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Credit Risk Management and Financial Performance of Deposit Taking Savings and Credit Co-Operative Societies in Nairobi City County, Kenya

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Abstract:
The study sought to determine the relationship between credit risk management and financial performance of deposit taking SACCOs in Nairobi City County. There is substantial empirical evidence focusing on the relationship between SACCOs and their financial performance but few studies if any, have specifically focused on deposit taking SACCOs. In this regard, there is need to fill the research gap that exists as well as add to the few empirical studies that exist. Most of the empirical studies have found a negative relationship and this warranted further consideration hence, need for the current study. The research design used was descriptive in nature with data being collected from 40 deposit taking SACCOs. Questionnaires were administered to 120 respondents three from each deposit taking SACCO in Nairobi City County through purposive sampling. Data was analyzed using standard deviation analysis, multiple regression and correlation coefficient. The study found that credit monitoring has a significant effect on financial performance of deposit taking SACCOs (p-value=0.0146). Similarly, the study established that credit appraisal has a significant effect on financial performance (p-value=0.0229) whereas credit risk control was found to have a significant effect on financial performance (p-value=0.0211). Hence, the study concludes that credit risk management is a key factor in explaining the financial performance of deposit taking SACCOs in Nairobi City County, Kenya.

Keywords : *Credit risk, credit risk management, credit monitoring, credit appraisal, financial performance, deposit taking savings and co-operatives*

1. Introduction and Background

SACCOs' financial performance entails the going concern of such institutions amidst being exposed to loan defaulting from members. Parast and Fini (2010) indicate that in pursuance of boosting profitability and enhancing operational performance, firms are looking for better strategies. Similarly, their financial performance may be studied in terms of their ROI and overall profitability. Share capital and member deposits contribute to a lager extent on their revenue vis-à-vis loan disbursement to members. The credit capacity of financial institutions improves the capacity of investors to utilize wanted beneficial endeavors. Kargi, (2011) alludes to the fact that financial institutions depend on credit creation to be the fundamental income producing activity. Coyle (2000) defines credit risk as unfortunate happenings arising from the failure of clients (borrowers) to pay the required funds and on time. The study alludes to the potential that a borrower will become neglectful towards meet his or her commitments as per the contract. Essentially, the risk is to the lending party and may incorporate different aspects like loss of the principal, interest, cash flows streams destabilization, and cost of expanded debt accumulation. The co-operative business of action and structure has not changed substantially over the years, but rather the substance and social dynamics are evolving quickly. The SACCOS Act of 2008 strategically places the supervision as well as the licensing of deposit taking under the authority of the SACCO Societies Regulatory Authority, also known as SASRA under which also fall both deposit taking as well as non-deposit taking SACCOs within the country's economy. Specifically, in Nairobi City County, the deposit taking are authorized and directed by SASRA. However, non-deposit taking SACCOs have been placed under the Commissioner for Cooperatives. SASRA is only mandated to license those SACCOs that fully meet the requirements described the Cooperative Societies Act, specifically CAP 490 (SASRA, 2012). Through this new lawful structure, prudential directions have been acquainted which manage the development and improvement of SACCOs (Barrales, 2012).

Credit risk management of SACCOs covers the systems in place, the procedures and controls that a SACCO has towards ensuring the most efficient payments collection with the ultimate goal or objective of minimizing non-payment risk (Naceur & Goaied, 2003). It will mainly focus on risk appraisal, monitoring, and control for the purposes of this study. Manganelli and Engle (2001) examined that for a financial institution to experience economic growth, it must have a robust and well-designed credit risk management operational system with set standards and guidelines, supervised by a competent Risk Management Committee. Credit risk is overseen both at the transaction level as well as the portfolio level. Financial institutions, however, progressively measure and deal with the credit risk on a portfolio premise rather than on

loan by loan. Gibson (2012) characterizes financial performance as the degree to which the financial objectives and goals of an institution have been realized or are in the process of being achieved. This is a procedure which coordinates the income created by the organization's objectives and strategies. It is a key measure for surveying the financial wellbeing of a specific organization inside the set time as per the investigation by Waymond (2007). The need to achieve enhanced operational performance and reach more profitability has prompted organizations to look for better strategies towards that goal. As competition continues to intensify due to emerging and challenging changes being witnessed in the basic industry structure as well as the emergence of innovative new technologies, businesses, companies, and organizations are determined more than ever to cut down on their respective operational costs while at the same time enhancing their overall profitability (Parast & Fini, 2010).

