



**EFFECT OF CREDIT POLICY ON FINANCIAL PERFORMANCE OF SAVINGS AND CREDIT CO-OPERATIVE SOCIETIES
IN KAKAMEGA COUNTY**

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ABSTRACT

Credit management is an important issue in any organization since most business operations are based on credit terms agreed by both parties. This is because without a proper management of firm's credit components, it is difficult for the firm to run its operations smoothly. A range of challenges affects SACCOs because most of their clients earn a modest income. As a result members default paying the loans disbursed to them. The purpose of this research was to determine the influence credit policy on the financial performance of SACCOs in Kakamega County. Dependent variable was financial performance of the SACCOs. The study employed descriptive research design. Structured questionnaires were used as the instruments for data collection. The sample size was 99. The study employed purposive sampling technique in identifying the SACCOs and the respondents from the sampled SACCOs. Data was analyzed and presented with the aid of statistical package for social sciences (SPSS). The findings indicated that credit policy significantly affect financial performance. In order to recover cash lost the management should take key issues on customer assessment and evaluation. The SACCO management should develop credit procedures, policies and analytical capabilities.

Key Words: Credit Policy, SACCOs, Collection policy, Credit period policy

INTRODUCTION

A credit policy outlines a structure or framework that act as guidelines when dispensing credit decisions which are some aspects and arrangements that an institution can set. This structure is fundamental principles and procedures for getting money back from clients, bearing in mind that not all borrowers will pay back since some of them will default since some customers are pay while others don't pay back their loans (Moti et al., 2012). The accumulation exertion should also consider going for quickening accumulations from averagely those who pay and as such reducing the possibility of a huge obligation burden (Loona & Zhong, 2014). An effective credit policy allows and insights full development of a chance for advancement in allocation and collection of credit. It is advisable for the SACCOs' management to ensure an efficient and effective credit policy (Kipkoech, 2015). Properly formulated credit policy, implemented and well comprehended at every level of an organization enables the management to maintain and uphold proper standards of the credit amount, therefore, avoiding any possible uncertainties and risks thus aiding in assessing and selecting investment opportunities that lead to the growth of the business (Gatuhu, 2013).

The Banking Act (2013) provides for the setting up of Credit Reference Bureaus and their operations. Specifically, it provides for registered CRBs to collect and disseminate prescribed credit information from clients of licensed institutions under the Banking Act (2013) the Microfinance Act (2006) and the SACCO Societies Act (2008). Resultantly SACCOs which are licensed are not barred from giving client information to CRBs but will require written consent for both positive and negative information sharing. Therefore, SACCOs need the approval to request credit information from bureaus with the aim of credit appraisal and give feedback on how the loan is performing (Kimondo & Muthemba, 2015). According to KUSCCO (2017) SACCOs have been added in the

Credit Information Sharing mechanism to help in tightening the noose on borrowers who default loan payment and for quite some time have been taking advantage of SACCOs by seeking credit from some financial institutions lack information their credit history.

Ondieki et al. (2017) Acknowledged that Kenyan Cooperatives, SACCOs have a significant role in Kenya's financial sector. A Savings and Credit Cooperative main aim is to collect savings from members and in return provide them with credit facilities (UN-HABITAT, 2010). Waweru (2011) asserts that SACCOs are voluntary associations or cooperative financial institutions owned and controlled by their members to promote saving, providing credit at low-interest rates and providing other financial services to its members. The common aim of SACCOs is to foster the economic interests and general welfare of its members. According to World Council of Credit Unions 2015 Statistical report. There are 60500 Credit Unions worldwide; in 109 countries on six continents, serving 223,000,000 members, having a total penetration of 8.3%, penetration rate computed by portioning out the sum of proclaimed credit union members by the economically active population, age 15-64 years old (WOCCU, 2016). Further, the report illustrates that the largest markets in Africa by some members as of December 31st, 2015 are (Kenya, 5,432,009; Senegal, 1,767,506; Rwanda, 1,607,560; Uganda, 1,325,517; and Benin, 1,272,020) (WOCCU, 2016).

