

# International Journal of **Finance** (IJF)

**EFFECT OF RISK MANAGEMENT FUNCTION ON FINANCIAL  
PERFORMANCE OF SAVINGS AND CREDIT CO-OPERATIVE  
SOCIETIES IN KENYA**

**Jackson Mnago Ndungo, Dr. Olweny Tobias and Dr. Memba Florence**



**CARI  
Journals**

## EFFECT OF RISK MANAGEMENT FUNCTION ON FINANCIAL PERFORMANCE OF SAVINGS AND CREDIT CO-OPERATIVE SOCIETIES IN KENYA

<sup>1</sup>\*Jackson Mnago Ndungo,

\*E-mail of corresponding author: [ndungojackson@yahoo.com](mailto:ndungojackson@yahoo.com)

<sup>1</sup>Post graduate student, Jomo Kenyatta University of Agriculture and Technology, Kenya

<sup>2</sup>Dr. Olweny Tobias

<sup>2</sup>Jomo Kenyatta University of Agriculture and Technology, Kenya

<sup>3</sup>Dr. Memba Florence

<sup>3</sup>Jomo Kenyatta University of Agriculture and Technology, Kenya

### Abstract

**Purpose:** The main objective of the study was to establish effect of risk management function on financial performance of savings and credit co-operative societies (SACCOs). The total assets of SACCOs grew from 257 billion to 301.5 billion while total deposits increasing from 182.7 billion to 205.9 billion from December 2013 to December 2014 financial years (SASRA, 2014). With savings of kes. 380 billion and asset base of Kshs. 493 billion, SACCOs control 39 percent of total loan accounts in Kenya (SASRA, 2012). However, some SACCOs have gone under liquidation thus putting billions at risk. This has led to the introduction of CRBs to control all financial institutions to reduce the information asymmetry effects between lenders and borrowers. The target population was 181 and a sample of 135 licensed deposit taking SACCOs as at 31<sup>st</sup> December 2014 was used. Stratified random sampling technique was used for each type or category. Secondary data from publications, CRBs, journals and financial records was used. Primary data was collected using structured questionnaires which had both close ended and open ended questionnaires. The study used multiple regression and Pearson correlation to test for significance and relationship respectively of the independent variables and the dependent variable.

**Findings:** The findings indicated that risk management function had a positive and significant effect on financial performance of SACCOs in Kenya.

**Recommendation:** The study recommends that lenders should review their risk management techniques regularly in order to cope with the rapid advances in technological changes. The study also recommended that SACCOs should always subject their clients to credit reference bureaus whenever they grant a loan.

**Keywords:** *Risk management, credit listing, Credit Reference Bureaus, risk assessment, financial performance, SACCOs.*

### 1.0 Introduction

The existence of information asymmetry results to credit risk which has to be managed to reduce credit defaults and consequently increase financial performance of lending institutions. Financial institutions need to have accurate information on the financial ability of prospective borrowers to determine their credit history as a risk management tool. Jappelli & Pagano (2005) argued that information sharing gives lenders the information about the characteristics and indebtedness of borrowers. It is possible that business enterprises can lose part or the entire money invested due

to credit defaults since the borrower may not make good the repayment of the principal amount plus the interest charged. The defaults result to liquidity problems as financial institutions cannot meet their immediate obligations as and when they occur. Liquidity refers to investment in current assets and current liabilities which are liquidated within one year or less which are crucial for firm's day to day operations (Kesimli & Gunay, 2011). In some cases borrowers fail to honor their obligations thereby affecting liquidity of lending institutions. The frequent financial crisis facing financial institutions has given rise to the largest wave of risk management tools with the introduction of credit reference registries.