Kenya's vision 2030's goal for financial services in Kenya is not far-fetched if members can enhance their borrowing capacity into viable investments that boost the economy. According to the annual report of the Ministry of Co-operative and Marketing – Nairobi City County (2009/2010), growth was noted in the number of active co-operatives throughout the county. The annual report noted that the co-operative movement in the Nairobi County was growing in every aspect with an increase in employment numbers as well. Deposit taking SACCOs (in Nairobi City County) have played a vital role in achieving this objective with a total of 40 deposit taking SACCOs.

2. Research Problem

Financial Institutions are at a risk of collapse if not properly managed hence, efficient governance of credit risk in these firms is important for their existence and expansion (Musimbi, 2015). SACCOs have a greater exposure to credit risk arising from perceived higher levels of risks. This is associated with the unique nature of their clients and the kind of business circumstances that they are operating in. By virtue of the fact that their main line of business activity is credit creation, they are exposed to high levels of default thus exposure to an environment of financial distress including bankruptcy (Sambasivam, 2013).Studies on various aspects of risk management practices by Kenyan SACCOs that have been previously done form part of empirical studies. Muchira (2010) studied the relationship between management of credit risk and non-performing loans in Kenya. The study found that loan repossession was still a struggle for most SACCOs. In their study, Karagu and Okibo (2014) also confirmed the existence of a high credit default rate among 37 deposit taking SACCOs they covered in Nairobi, attributable to the poor financial performances. Similarly, Essendi (2013) examined the effect of credit risk management on loans portfolio among the SASRA licensed SACCOs within Nairobi County and found that various stakeholders were involved in credit risk management process. In this regard, despite the empirical evidence, there remains a research gap on the relationship between credit risk management and financial performance of deposit taking SACCOs specifically in Nairobi City County hence, the motivation for this study.

3. Objectives of the Study

The specific objectives of the study were:

- To establish the relationship between credit monitoring and financial performance of deposit taking SACCOs Nairobi City County, Kenya.
- To determine the relationship between credit appraisal and financial performance of deposit taking SACCOs in Nairobi City County, Kenya.
- To establish the relationship between credit risk control and financial performance of deposit taking SACCOs in Nairobi City County, Kenya.

The study formulated and tested three null hypotheses in view of each specific objective at a significance level of 0.05.

4. Significance of the Study

It is expected that the outcome of the study will offer an insight into the different credit risk management approaches, their effectiveness and how to reduce exposure to risk. The research will assist management to improve efficiency as they will learn on various credit risk management practices that they can adopt for better results. The study will be useful in adding to literature that entails investment decisions and efficiency in the management of the shareholders' funds. The study will also assist the regulatory authorities in developing regulatory and legislative framework that will assist SACCOs in developing and adopting sound credit risk management practices. The government may find it useful to use the study findings as a broad guide on policy formulation for SACCOs to increase their productivity, as they contribute heavily to the economy of Kenya in terms of employment and domestic savings which contributes significantly to national savings Ministry of Industrialization and Enterprise Development (MIED, 2014). To the academic community, the study will broaden the knowledge on the relationship of credit risk management on financial performance hence providing a basis for future research.

5. Review of Literature

The paper reviews relevant theories as well as empirical evidence as captured hereunder.

5.1. Theoretical Review

The study considered the following theories relating to credit risk management; Portfolio Theory, Liquidity Preference Theory, Theory of Financial Intermediation as well as Stakeholder Theory.