Statement of the Problem

A range of challenges affects SACCOs because most of their clients earn a modest income. As a result, members default paying the loans disbursed to them, thus struggling to reach a balance between their running costs and satisfying the clients' needs (Kipng'etich & Muturi, 2015). Also, there are no stringent policies set by SACCOs in the country that regulate issuing of loans and collecting payments. Besides, limited credit appraisal poses a hitch in that SACCOs in Kenya carry out an inadequate

financial assessment of clients and their guarantors leading to disbursing of loans to credit unworthy members who eventually default (Hyman, 2016). All these challenges result in loss of revenue hence SACCOs collapse, and as such lose their bargaining power in the investment sector, their businesses also risk being liquidated, and they even lose potential customers (Musyoki, 2011). SACCOs should, therefore, solicit for new members who are high-income earners and should consider using liquid assets like Vehicle log books, title deeds and premises as collateral security (Olando et al., 2013). They should also formulate policies that meet the current market standards. The SACCOs should work with the Credit Reference Bureau to allowing gathering substantial information that will aid in proper credit appraisal (Banking Act, 2013). A number of studies have been done to determine financial performance of SACCOs including technology (Mosongo et al., 2013) managerial competency (Lwanga et al., 2014) dividend policy, loan portfolio and surpluses (Maingi, 2014) and thus, the studies recommend for further research on credit management while looking at SACCOs as business units aimed at benefiting their members, their profitability and ability to achieve long-term goals in a competitive market.

Research Objectives

To determine the effect of credit policy on the financial performance of SACCOs in Kakamega County.

LITERATURE REVIEW

Theoretical Review

C's of Credit

Lending foundations build their credit policy around the 5 C's of credit: A client with an excellent reputation with open and disclosed information about them in the process of the decision making. Reviewing sources of income versus obligations helps to determine the payment ability of the borrower based on past information about him or her. The wealth position of a borrower usually estimated by market standing and soundness of his

or her finances is called capital. Conditions such as socioeconomic, political environmental and commercial are used to assess the implementation of the recovery of the credits issued. The credit issuer is guaranteed of income in case of failure by the credit holder to pay back the loan by using collateral as guarantee (MacDonald et al., 2006). This theory aided in understanding the policies and procedure laid down to regulate the issue and collection of credit. The rate of extension to borrowers will help know when, how and to whom thus resulting in efficient credit decision making.

This theory informed the second objective of the study which sought to determine the effect of credit policy on the financial performance of SACCOs in Kakamega County. The 5 C's which comprise of Cash Flow, Collateral, Capital, Character, and Conditions helps SACCOs to put strategies in place on specific procedures and means of monitoring the lending activity. This strategies include collection policy and credit period policy.

Conceptual Framework

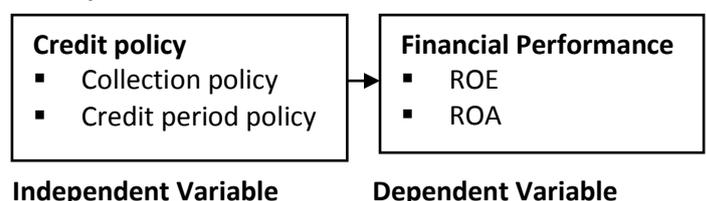


Figure 1: Conceptual Framework

Source: Author (2018)

Empirical Review

Ahmed and Malik (2015) evaluated the influence of credit risk management practices on loan performance (LP) while taking the credit terms and policy (CTP) as the dimensions of the credit risk management practices. For statistical evaluation, the primary data in cross sectional form has been taken into consideration. The data is collected from the managerial level credit risk management staff of microfinance banking sector. Multiple regression analysis has been used for empirical relationship evaluation of the credit risk management practices on the performance of loan. The results of the

analysis are showing that the credit policy have positive but insignificant impact on loan performance.

