according to Baum (2013) who indicated that a VIF greater than 10 is a cause of concern. The basic assumption is that the error terms for different observations are uncorrelated (lack of autocorrelation).

**Table 2: Summary of Collinearity Statistics**

Model	Collinearity Statistics	
	Tolerance	VIF
Non-performing loans	0.924	2.728
Cost of lending	0.786	1.423
Appraisal methods	0.634	1.352
Credit accessibility	0.780	3.427

**Effect of Credit Reference Bureaus on Non-performing loans**

The study sought to establish the effect of Credit Reference Bureaus on performance of Stima Sacco in Kenya. The study established that CRB ensures objectivity in loan write-offs to a very great extent. Further, the study established that CRB reduces the number of days a loan is in arrears to an extent, Use of CRB data reduces the Portfolio at risk, CRB reduces credit risk to acceptable levels and that CRB has an effect on the bad debts written off to a great extent. The most significant of the effects is ensuring objectivity in loan write-offs. However, it has a small effect on the creation of customer consciousness and discipline in loan repayments. On this note, Tiffany and Greenidge (2010) stipulate that the magnitude of non-performing loans is a key element in the initiation and progression of financial and banking crises.

**Effect of Credit Reference Bureaus on Cost of lending**

The study established that CRB affects the interest rate charged and the insurance costs related to lending by SACCOS to a very great extent. Additionally, the study established that CRBS enables use of reputation collateral as opposed to chargeable security and this therefore means that character is emphasized as a component of lending as opposed to a chargeable security, reduces stringent collateral requirements for highly rated borrowers since they are considered to be good payers and of low risk, influences the costs incurred in loan recovery and default, affects the Appraisal fee applied by SACCOS and also reduces the cost of security perfection by SACCOS to a great extent. This is in line with Langohr (2013) who suggests CRAs provide a gate-keeping function to enter global capital markets, where the rating provides the ticket for entry. To reduce the information asymmetry effects (Myers and Majluf, 2010) between the issuer and investors.

**Effect of Credit Reference Bureaus on Appraisal methods**

The study established that CRB reduces over reliance on collateral for loan appraisal and emphasizes cash flow and liquidity as a method of appraisal to a very great extent. Miller, (2003) states that credit reporting is a critical part of the financial system in most developed economies but is often weak or absent in developing countries. It addresses a fundamental problem of credit markets: asymmetric information between borrowers and lenders that can lead to adverse selection and moral hazard. Further, the study revealed that CRB emphasizes cash flow and liquidity as a method of appraisal, encourage use of credit rating for appraisal and influences use of historical trends in lending and repayment to a very great extent. This

agrees with previous research that credit reports also strengthen borrower discipline, since non-payment with one institution results in sanctions with others. Credit reporting, it shows, significantly contributes to predicting default risk of potential borrowers, which promotes increased lending activity (Miller, 2003).

### **Effect of Credit Reference Bureaus on Credit accessibility**

The study found that CRBs play a pivotal role in reducing the information asymmetry that exists between banks and borrowers leading to new disbursements, CRBS increases the number of repeat customers and use of CRB reduce the borrowing cost by forcing creditors to be more competitive for good borrowers. In addition, the study concluded that credit information sharing from CRB rewards and promotes good credit track record and increases efficiency in borrowing by lowering borrowing costs for low credit. This concur with Pagano and Jappelli (2014) who observes that loan accessibility is affected by credit information sharing, as such, credit information sharing is pertinent for SACCOs to eliminate information asymmetry and improve credit accessibility.

### **REGRESSION ANALYSIS**

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 21.0) to code, enter and compute the measurements of the multiple regressions.

R-Squared is a commonly used statistic to evaluate model fit. R-square is 1 minus the ratio of residual variability. The R<sup>2</sup>, also called the coefficient of multiple determinations, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. 70.4% of the changes in the performance of Stima Sacco in Kenya could be attributed to the combined effect of the predictor variables.

**Table 3: Model Summary**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	0.839	0.704	0.668	0.328

The probability value of 0.000 indicates that the regression relationship was highly significant in predicting how non-performing loans, cost of lending, appraisal method employed and credit accessibility influenced the performance of Stima SACCO. The F calculated at 5% level of significance was 19.631 since F calculated is greater than the F critical (value = 2.66), this shows that the overall model was significant.