The modern portfolio theory (attributed to Harry Markowitz (in the early 1950s)) was developed through to 1970s. This theory asserts that the risk to which an investor is exposed to can be reduced by holding a diversified portfolio of assets (Markowitz, 1952). The portfolio theory main assumption in regard to managing risk is that the market is being

run efficiently and is perfect while the investors are rational (Chijoriga, 1997). SACCOs have advanced over the years in spreading risk by use of credit derivatives thus advancing in handling credit risk in a portfolio state. This study will seek to accentuate how managers spread risk while disbursing loans to members which by extension represents the financial performance of a firm and how credit risk is being managed in SACCOs.

Put forward by Keynes John Maynard (1989), liquidity preference theory stipulates that the interest rate is the reward that someone gets for parting with their liquidity for a defined period of time. This theory proposes that investors are likely to demand a premium for those securities that come with longer maturity periods as they are associated with greater risk thereby preferring to hold cash associated with less element of risk. This is because the higher the liquidity of an investment, obviously the easier and faster it will get to sell at full value (Mbole, 2004). Financial institutions of which SACCOs are a part of, lend out credit and they could possibly encounter problems associated with liquidity particularly if borrowers cannot meet their loan obligations within the stipulated period. This theory, therefore, argues that a lending entity ought to retain more cash for purposes of investing hence, its relevance to the study for such institutions to deal with uncertainties which are inevitable.

Matthews and Thompson (2008) explained financial intermediation as an undertaking whereby deficit units are aided by surplus units which deposit funds with financial institutions. Financial intermediation theory asserts that, units with deficits seek to interlink with units with surplus so as to bring about an equilibrium effect in the economy. SACCOs are financial intermediaries hence, this theory seeks to enhance intermediation between borrowers and lenders. Alin Marius (2009) considers financial intermediaries as information sharing coalitions hence; households will put their deposits with the intermediaries with the hope of gaining a return in the future. The study seeks to intermediate the relationship between SACCO members and lenders thereby ascertaining how well members can be managed or assessed for SACCOs to reduce the risk of loan default. Over the years, financial intermediation has grown leading to financial innovations that are focused more on credit risk management rather than transaction costs and information asymmetry (Wensveen, 2003). In this view, financial intermediaries transform savings, given the preferences of the savers with respect to liquidity and risk, into investments according to the needs and risk profile of the investors. The study seeks to intermediate the relationship between SACCO members and lenders thereby ascertaining how well members can be managed or assessed for SACCOs to reduce the risk of loan default. Stakeholder theory was proposed by Dr. F. Edward Freeman (1984) and it asserts as to what an organization should be and how it should be deliberated. The principle of stakeholder recourse. Stakeholders may bring an action against the directors for failure to perform the required duty of care (Freeman 2004). In essence this theory seeks to equilibrate the interests of all stakeholders in a given institution. Managers who have been given the mandate to run the institutions should always act in the interest of all shareholders in maximizing wealth and not only for their own self benefit.

5.2. Empirical Review

The paper reviewed several relevant empirical literatures. The Kibui (2010) study investigated the effects of risk management practices on how Harambee SACCO performed. The study in particular delved into the impacts of strategies directed to credit evaluation, credit policy plan, present day techniques on credit risk control and monitoring, systematic loan defaulting and defaulter report on SACCOs financial performance. The empirical investigation adopted a descriptive exploration strategy. The objective populace of this investigation was credit officers of Harambee SACCO, Nairobi. The study found that the firm utilized shareholding, guarantor, collaterization, and insurance as part of the credit risk relief methodologies. The examination additionally discovered that risk management is useful in boosting financial performance to a considerable extent. However, this study did not capture the role of moderator in the study.