Byusa and Nkusi (2012) investigated the effects of credit policy on bank performance using data on selected Commercial Banks. Using a triangulation of methods such as quantitative data collection, questionnaire, and review of the existing literature, the paper evaluates the banking sector performance: its deepening over time, profitability, and efficiency in the light of post-liberalisation policies. The results obtained indicate banks have unusually high and increasing average interest rate spreads and interest rate margins showing both highly poor competition and inefficiency. Bad debts still exist though declining and therefore banks should continue to improve their credit policies.

Mwaura and Jagongo (2017) sought to investigate the effects of credit policy on financial performance of commercial banks in Kenya. Descriptive research design was adopted. The population for the study was all the forty three commercial banks headquarters located within Nairobi CBD Primary data was collected through the use of close questionnaire. The results shows that the nature of loan competitiveness, the study also found that most commercial banks rely to a large extent on the borrower's credit history in awarding loan amounts. The results shows that credit policy positively affect the performance of commercial banks.

A study carried out by Nyawera (2013) with the purpose of establishing the effects of credit policies on the financial performance of Micro finance institutions. Descriptive design was adopted. The researcher used a census approach for the six deposits taking micro finance organizations in Kenya. Secondary data was obtained from the central bank of Kenya and the individual institutions. The findings indicated a positive significant relationship implying that credit policies affects the financial performance of deposit taking micro finance organization with a minimal effect since there other more factors that affect financial performance with a greater effect.

Maiti (2015) sought to answer the question what is the effect of credit policy on financial performance of SASRA regulated SACCOs in Nairobi. The study adopted correlation research design. The study population consisted of all 40 SASRA Regulated SACCOs registered under the Societies Act in Nairobi, Kenya .The data was collected from regulated SACCOs financial books and financial reports of the societies. The study revealed that regulated SACCOs had adopted credit standards as a credit policy and credit term policy loan ratio in determination of how much a client would borrow. The study concluded that credit terms policy significantly increased ROA of regulated SACCOs hence decreasing loan to assets ratio significantly leading to increase in financial performance.

Mutua (2016) researched on the impact of credit risk management on the financial performance of savings and credit co-operative societies in Kitui County finding that credit monitoring was very high hence sound financial performance. She also established that SACCOs had effective credit policies governing issue and collection of loan amounts since most of these institutions carried out credit investigation and also followed up on the projects that their borrowers ventured to make sure that loans disbursed were invested well and as such an efficient system of financial performance.

METHODOLOGY

The research applied descriptive research design. According to Cooper and Schindler (2014) research design constitutes the blueprint for the collection, measurement, and analysis of the data. In compliance, Bryman and Bell (2003) argue that analysis design offers a framework for the collection and analysis of data. There were 5,769 SACCOs in Kenya (WOCCU, 2016) but the research targeted a population of one hundred and thirty-two (132) SACCOs within Kakamega County (KUSCCO, 2016). In this study, the sample frame included managers of SACCO such as Audit & Risk Managers, Finance managers, Credit managers, FOSA managers, CEO and Accountants. The researcher applied the

following Neyman allocation sample formulae to calculate the sample size:

$$n = N / (1 + N(e)^2)$$

Whereby,

N is the target population,

n is the sample size

e is the level of precision and in this study, 95% level of confidence was used which gives 0.05 chance of deviation from the actual.

Therefore: $n = 132 / (1 + 132(0.05)^2)$

= 99 Respondents.

Collection of data was by the use of questionnaires administered by the researcher whereby and built from the objectives of the study in chapter one. The researcher administered likert scaled

questionnaires with both closed ended and open ended questions to get information from the intended respondents (Saunders et al., 2009). SPSS software application was used to conduct Correlation and Regression analysis (Mbucho, 2015).

RESULTS

Credit Policies

To measure credit policies, a set of nine statements were formulated. The respondents were asked to indicate the extent of agreement with each of the credit policies statements. The relevant results were presented in Table 1.