Risk assessment is one of the principles of risk management and it encompasses risk identification, risk quantifying and prioritization of exposures to risks. Credit reference bureaus are essential in risk identification since the credit defaulters are listed. However, political influence is a hindrance especially in developing nations since some of those in political positions wouldn't wish their cronies subjected to thorough scrutiny. When the risks are identified from the credit registries they are analyzed so as to establish their potential severity and frequency. In this case, borrowers are subjected to credit reference bureaus and so lenders can assess the credibility of the borrowers which can guide them whether or not to grant a loan. This is in agreement with Gaitho (2013) who found that CRBs enhance effective risk identification.

Credit reference bureaus (CRBs) are essential in risk measurement since they can quantify the borrower by knowing how much to lend using the available past repayment history in the credit registries. Financial institutions benefit more when credit is accessed in abundant especially in situations where borrowers and lenders have accurate credit information from these institutions (Lin, Ma, & Song, 2012). Lenders derive valuable information from credit information registries, commonly known as credit reference bureaus and this credit information can assist them in quantifying borrowers' capability on loan repayment. This has assisted SACCOs to reduce their liquidity levels since the borrower's credit information is more accurate thereby reducing the burden of lenders on how much to lend as measured by their capabilities. According to Sambasivam & Biruk (2013) SACCOs face a risks arising from liquidity shortage and this has been a major cause of failure of many financial cooperatives.

Financial monitoring and business performance of the borrower are statistically significant (Chirwa, 2007). CRBs ensure close supervision of all the lending activities to ensure that there is no deviation and if it happens then it could be easy to put corrective measures to arrest the situation in time. Risk management is the systematic uses of organization-wide processes of identify, assess, manage and monitor risks such that the aggregated information can be used to protect, release and create value (Haneef, Riaz, Ramzan, Rana, & Ishaq, 2012). A good monitoring and evaluating system must be in place to make sure that all risk management procedures are carried out in time to locate deviations earlier and corrective actions done (Al-Tamimi & Al-Mazrooei, 2007). Gitahi (2013b) found an inverse relationship between the number of credit checks done by the credit reference bureaus and the level of non-performing loans.

The use of credit reference bureaus enhance risk control eliminating threats of SACCOs by making continuous adjustment to improve efficiency and effectiveness of these institutions. The borrowers are also controlled from moving from one lender to another when they default. Risk control involves risk mitigation, contingency planning and close supervision or monitoring by relevant managers. Shisia, et al.,(2014) found that Credit Reference Bureau Regulation has contributed positive impact towards mitigating Credit Risks.

Therefore, risk management is fundamental element for any business organization if it were to achieve its objectives in the process of its operation and it includes risk assessment and risk control. Management principals are employed by financial institutions to manage their exposures to risks, attain their objectives and goals and to regulate their conduct to meet their expectations. Risk management provides strategies, techniques, and an approach to recognize and confront any threats faced by an organization in fulfilling its mission (Cielens, 2010). For proper risk management an enterprise has to identify and understand the risks which it exposed to and plan for strategies and techniques for recognizing and confronting these threats to performance. When these institutions grow they are also exposed to threats as Kent & D'Arcy (2010) suggested that risks peak at the top of business cycle. Information asymmetry makes it extremely difficult for lenders to assess the borrowers` credit worthiness and their ability to repay the loans with attached interest.

Credit bureaus help create an open environment of credit information which allow lenders to identify good clients by providing information on the borrowers` repayment histories and levels of indebtedness (McIntosh & Wydick, 2007). Recently SACCOs have tried to address risk management issues to establish what they would go wrong and put measures to prevent and control these risks. Risk management remains the central part of any organizations strategic management activities where organizations methodically address the risks attaching to their activities with the goal of achieving sustained benefits within each activity and across the portfolio of all activities (Amoah-Binfoh, Ricky-Okine, Bennet, Obenewaa, & Nusenu, 2012).

In USA, the Fair Credit Reporting Act was enacted to regulate the credit information sharing mechanism. African countries have sparked interest in the feasibility of the creation of credit bureaus to help manage borrower risk under heightened competition.