Magali (2014) explored Rural SACCOs in Tanzania and the effectiveness of Loan Portfolio Management. Data collection for the study was done in May 2013 and for data analysis, multiple regression was employed. The conclusions indicated a positive relationship between quality of a SACCO's loan portfolio and the loan size while a negative one exists between gender and borrower's location. It also came out clearly that loan portfolio quality had a negative relationship to agricultural produce cost and price fluctuations. Ochogo **(**2015) assessed the relationship that exists between management of credit risk and SACCOs' financial performance in Kitui County. It became apparent from the findings that a strong and positive relationship exists between SACCOs loan policies, credit monitoring, loan defaulting and their financial performance. Biwott (2015) explored the financial performance of KARI SACCO Limited as it related its management of credit risk. Mainly, the research sought to evaluate KARI SACCO Limited's financial performance against the importance of credit monitoring practices. The results were that a positive and definite relationship existed between KARI's financial performance and how it managed its credit monitoring practices. Keitany (2013) documents a negative relationship that exists between the performance and loan defaulting among SACCOs in operating Nairobi, Kenya. The study results depicted a negative relationship that exists between profitability and defaulting by creditors, recommending that it's important for SACCOs to review their credit policies from time to time in the quest of evaluating the character of loan applicants.

6. Research Methodology

The study used descriptive survey in analyzing data to draw conclusions from deposit taking SACCOs in Nairobi City County. The target population was 40 Deposit Taking SACCOs that have been licensed by SASRA to operate within Nairobi City County. Target respondents comprised of three key employees from each SACCO: Credit Risk Manager, Finance Officer and Head of operations thus bringing the target respondents to 120.The study adopted a census survey hence, no sampling was done for this study. Sampling for respondents, however, was through purposive sampling technique. This study utilized a questionnaire for primary data collection. Close and open-ended questions plus the use of

a Likert scale in all the independent variables were used to capture the respondents' input towards the study objectives. The method used to administer the questionnaires was "drop and pick later". Descriptive statistics was adopted in the analyzation of data by use of mean, percentage and standard deviation. Correlation analysis was adopted for data analysis and explanation of the main study findings. The effect of each independent variable was assessed using multiple regression analysis.

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$

Where:

Y = Financial Performance

β_0 = Constant

β_1-β_3= Beta Coefficients

X_1 = Credit Monitoring

X_2 = Credit Appraisal

X_3= Credit Risk Control

e = Error term

7. Results and Findings

7.1. Descriptive Analysis

The section represents output and interpretation on descriptive analysis in the form of mean and standard deviation.

Credit Monitoring	Mean	Std deviation
Prior before loan disbursement, the applicants credit worthiness is thoroughly checked	3.99	0.48
The SACCO has standardized credit application forms issued to applicants during the process	4.29	0.51
Credit disbursement evaluation covers completeness of the credit request process	3.77	0.11
Loan disbursement procedures adhere to firm's internal guidelines	4.23	0.23
The credit risk commission always performs thorough checks to ensure that loans are re-paid within the stipulated time	3.83	0.61
The credit risk committee continually monitors the status of loans issued to members	4.33	0.71

Table 1: Credit Monitoring Ratings
Source: Research Data, (2019)

The results from the findings indicate the highest score at 4.33 while the lowest is 3.77. This implies that credit must not only be monitored but reviewed as well and that portfolio managers need to keep a sharp eye over the loan. This, however, is also reflective of the fact that majority of these institutions lack, to a large extent, any form of standardized approach towards credit risk management and that much is left to the managers' discretion.

Credit Appraisal	**Mean**	**Std Deviation**
The collateral availed by members are evaluated against the loan credit applied.	4.38	0.81
The capacity of individual member to re-pay the loan is weighed against the loan requested	3.88	0.19
The credit risk committee always checks on members' source of income before loan disbursement	4.17	0.14
The ability of individual members to repay the applied credit is thoroughly weighed against the amount applied based on applicant's lifestyle	3.97	0.15
The credit risk assessment committee appraises the existing liabilities of borrowers before issuing loan	4.18	0.82
The credit risk assessment committee must check on the current financial status of the applicant before disbursements of the loan	3.79	0.13

Table 2: SACCOs in Terms of Credit Appraisal
Source: Research Data, (2019)

The findings indicate the highest score at 4.38 and the lowest at 3.79. This shows that loan review on a regular basis as well as a well-designed credit risk rating system will empower management of these institutions to identify changes in trends and individual credits faster.