Table 1: Credit Policies

Responses	SD	D	NA/ND	A	SA
We have formulated collection procedures and systems to secure repayment from customers	0(0%)	0(0%)	7(8%)	8(10%)	43(80%)
We enforce guarantee policies to provide chances for loan recovery in case of loan defaults	0(0%)	2(6%)	2(8%)	11(18%)	38(70%)
We have regular reviews on collection policies to improve the state of credit management	16(30%)	12(20%)	7(10%)	6(8%)	17(30%)
We maintain a credit policy manual to help in debt recovery	0(0%)	5(8%)	7(10%)	14(24%)	35(66%)
Flexible repayment duration enhances loan repayment	0(0%)	6(8%)	12(20%)	17(30%)	24(42%)
Penalty for late repayment encourages customers commitment to loan repayment	0(0%)	7(8%)	19(32%)	0(0%)	33(60%)
Staff incentives are effective in improving recovery of delinquent loans	7(10%)	7(10%)	12(20%)	15(28%)	18(32%)
We have stringent credit period policy	12(20%)	14(24%)	4(6%)	12(20%)	22(40%)

Key: SD=Strongly Disagree, D=Disagree, NA/ND=Neither Agree/Neither Disagree, A=Agree, SA=Strongly Agree

Table 1 showed that 80% strongly agreed that SACCOs had formulated collection procedures and systems to secure repayment from customers. None of the respondents strongly disagreed nor disagreed with statement with 8.0% remaining undecided to disagree or agree. Based whether SACCOs had enforced guarantee policies to provide chances for loan recovery in case of loan defaults

70% strongly agreed and 18% agreed. None of sampled respondents strongly disagree while 6% disagreed. The results revealed that 30% strongly agreed that SACCOs have regular reviews on collection policies to improve the state of credit management while 8% agreed. On the other hand, 30% strongly disagreed and 20.0% disagreed. Further, 66% strongly agreed that they maintained

a credit policy manual to help in debt recovery and 24% agreed. On the other hand, none strongly disagreed while 8% disagreed. Credit policies positively influence financial performance of SACCOs. This findings concurs with Bagchi and Khamrui, (2012) that organizations which can collect back debts and minimize the level of bad debts shall increase their profitability.

Furthermore 42% of respondents strongly agreed that flexible repayment duration enhances loan repayment and 30% agreed. However, none strongly disagreed while 8% disagreed with that statement. Further, 60% of respondents strongly agreed that penalty for late repayment encouraged customers commitment to loan repayment and none agreed. Similarly, none strongly disagreed and 8.0% disagreed. The results also revealed that 32% strongly agreed that staff incentives were effective

in improving recovery of delinquent loans as 28.0% agreed. On the other hand 10% of the respondents strongly disagreed and the same percentage also disagreed. Lastly, 40% strongly agreed that SACCOs had stringent credit period policy as 20% agreed. On the other hand, 20% strongly disagreed while 24.0% disagreed. This is in agreement with Kariuki (2010) who states that there are some policies which an organization should adopt to ensure proper implementation of credit management.

Financial Performance

To measure performance, a set of six statements were formulated. The respondents were asked to indicate the extent of agreement with each of the performance statements. The pertinent results were presented in Table 2.

Table 2: Financial Performance

Financial Performance	SD	D	NA/ND	A	SA
Return On Asset has been increasing over the past five years	6 (10.2%)	1 (1.7%)	13 (22%)	10 (16.9%)	29 (49.2%)
Return On Equity has been increasing over the past five years	2(3.4%)	5 (8.5%)	14 (23.7%)	15 (25.4%)	23 (39%)
Return On Investment has been increasing over the past five years	11 (18.6%)	3 (5.1%)	20 (33.9%)	7 (11.9%)	18 (30.5%)
Future projections for Return On Assets indicate that it will increase in the next five years	1 (1.7%)	7 (11.9%)	2 (3.4%)	24 (40.7%)	25 (42.4%)
Future projections for Return On Equity indicate that it will increase in the next five years	1 (1.7%)	11 (18.6%)	7 (11.9%)	13 (22%)	27 (45.8%)
Future projections for Return On Investment indicate that it will increase in the next five years	5(8.5%)	21 (35.6%)	3 (5.1%)	5 (8.5%)	25 (42.4%)

Key: SD=Strongly Disagree, D=Disagree, NA/ND=Neither Agree/Neither Disagree, A=Agree, SA=Strongly Agree