Like any financial institution SACCOs have been licensed and registered in credit reference bureaus so that they can assess credit information of any borrower in order to make informed decisions in granting loans. Nguyen (2008) stated that credit provision is critical and should be handled with great care. In Kenya, it is mandatory for aspirants seeking political office or any public post are to obtain certificates CRBs that confirm their creditworthiness from under the requirements of the Leadership and Integrity Act, 2012 on financial obligations.

## **1.2 Problem Statement**

In an environment of information asymmetry, the licensing of credit reference bureaus continues to gain interest in SACCOs especially those in business of deposit-taking. The total assets of

SACCOs grew from 257 billion to 301.5 billion while total deposits increasing from 182.7 billion to 205.9 billion from December 2013 to December 2014 financial years (SASRA, 2014). SACCOs have improved lives of many by granting loans and offering direct and indirect employment opportunities. Financial institutions therefore strive to ensure that they address risk management by ensuring that they identify, understand the unique threats exposed to them. SACCOs have been not only a source of employment among youth but also encourage people the need to save and then offer credit to borrowers with intention to invest. Many study findings have indicated that risk management is fundamental in financial performance with respect to financial institutions which have the business of lending. However, some SACCOs have gone under liquidation thus putting billions at risk. Although financial performance has been examined in different context and techniques developed by various institutions, there seems to be a continuous lack of definite answers on how best financial performance can be improved. Segita, Limo, Kibati, & Muhanji (2014) reviewed the asymmetry information on CRBs for banks in Kenya; Gitahi (2013) studied on effect of CRBs on NPLs in commercial banks in Kenya and Gaitho (2013) reviewed the role of credit reference bureau on credit access, a survey of commercial banks in Kenya. In Kenya the operations, establishment, licensing, governance and management of CRBs, is provided through the banking Act, 2009 and under this Act all financial institutions have to be registered and licensed by Credit Reference Bureaus as a risk management measure in order to reduce risk through credit defaults. The World Bank report (2011) identified risk management as one of the critical functions of CRBs for improving financial performance and it is therefore important to establish whether the introduction of credit reference bureaus have enhanced financial performance through risk management function in the SACCOs.

### **1.3 Objectives of the Study**

To establish effect of risk management function on financial performance of SACCOs in Kenya

### **3.0 Research Methodology**

This study adopted a descriptive research design which generally describes the characteristics of a particular situation, event or case. A research design is the actual configuration and structure which the research process is based on (Laurel, 2011). Descriptive statistics was chosen since it utilizes data collection and analysis techniques that yield reports concerning the measures of central tendency, variation, and correlation. Both quantitative and qualitative research approaches were used. The target population comprised of registered 181 deposit-taking SACCOs as at 31<sup>st</sup> December 2014 and the three licensed CRBs in Kenya. The sampling frame used was the list of all the 135 licensed deposit taking SACCOs as at 31<sup>st</sup> December 2014 (SASRA, 2014). The study used stratified random sampling where the SACCOs were grouped into their respective strata and randomly selected. Cooper & Schindler (2008) define sampling as selecting a given number of subjects from a defined population as representative of that population. According to Adejimi, Oyediran, & Ogunsanmi (2010), the merit of stratified technique is that it samples each sub-population (stratum) independently by grouping members of the population into relatively homogeneous subgroups before sampling. Secondary data from financial reports journals and other publications were used. Primary data was collected through questionnaires. Sutrisna (2009) stated that questionnaires are appropriate for studies since they collect information that is not directly observable as they inquire about feelings, motivations,

attitudes, accomplishments as well as experiences of individuals. The questionnaires were administered through a drop and pick and mail methods.