Credit Risk Control	**Mean**	**Std deviation**
Proper document verification is done before loan disbursement	4.26	0.19
The organization has penalty mechanism in place to deal with defaulters	3.93	0.41
The credit risk committee is in existence and comprises of competent staff.	4.13	0.71
There is a probability of members to default on the loan disbursed	3.99	0.31
Audits are usually conducted on portfolio performance to evaluate member performance of loan utilization	4.28	0.27

Table 3: SACCOs in Terms of Credit Risk Control
Source: Research Data, (2019)

The findings indicate the highest score at 4.28 and the lowest at 3.93. The economy's general state came out as a moderate significance in terms of developing a sound credit policy. The study found out that credit risk committee reviews the credit risk management policy annually to harmonize borrowing trends with economic dynamics.

7.2. Correlation Analysis

The study adopted correlation analysis where the dependent variable (Y) was financial performance and independent variables were credit monitoring (X_1), credit appraisal (X_2) and credit risk control (X_3). This correlation output is presented in table 4 below:

		SACCOs' Financial Performance (Y)	Credit Monitoring (X_1)	Credit Appraisal (X_2)	Credit Risk Control (X_3)
SACCOs' Financial Performance (Y)	Pearson Correlation	1	.404**	.685**	.583**
	Sig. (2-tailed)		.000	.000	.000
	N	102	102	102	102
Credit Monitoring (X_1)	Pearson Correlation	.404**	1	.275**	.237*
	Sig. (2-tailed)	.000		.003	.011
	N	102	102	102	102
Credit Appraisal (X_2)	Pearson Correlation	.685**	.275**	1	.401**
	Sig. (2-tailed)	.000	.003		.000
	N	102	102	102	102
Credit Risk Control (X_3)	Pearson Correlation	.583**	.237*	.401**	1
	Sig. (2-tailed)	.000	.011	.000	
	N	102	102	102	102

Table 4: Correlation Analysis
Source: Research Data, (2019)

The study findings established that a positive correlation exists between credit monitoring and financial performance of these institutions, as indicated by correlation factor of 0.404. Statistically, this strong positive relationship was found to be significant as the p- value stood at 0.000 which is below the 0.05 threshold. The findings supported Ana-María, Francisco and Bernardino (2014) findings that there exists a positive relationship between credit monitoring and financial performance of SACCOs.

A strong and positive correlation exists between SACCOs' financial performance and credit appraisal as depicted in the table above. This is indicated by a 0.635 correlation coefficient, with a p-value of 0.000 which is below 0.05. The findings supported O'brien (2013) that credit appraisal aids in achieving quality in financial management.

In addition, the study found a positive and strong correlation between financial performance and credit risk control whose correlation coefficient stood at 0.583. The p-value was 0.000, which is below 0.05. The findings supported Gunday et al., (2011) in that Credit Risk Control enhanced SACCOs' Financial Performance in an environment of fast changing market.

7.3. Regression Analysis

The study adopted multiple regressions where the dependent variable (Y) was financial performance while the independent variables were credit monitoring (X_1), credit appraisal (X_2) and credit risk control (X_3). The diagnostic tests were done to ensure data was fit for purposes of regression analysis. The results are tabulated in table 5 below:

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.933	0.8704	0.793	0.6273

Table 5: Model Summary
Source: Research Data, (2019)

Table 5 above shows a good linear relationship between the dependent and independent variables in the study as depicted by correlation coefficient (R) of 0.933. The findings indicate a strong positive correlation between financial performance and credit monitoring, credit appraisal and credit risk control collectively. Coefficient of Determination (R^2) indicates how the variability in the dependent variable (Y) is caused by changes in the independent variables (X_1, X_2, X_3). The adjusted R^2 of 0.793 depicts a moderately strong relationship between dependent and independent variables. In this regard, there was a strong positive correlation between credit risk management and financial performance of deposit taking SACCOs.