From Table 2, 49.2% of the sampled respondents strongly agree and additional 16.9% agreed that Return On Asset has been increasing over the past five years implying that more than half of the respondent confirmed that ROE has been increasing. On the other hand, 10.2% and 1.7% of the sampled respondents strongly disagree and agree respectively. Despite 23.7% of the respondents been undecided on Return On Equity

has been increasing over the past five years, 39% strongly agree and 25.4% agreed that Return On Equity has been increasing over the past five years. On the other hand, only 3.4% strongly disagreed and 8.5% agreed on the same. However, less than half of the respondents indicated that Return On Investment has been increasing over the past five years of which 30.5% strongly agree and 11.9% agreed. The results also revealed that 18.6% of the

respondents strongly disagreed while 5.1% sdiagreed on the same.

Majority of the respondents confirmed that future projections for Return On Assets indicated that it will increase in the next five years of which 40.7% agreed and 42.4% strongly agreed. However, 11.9% and 1.7% disagreed and strongly disagree respectively with the statement. Further, less than half of the respondents (45.8%) strongly agreed that future projections for Return On Equity indicate that it will increase in the next five years and 22.0% agreed. On the other hand, 1.7% strongly disagreed and 18.6% disagreed with the

Table 3: Correlation Results for Credit policies

		Credit Policies	Financial Performance
Credit policies	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	59	
Financial Performance	Pearson Correlation	.750**	1
	Sig. (2-tailed)	.000	
	N	59	59

** . Correlation is significant at the 0.01 level (2-tailed).

In determining the effect of Credit policies on financial performance of SACCOs in Kakamega County, the study established a coefficient of correlation (r) as 0.750**. The objective answered what was the result of credit policy on the financial performance of SACCOs in Kakamega County. This implied that increase in credit management policies would results to increases in financial performance and decrease in Credit policies management would lead to decrease in financial performance. The

Table 4: Regression Results of Credit policies

Model	Model Summary				Std. Error of the Estimate
	R	R Square	Adjusted R Square		
1	.750 ^a	.562	.554		.76434

statement. Lastly, the findings revealed that 35.6% disagreed that future projections for Return On Investment indicate that it will increase in the next five years as compared to 42.4% who strongly agreed. However, 35.6% disagreed and 8.5% strongly disagreed.

Correlation Analysis for Credit Policies

The Pearson correlation analysis was used to investigate the relationship between credit policies and financial performance. The results were as shown in are Table 3.

results indicated that the relationship between Credit policies and financial performance is positive, strong and significant.

Regression Results of Credit Policies

Regression analysis was conducted to find the proportion in the dependent variable (financial performance) which can be predicted from the independent variable (Credit policies). Table 4 showed the analysis results.

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.750 ^a	.562	.554	.76434		
ANOVA						
Model	Sum of Squares		Df	Mean Square	F	Sig.
1 Regression	42.739		1	42.739	73.157	.000 ^b
Residual	33.300		57	.584		
Total	76.039		58			
Coefficients						
Model	Unstandardized Coefficients		Standardized Coefficients		T	Sig.
	B	Std. Error	Beta			
1 (Constant)	0.540	.400			1.351	.182
Credit Policies	.803	.094	.750		8.553	.000

The results revealed a coefficient of determination (r^2) of 0.562 implying that credit policies can explain up to 56.2 % of the variance in financial performance of SACCOs in Kakamega County. The adjusted r square attempts to produce a more honest value to estimate r square for the population. The F test gave a value of $F(1,58) = 73.157$, $P < 0.01$, which was large enough to support the goodness of fit of the model in explaining the variation in the dependent variable. It also means Credit policies is a useful predictor of financial performance.

The regression equation for Credit policies becomes:

$$Y = 0.540 + 0.803CP$$

The findings of this study was in line with Mwaura and Jagongo (2017) who showed that credit policy positively affect the performance of commercial banks. Similar results were obtained by Nyawera (2013) who indicated indicated a positive significant relationship implying that credit policies affects the financial performance of deposit taking micro finance organization. However, Ahmed and Malik (2015) showed that showing that the credit policy have positive but insignificant impact on loan performance.