**Table 1: Sample Size**

Categories	Population	Sample
Government based DTSSs	42	31
Teachers based DTSSs	42	31
Farmers based DTSSs	58	43
Private institutions based DTSSs	16	12
Community based DTSSs	23	17
<b>Total</b>	<b>181</b>	<b>135</b>

Source: SASRA 2014

Both secondary and primary data collection was used. Secondary sources were available from the CRBs, published journals, annual reports and financial reports while Primary data was obtained from the original sources using questionnaires. Two top managers of each sampled SACCO were selected and participants were interviewed through questionnaires on effect of credit information sharing on financial performance of SACCOs. The participants were allowed to give their opinions voluntarily and confidentiality of their reports was guaranteed. The data was subjected to overall reliability and validity tests. Some of the questionnaires were self-administered with the help of two research assistants while others were administered via mail. The questionnaires were administered through two methods a drop and pick method and mail survey due to the busy schedules of the respondents. To enhance the response rate, the study did put into consideration the research ethical issues. The primary was collected using questionnaires and the secondary data were subjected to quantitative analysis using SPSS.

Correlation analysis was used to establish either positive or negative relationships between the variables. Regression analysis was used to establish the significance of the variables and the degree of causal effect of the independent variables on the dependent variable. The hypothesis testing was conducted using simple regression model and thus was tested on the objective.

Objective: Effect of information sharing function on financial Performance;  $Y = \beta_0 + \beta X + \epsilon$

Where X=Risk management

Y= Financial Performance

$\beta_0$  = Constant value of Financial Performance

## 4.0 RESEARCH FINDINGS AND DISCUSSIONS

### 4.1 Response Rate

Out of total of 135 questionnaires administered 110 questionnaires were properly filled and returned representing a response rate of 81.5 percent. The response rate result is shown in table 2.

**Table 2: Response Rate**

Response	Frequency	Percent
Returned	110	81.5%
Unreturned	25	18.5%
<b>Total</b>	<b>135</b>	<b>100%</b>

#### 4. 2 Categories of Sacco

The respondents were asked to indicate their type or category of Sacco. Results are presented in table 3

**Table 3: Categories of Sacco**

Type of Sacco	Frequency	Percent
Government based	19	17.3
Teachers based	10	9.1
Farmers based	27	24.5
Private institutions based	30	27.3
Community based	24	21.8
<b>Total</b>	<b>110</b>	<b>100</b>

Table 3 shows the five categories of deposit-taking SACCOs namely government based deposit-taking SACCOs, teachers based, farmers based deposit-taking SACCOs, private institutions based deposit-taking SACCOs and community based deposit-taking SACCOs. The deposit-taking SACCO with the largest share was Private institutions based with 27.3 percent followed by farmers based SACCOs 24.5 percent, community based with 21.8 percent, government based had 17.3 percent while teachers based had the smallest share of 9.1 percent. This could mean that private institutions have the largest number of employees in the country compared to the other sectors.

#### 4.3 Years of Existence

The respondents were asked to indicate the years of existence of their deposit taking SACCOs and the results are presented in table 4.

**Table 4: Years of Existence**

Duration	Frequency	Percent
5-10 years	17	15.5
Above 10 years	93	84.5
<b>Total</b>	<b>110</b>	<b>100</b>

Table 4 shows that 84.5% of the respondents who were the majority indicated that their deposit taking SACCOs has been in existence for over 10 years while only 15.5% indicated that they have been existence for between 5 to 10 years. This could mean that SACCOs have provided lending services for many years which is in agreement with SASRA (2012) that SACCOs control 39 percent of the total loan accounts in Kenya.

#### 4.4 Number of Years the SACCO were licensed in Deposit-taking Business

The respondents were requested to indicate number of years their SACCOs were licensed in Deposit-taking Business. Results are presented in table 5.

**Table 5: Number of Years the SACCO were licensed in Deposit-taking Business**

	Frequency	Percent
Less than 1 year	12	10.9
2 to 5 years	75	68.2
More than 5 years	23	20.9
<b>Total</b>	<b>110</b>	<b>100.0</b>

Results in Table 5 show that 10.9 percent of the sampled SACCOs were licensed for less than one year, 68.9 percent licensed within two to five years while 20.9 percent were licensed for more than five years as shown in table 6. This could indicate that many SACCOs registered after 2010 when the credit reference bureaus started and the SACCOs were aware of the need to be registered in the credit bureaus to control defaults rate thus improving their financial performance.