**Table 4: Summary of One-Way ANOVA results**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.223	4	2.306	19.631	0.000
	Residual	3.876	33	0.117		
	Total	13.099	37			

The regression equation has established that taking all factors into account (non-performing loans, cost of lending, appraisal method employed and credit accessibility) constant at zero the performance of Stima SACCO will be 1.053. The findings presented also show that taking all other independent variables at zero, a unit increase in the non-performing loans would lead to a 0.682 decrease in the scores of the performance of Stima SACCO and a unit increase in the scores of cost of lending would lead to a 0.701 decrease in the scores of the performance of Stima SACCO. Further, the findings shows that a unit increases in the scores of appraisal method employed would lead to a 0.599 increase in the scores of the performance of Stima SACCO. The study also found that a unit increase in Credit accessibility would lead to a 0.763 increase in the scores of performance at Stima SACCO. Overall, Credit accessibility had the greatest effect on the performance of Stima SACCO, followed by Cost of lending, then Non-performing loans while Appraisal method employed had the least effect to the performance of Stima SACCO. All the variables were significant ( $p < 0.05$ ).

**Table 5: Regression coefficients of the relationship between performance of Stima SACCO and the four predictive variables**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.053	0.217		4.853	0.028
	Non-performing loans	-0.682	0.149	-0.513	-4.577	0.031
	Cost of lending	-0.701	0.181	-0.619	-3.873	0.014
	Appraisal method employed	0.599	0.196	0.434	3.056	0.044
	Credit accessibility	0.763	0.091	0.638	8.385	0.011

As per the SPSS generated table above, the equation ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$ ) becomes:

$$Y = 1.053 - 0.682X_1 - 0.701X_2 + 0.599X_3 + 0.763X_4$$

## **CONCLUSIONS**

The study concludes that CRB ensures objectivity in loan write-offs to a very great extent. Further, the study concludes that CRB reduces the number of days a loan is in arrears, use of CRB data reduces the Portfolio at risk, CRB reduces credit risk to acceptable levels and that CRB has an effect on the bad debts written off to a great extent.

The study also concludes that CRB affects the interest rate charged and the insurance costs related to lending by SACCOS to a very great extent. Additionally, the study further concludes that CRBS enables use of reputation collateral as opposed to chargeable security, reduces stringent collateral requirements for highly rated borrowers, influences the costs incurred in loan recovery and default, affects the Appraisal fee applied by SACCOS and also reduces the cost of security perfection by SACCOS to a great extent.

The study further concludes that CRB reduces over reliance on collateral for loan appraisal and emphasizes cash flow and liquidity as a method of appraisal to a very great extent. Further, the study concludes that CRB emphasizes cash flow and liquidity as a method of appraisal, encourage use of credit rating for appraisal and influences use of historical trends in lending and repayment to a very great extent.

The study found that CRBs play a pivotal role in reducing the information asymmetry that exists between banks and borrowers leading to new disbursements, CRBS increases the number of repeat customers and use of CRB reduce the borrowing cost by forcing creditors to be more competitive for good borrowers. In addition, the study concluded that credit information sharing from CRB rewards and promotes good credit track record and increases efficiency in borrowing by lowering borrowing costs for low credit in Stima SACCO.

## **RECOMMENDATIONS**

The study established that CRB ensures objectivity in loan write-offs to a very great extent. The study further found out that the magnitude of non-performing loans is a key element in the initiation and progression of financial and banking crises. Therefore, this study recommends that Stima SACCO minimizes its involvement in non-performing loans. This can be achieved by carrying out thorough background studies on loan applicants to ascertain that they will put good use of the funds.

The study established that CRB affects the interest rate charged and the insurance costs related to lending by SACCOS to a very great extent. The interest rates are further determine a person's credit rating. Very high interest rates have the effect of lowering the credit rate for most people. This study therefore, recommends that SACCOS should strive to maintain low interest rates and should seek help from the government in making the CRB respect this.

The study established that CRB reduces over reliance on collateral for loan appraisal to a very great extent. Collateral is what has been keeping very many people out of loan applications in SACCOS. Therefore, through CRB, the reliance on collateral is reduced and

therefore loan uptake will increase. The study recommends that SACCOs liaise with CRB to ensure that the collateral in SACCOS becomes a thing of the past.

The study found that CRBS increases the number of repeat customers hence increasing profitability. The study recommends that Stima SACCO engages with CRB to ensure that it eliminates bad and doubtful debts from its statement so that profitability can increase.

Following this study, another study should be done to investigate the use of Credit Reference Bureaus reports on non-lending functions such as job placements and job tenders. A similar study should also be done on other larger SACCOS in other industries since their operations are different from that Stima SACCO. Further studies should be done on the effect of Credit Reference Bureaus on economy as a whole.

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