SUMMARY

The second objective of this study was to determine the effect of credit policy on the financial performance of SACCOs in Kakamega County. The

likert scale results indicated that many of the respondents strongly agreed that they had formulated collection procedures and systems to secure repayment from customers. They also affirmed that they enforced guarantee policies to provide chances for loan recovery in case of loan defaults and consequently administer penalty for late repayment encouraging customer commitment to loan repayment. Further, confirmed that they maintain a credit policy manual to help in debt recovery. On the other hand, a considerable number of them did not confirm that they have stringent credit period policy, indicating also that they did not regularly review collection policies to improve the state of credit management.

Pearson correlation analysis revealed that there is significant positive relationship between credit policies and financial performance of SACCOs. Simple linear regression revealed that a change in financial performance significantly accounts for credit policies. Multiple linear regression analysis implied that a unit change in credit policies would results to a significant change financial performance.

Conclusions

The study concluded that credit policy has significant positive effect on the financial performance of SACCOs in Kakamega County as indicated by Pearson Correlation results. This implied that an improvement in credit policies would result to significant increase in financial

performance. Regression results revealed that a variation in financial performance significantly accounts for credit policies. Further, a unit change in credit policy would lead to significant change in financial performance of SACCOs in Kakamega County in same direction. Hence, credit policies is significant predictor of financial performance. Therefore SACCOs which have good collection policy and robust credit period policy would achieve improved financial performance. This policies include obtaining credit history report of the borrower before advancing credit to them, assessing credit worthiness of the borrower and determining guarantor's intention to guarantee before disbursement of funds.

RECOMMENDATIONS

Most of the SACCO were found to have had formulated collection procedures and systems to secure repayment from customers. The study recommended that SACCO managers should have formalized structures to support secure collection and repayment from customers. Majority of SACCOs enforced guarantee policies to provide chances for loan recovery in case of loan defaults, therefore, the study recommends that SACCO management need to improve credit terms in conditions and terms and the customers should be aware before loan release.

Most of the SACCOs had staff incentives which were effective in improving recovery of delinquent loans. The study recommended that SACCOs should avail the required resources need for effective implementation of debt collection policy in the organization. This included competent and motivated staff; efficient information systems to make data processing quicker and more accurate

REFERENCES

Adre, A. (2007). Credit risk management in microfinance institutions. *International Small Business Journal*, 2(1), 231-285.

which would also improve the process of debt collection and ensure that their objectives and goals are met without constraints. Most SACCOs were found to have flexible repayment duration enhances loan repayment. The study recommends that SACCOs should offer discount to customers who repay before due date. This will help the borrowers to comply with their credit obligation as per the terms and conditions

Most SACCOs maintained a credit policy manual to help in debt recovery, in that connection, the study recommends there is need to adopt technology in their credit policies besides manual input. Some SACCOs did not have stringent credit period policy; therefore, the study recommended that SASRA should ensure all SACCO have credit policies which are well implemented to safe members deposits. A good number of respondents confirmed penalty for late repayment encourages customers commitment to loan repayment. The SACCOs management should ensure that the repayments dates and deadlines are clear and known to the borrower so as to reduce incidence of late payment. Few SACCOs regular reviewed on collection policies, therefore, this study recommends that SASRA should ensure that SACCOs regularly review the collect to improve state of their credit management.

Areas for Further Research

The study recommended that there is need for future studies to include moderating or intervening or mediating variable such as SASSRA regulation, management competency to find out if they have moderating effect on the relationship between credit risk management and financial performance.