#### 4.5 Risk Management Function

The study sought to assess effect of risk management function on the financial performance of SACCOs. Results were presented in Table 6.

**Table 6: Risk Management Function**

Statement	No idea	Strongly disagree	Disagree	Agree	Strongly Agree	Mean	Std. Dev
CRBs have improved credit risk management in our SACCO	3.60%	7.30%	7.30%	33.60%	48.20%	4.15	1.077



CRBs lead credit risk identification in our SACCO	1.80%	0.90%	1.80%	40.00%	55.50%	4.46	0.75
CRBs enhance prevention of multi-loaning in our SACCO	0.00%	0.90%	4.50%	41.80%	52.70%	4.46	0.631
CRBs have enhanced detection of loan frauds in our SACCO	0.00%	0.90%	6.40%	27.30%	65.50%	4.57	0.656
CRBs lead to credit monitoring of borrowers characteristics in loan repayment in our SACCO	0.00%	2.70%	0.00%	49.10%	48.20%	4.43	0.642
CRBs use credit information as evidence in conflict resolutions	2.70%	7.30%	1.80%	37.30%	50.90%	4.26	1.002
CRBs help establish the score of credit applicants	4.50%	4.50%	3.60%	28.20%	59.10%	4.33	1.059
CRBs help lenders fix maximum loan to to a borrower in our SACCO	2.70%	1.80%	6.40%	45.50%	43.60%	4.25	0.872
CRBs help lenders fix minimum to a borrower in our SACCO	2.70%	3.60%	7.30%	42.70%	43.60%	4.21	0.93
CRBs have enhanced controls on loans provision in our SACCO	4.50%	1.80%	3.60%	50.00%	40.00%	4.19	0.943
CRBs enhance relaxation of private Act enjoyed by borrowers.	0.00%	3.60%	0.00%	50.90%	45.50%	4.38	0.677
<b>Average</b>						<b>4.3</b>	<b>0.8</b>

The study ought to establish effect of risk management function on the financial performance of SACCOs where Credit reference bureaus have led to improved credit risk management; 81.8 percent agreed that Credit reference bureaus have led to credit risk identification established that CRB has enhanced effective risk identification or monitoring and microcredit extension which is in agreement with Gaitho (2013) who established that CRB has enhanced effective risk identification or monitoring and microcredit extension; 95.9 agreed that credit reference bureaus have enhanced prevention of multi-loaning. This is in agreement with McIntosh & Wydick (2007) that borrowers can take separate loan contracts from different lenders where there is information asymmetry. 92.8 percent agreed that credit reference bureaus enhanced detection of frauds.

Majority (88.2 percent) agreed that credit reference bureaus have led to use of credit information in conflict resolution. 87.3 percent agreed that credit reference bureaus help establish the score of credit applicant; 89.1 percent agreed that credit reference bureaus help fix maximum loan to be granted to a borrower. 86.3 percent agreed that credit reference bureaus help lender fix minimum loan to be granted to a borrower. This is in support with Klein (2013) that there is merit to strengthen supervision to prevent a sharp buildup of NPLs in future, avoid excessive lending and maintain high credit standards. 95.5 percent agreed that Credit reference bureaus have led to credit risk identification. 94.5 percent agreed that credit reference bureaus have enhanced controls on loan provision. To minimize loss of earnings or capital through intentional deception by employee or customers, organizations nowadays have invested increasingly their internal control systems in purpose of enhancing a well-improved system in order to reduce as much as possible the risk of frauds (Troan, 2015). 96.4 percent agreed that credit reference bureaus have enhanced relaxation of private Act previously enjoyed by borrowers.

Using a five-point scale likert mean, the overall mean of the responses was 4.3 which indicates that majority of the respondents agreed to the statement of the questionnaire. Additionally, the standard deviation of 0.8 indicates that the responses were varied.

#### 4.6 Correlation Analysis

Correlation analysis was conducted between risk management function (independent variable) and financial performance (dependent variable).