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	2.1702	3	0.7234	30.585	.0179[a]
	Residual	23.177	98	0.2365		
	Total	25.3472	101			

Table 6: Analysis of Variance (ANOVA)
Source: Research Data, (2019)

Table 6 above shows the ANOVA statistics used in the regression model. The p- value of 0.0179 is less than 0.05 thus indicating that the regression was significant in determining the relationship between credit risk management and financial performance of deposit taking SACCOs in Nairobi City County. At 5% level of significance the F critical is 3.23 (Standard F-tables). The F calculated (30.585) is more than the F critical, therefore the overall model was a good fit.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	1.172	.7257		1.615	.0367
	Credit Monitoring	.798	.1889	.152	4.223	.0146
	Credit Appraisal	.571	.1533	.054	3.724	.0229
	Credit Risk Control	.676	.1717	.116	3.936	.0211

Table 7: Coefficients
Source: Research Data, (2019)

The regression function is extracted from table 7 above as follows:
$Y=1.172+0.798X_1+0.571X_2+0.676X_3$

Table 7 above shows results for the regression equation that was established. According to the regression function, all factors held constant (credit monitoring, credit appraisal and credit risk control), the coefficient for SACCOs' financial performance will be 1.172. Further, the findings show that a unit increase in credit monitoring leads to a 0.798 increase in financial performance all factors held constant. A unit increase in credit appraisal leads to a 0.571 increase in financial performance all factors held constant. Lastly, a unit increase in credit risk control leads to a 0.676 increase in the financial performance all factors held constant. The statistical significance of individual capital structure components on financial performance can be explained by the p-values. Credit monitoring has a p-value of 0.0146 which is less than 0.05 hence the study rejects the null hypothesis that there is no significant relationship between credit monitoring and financial performance. Results further indicate that credit appraisal has a p-value of 0.0229 which is an indication that there is a significant relationship between credit appraisal and financial performance hence, rejecting the null hypothesis. Similarly, credit risk control has a p-value of 0.0211. Consequently, the study rejects the null hypothesis that there is no relationship between credit risk control and financial performance. Credit monitoring is a significant predictor of financial performance. A unit increase in credit monitoring would yield a 0.798 increase in the financial performance. The results revealed prior to loan disbursement, the applicants credit worthiness is thoroughly checked (M= 3.99), the credit risk committee always performs thorough checks to ensures that loans are re-paid within the stipulated time (M= 3.83) and that credit disbursement evaluation covers completeness of the credit request process (M= 3.77). These findings go hand in hand with Magali (2014) that financial institutions must manage the credit risk within their entire portfolio and that includes the risk posed in individual transactions and credits.

Participants also added that the effective credit risk management by SACCOs is a critical element of a comprehensive and broad approach towards risk management. This is vital to the long-term success of all types of financial institutions with SACCOs being a part of them. In regard to credit appraisal, the study revealed that it forms a significant and crucial predictor of the financial performance. The findings showed that collateral availed by members is evaluated against the loan credit applied. (M=4.38), the credit risk assessment committee appraises the existing liabilities of borrowers before issuing loan (M= 4.18) and that credit risk committee always checks on members' source of income before loan disbursement (M=4.17). These findings concur with those of Keitany (2013) in that SACCOs' credit appraisal program revolved around collateral character capability and capacity.

8. Conclusion and Recommendations

8.1. Conclusion

The study sought to determine the relationship between credit risk management and financial performance of deposit taking SACCOs in Nairobi City County. There is a strong positive correlation between credit monitoring and financial performance whereby, credit monitoring has a p-value of 0.0146 which is less than 0.05. Hence, we conclude that credit monitoring is key and the same explains financial performance. The study found a strong positive correlation between credit appraisal and financial performance whereby credit appraisal has a p-value of 0.0229 which is less than 0.05. This means that credit appraisal is a major function in lending and the firms studied embrace the same to a great extent hence affecting financial performance. In addition, the study found strong positive correlation between credit risk control and financial performance whereby credit risk control has a p-value of 0.0211 which is less than 0.05. This is an

indication that credit risk control is highly valued and the same affects financial performance. In conclusion, the study found out that the variables studied, (credit monitoring, credit appraisal and credit risk control) are vital in determining financial performance of SACCOs hence, management should put them into consideration.

8.2. Recommendations

The study recommends to the management of deposit taking SACCOs on periodic thorough scrutiny and amendment of credit monitoring policies so as to ensure that current loopholes are addressed. This will enhance a low default rate among the institutions. SASRA as the regulator should ensure that management is fully competent in terms of skill, expertise and qualification. As these institutions expand to accommodate more members across the different regions of the country, their approach of solely relying on their individual portfolio managers could ultimately prove to be inadequate. The study findings recommend the regulator to see to it that customers' considerations are put to effect in policy formulation. This will help in spurring economic growth as SACCO members play a huge role in being part of the Kenya's economy.

9. Contribution to Knowledge

The study findings indicated that there is a significant relationship between credit monitoring, credit appraisal and credit risk control and financial performance of deposit taking SACCOs in Nairobi City County. This study will contribute to Finance Theory and Literature by helping management of these institutions to improve efficiency in credit risk. The study may also be used as a guide in policy formulation by the regulatory body- SASRA, in increasing productivity of these institutions as the country gears toward achieving vision 2030.

10. Areas for Further Research

Since the current business environment is not only dynamic but also presents new opportunities and challenges, it may be important that this study is replicated after 5 years to establish the status then. The study recommends additional variables to assess the effect of financial performance with the use of descriptive and correlation analysis. This will greatly assist in benchmarking with other institutions for the overall financial performance to be achieved.

11. References

i. Biwott (2015) Effects of Credit Risk Management on the Financial Performance of KARI SACCO limited
ii. Chijoriga, M. M. (1997). Application of Credit Scoring and Financial Distress Prediction Model to Commercial Banks Lending: The Case of Tanzania. Ph.D. Dissertation, Wirts Chaftsnnversitat Wien (WU), Vienna.
iii. Coyle, B. (2000). Framework for Credit Risk Management; United Kingdom: Chartered Institute of Bankers. Credit Unions, Washington D.C.
iv. Essendi (2013) effects of credit risk management on the loan's portfolio among Saccos in Kenya (unpublished MBA thesis), University of Nairobi, Kenya.
v. Kargi, H.S. (2011). Credit Risk and the Performance of Nigerian Banks Ahmadu, Bello University, Zaria.
vi. Kibui (2010). Effects of credit risk management on financial performance of SACCOs: a case study of Harambee SACCO in Kenya. Learning
vii. Magali, J. (2013). The Impacts of Credits Risk Management on Profitability of Rural Savings and Credits Cooperative Societies (SACCOS),' The Case Study of Tanzania. International Journal of Management Sciences and Business Research, Vol- 2, Issue 12:62-77'.
viii. Markowitz, H., (1952). Portfolio selection, Journal of Finance, 4, 77- 97.
ix. Mbole, W. (2004). The relationship between credit risk analysis and the level of non-performing loans, Unpublished MBA Project, University of Nairobi.
x. Ochogo (2015) Effects of Credit risk management practices on profitability of deposit taking SACCOs in Nairobi County.
xi. Parast and fini (2010) The effect of productivity and quality on profitability in US airline industry: An empirical investigation", Managing Service Quality: An International Journal, 20 (5), 458 – 474.
xii. SACCO Societies Regulatory Authority (SASRA) (2016). SACCO Supervision Report: Deposit Taking SACCOs. In house Publication.
xiii. Sambasivam, Y., & Biruk, A. (2013) Financial Performance analysis of GOHE Co-Operatives Savings and Credit Union in Bure Woreda, Ethiopia. International journal research journal of economics and business studies. 02 (06). Retrieved from www.theinternationaljournal.org.