**Table 7 Risk Management Function**

		<b>Financial performance</b>	<b>Risk management</b>
Financial performance	Pearson Correlation	1.000	
	Sig. (2-tailed)		
Risk management Function	Pearson Correlation	.224*	1.000
	Sig. (2-tailed)	0.019	

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

Results are presented in table 7 indicated the value for R was 0.224 indicating strong positive linear relationship of 0.224 between risk management function. There is a significant relationship between risk management function and financial performance since the p-value is less than 0.05 (p=0.019).

It can be concluded that risk management function has significant on financial performance and positive relationship between risk management function financial performance.

This is in agreement with Haneef, et al., (2012) in their study on Impact of Risk Management on Non-Performing Loans and Profitability of Banking Sector of Pakistan found that risk management is significant on profitability of banking. He recommended that financial

institutions should have mechanisms to identify stress situations ahead of time and plans to deal with such implemented. They also recommended experts in the field of risk management to be employed.

The 2012 Risk Management Benchmarking Survey of the Federation of European Risk Management Association (FERMA) revealed that 74% of the twenty countries with mature or advanced risk management practices showed the strongest level of growth in terms of Earnings Before interest, Taxes, Depreciation, and Amortization (EBITDA) (Luzzi, 2012)

#### 4.7 Regression Analysis

Ordinary least square regression analysis was conducted and the result was represented in Table 8.

**Table 8 Risk management function**

	Unstandardized		Standardized		
	Coefficients		Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.309	0.028		11.086	0.000
Risk management function	0.016	0.007	0.224	2.387	0.019

The results indicated that a unit change in risk management function will lead to a positive change in financial performance at the rate of 0.016. In the absence of risk management function, financial performance will be at 0.309 implying that there could be other drivers of financial performance other than risk management function. The p-value is 0.019 implying that risk management function is significant in financial performance. This is in agreement with Haneef, et al., (2012) in their study on Impact of Risk Management on Non-Performing Loans and Profitability of Banking Sector of Pakistan found that risk management is significant on profitability.

Nagarajan (2011) in his study of credit risk management practices for microfinance institutions in Mozambique found that risk management is a dynamic process that could ideally be developed during normal times and tested at the wake of risk. The study concluded that financial institutions needed to minimize risks related losses through diligent management of portfolio and cash-flow by building robust institutional infrastructure with skilled human resources and inculcating client discipline, through effective coordination of stakeholders. Locally, various aspects of CRB have been reviewed by various scholars. The risk management function regression model is  $Y = \beta_0 + \beta X + \epsilon$  thus  $Y = 0.309 + 0.016 X$

Where Y=Financial Performance  
 X=Risk management function

In testing for the hypothesis by using simple linear regression (table 8, above), the acceptance or rejection criteria was that, if the p-value is greater than 0.05, the  $H_0$  is not rejected but if it's less than 0.05, the  $H_0$  fails to be accepted.

The null hypothesis was that risk management function has no significant effect on financial performance of SACCOs in Kenya. Results in Table 8 above show that the p-value was  $0.019 < 0.05$ . This indicated that the null hypothesis was rejected hence risk management function has a significant effect on financial performance of SACCOs in Kenya.

#### 4.8 Hypothesis Testing

The null hypothesis was that risk management function has no significant effect on financial performance of SACCOs in Kenya. Results in Table 8 above show that the p-value was  $0.019 < 0.05$ . This indicated that the null hypothesis was rejected hence risk management function has a significant effect on financial performance of SACCOs in Kenya.

#### 4.9 Conclusion

The research findings indicated that there is a significant and positive relationship between risk management and financial performance of SACCOs thus risk management is a significant function of CRBs in improving financial performance. From the study, risk management principals included risk identification, risk quantification, risk monitoring and risk controls. Since the implementation and introduction of CRBs in 2010, risk management remains an important function of CRBs on financial performance.

#### 4.10 Recommendation

The study recommends that SACCOs should always subject their clients to credit reference bureaus whenever they grant a loan. There is need for SACCOs to employ competent and qualified managers with good leadership and integrity test or consultants with skills to guide through complexities of both local and global risk management. The lenders should have regular review of their risk management techniques which have ability to manage risk in order to cope with the rapid changes in technological advances including developing and using sophisticated technological skills that can timely detect, monitor and control any fraudulent activity.

#### 4.11 References

- Adejimi, A., Oyediran, O., & Ogunsanmi, E. B).Employing Qualitatively Enriched Semi-Structured Questionnaire in Evaluating ICT Impact on Nigerian "Construction Chain Integratin". *The Built & Human Environment Review* , 1 (3), 49-62.
- Al-Tamimi, H., & Al-Mazrooei, M. (2007). Banks' Risk Management: A Comparison Study of UAE National and Foreign Banks. *The Journal of Risk Finance* , VIII (4), 394-409.

- Amoah-Binfoh, K., Ricky-Okine, C., Bennet, E., Obenewaa, L., & Nusenu, A. (2012). *Risk Management and It's Impact on Profitability in Micro-finance Institutions*. Koforidua: All Nations University.
- Chirwa, E. A. (2007). An Econometric Analysis of the Determinantsof Agricultural Credit Payment in Malawi. *African Review of Money Finance and Banking* , I (2).
- Cielens, M. (2010). *Risk Assessment and Risk Management*. Washington D.C.
- Cooper, P., & Schindler, P. (2008). *Business Research Methods* (10th Edition ed.). New York: Wiley.
- Gaitho, N. W. (2013). Role of Credit Reference Bureaus on Credit Access in Kenya: A survey of Commercial Banks in Kenya. *European Scientific Journal* , IX (13), 1-14.
- Gitahi, R. W. (2013). *The Effect of Credit Reference Bureaus on the Level of non-performing Loans in the Commercial Banks in Kenya*. Nairobi: University of Nairobi.
- Haneef, S., Riaz, T., Ramzan, M., Rana, A., & Ishaq, H. K. (2012). Impact of Risk Management on Non-Performing Loans and Profitability of Banking Sector of Pakistan. *Internatinal Journal of Business and Social Science* , 1-9.
- Jappelli, T., & Pagano, M. (2005). *Role and Effects of Credit Information Sharing*. Fisciano: Centre for Studies in Economics and Finance.
- Kesimli, G., & Gunay, S. (2011). The Impact of the Global Economic Crisis on Working Capital of Real Sector in Turkey. *Business and Economic Horizons* , 4 (1), 52-69.
- Laurel, B. (2011). *Design Research: Methods and Perspectives*. Cambridge: MIT Press.
- Lin, C., Ma, Y., & Song, F. (2012). What Drives Bank Operating Efficiency? The Role of Bank Competition and Credit Information Sharing. *Research Handbook on International Governance* , 87.

- Sambasivam, Y., & Biruk, A. (2013). Financial Performance Analysis of GOHE Co-operatives Savings and Credit Union in Bure Woreda Ethiopia. *International Research Journal of Economics and Buiness Studies* , 2 (06).
- SASRA. (2012). *SACCO Societies Regulatory Authority*. Nairobi: Government Printers.
- SASRA. (2014). *SACCO Societies Regulatory Authority*. Nairobi: Government Printer.
- Segita, M. A., Limo, C., Kibati, P., & Muhanji, S. (2014). *Asymmetry of Informatin on Credit Reference Bureaus for Bank Customers in Kenya: A case Study of Nakuru Town*. Nakuru: Kabarak University .
- Shisia, A., Marangu, W. N., & Omwario, B. (2014). Assessment of the contribution of Credit Reference Bureau Regulation Towards Mitigating Credit Risks in the Kenya's Banking Industry. *European Journal of Business and Management* , 6 (14), 1-8.
- Sutrisna, M. (2009). *Research Methodology in Doctoral Research: Understanding the Meaning of Conducting Qualitative Research*. Liverpool: John Moores University.