- Ahmed, S. F., & Malid, Q. A. (2015). Credit risk management and loan performance: Empirical investigation of micro finance banks of Pakistan. *International Journal of Economics and Financial Issues*, 4(12), 175-192.
- Almazari, A. A. (2011). Financial performance evaluation of some selected Jordanian commercial banks. *International Research Journal of Finance and Economics*, 68, 50-63.
- Amakuwah, A. (2011). *Causes and effects of loan defaults and the profitability of Okomfo Anokye Rural bank*. (Unpublished Doctor's Thesis). University of Lagos Lagos, Nigeria,
- Arishaba, S. (2011). *Lending methodologies and loan losses and default in a amicrofinance deposit taking institutions in Uganda: A case stuy of Finca Uganda Kabala Branch*. (Unpublished Master's Thesis). Makerere University, Kampala, Uganda.
- Arora, A., & Kumar, M. (2014). The Credit-risk-management-index score for India banking sector: an indepth analysis. *IUP Journal of Bank Management*,, 13, 19-28.
- Arora, N., Gaur, A., & Babita, M. (2013). Credit Appraisal process of SBI: A case study of Branch of SBI in Hisar. *A Journal of Economics and Management*, 2(1) 28-77.
- Athanasoglou, P. P., Delis, M. D., & Staikouras, C. K. (2005, September 20). Determinants of Bank Profitability in the South Eastern European Region. *Munich Personal RePEc Archive*. Munich, South Eastern Europe: Munich Personal RePEc Archive.
- Auronen, L. (2003). Assymetric information: Theory and application. *Paper presented to the seminar of strategy and international business at Helsinki University of Technology*, (136-489). Helsinki: Helsinki University press.
- Bagchi, B., & Khamrui, K. (2012). Relationship Between Working Capital Management and Profitability: A Study of selected FMCG companies in India. *Business and Economics Journal*, 3(1), 1-11.
- Banking Act. (2013). Central Bank of Kenya. *Laws of Kenya*. Kenya: Central Bank of Kenya.
- Baumaohl, B. (2012). *The secrets of Economic Indicators*. New Jersey: Pearson Education, Inc.
- Bezzina, F., & Grima, S. (2012). Investigating circumstances that affect the proper use of derivatives. An empirical study with active users and controllers of derivatives. *Managerial Finance*, 38, 414-434.
- Bhattarai, Y. R. (2016). *Effects of credit risk on performance Nepalese commercial Banks: NRB economic review*. Tribhuvan University.
- Black, F., & Cox, J. (1976). Valuing Corporate Securities: Some Effects of Bond Indenture Provisions. *Journal of Finance*, 31, 351-367.
- Boeije, H. (2010). Analysis in Qualitative Research. *A Jornal of Language Learning*, 26(2), 90-91.
- Boldizzoni, F. (2008). Means and ends: the concept of capital in the West, 1500-1970. New York. Publisher: Palgrave Macmillan. *International Small Bussiness Journal*, 11, 229.

- Borg, W., & Gall, M. D. (2009). *Educational Research: An introduction* (5th ed.). New York : Longman.
- Brown, K., & Moles, P. (2014). *Credit risk management*. Edinburgh: Herriot watt university.
- Bryman, N., & Bell, V. (2003). Liquidity Risk, credit risk, market risk and bank capital International. *Journal of risk finance*, 2(3), 36-45.
- Bullivant, G. (2016). Assessing Risks in Trade. *Credit Management, Routledge* , 5(3), 123-172.
- Byusa, V., & Nkusi, D. (2012). The effects of credit policy on bank performance: Evidence from selected Rwandan Commercial banks. *Rwanda Journal*, 26, 116-119.
- Chelogoi, J. (2013). The non-correlation between board independence and long term firm performance. *Strategic Management Journal*, 20(1) 92-117.
- Chijoriga, M. (2011). Application of various discriminant analysis (MDA) as a credit scoring and risk assessment model. *international Journal of Emerging Markets*, 132-147.
- Collis, J., & Hussey, R. (2009). *Business Research. A practical guide for undergraduate and postgraduate students. 3rd edition*. Hampshire: Palgrave Mcmillan.
- Cooper, D. R., & Schindler , P. S. (2014). *Business research methods* (10th ed.). New York: McGraw-Hill.
- Creswell, W. J. (2009). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. Los Angeles: Sage publications.
- Currivan, D. V. (2006). Using a dual frame sample design to increase the efficiency of researching population subgroups in a telephone survey. *Journal of the American Association.*, 1(2), 1-1041.
- Curwin, J. &. (2008). Quantitative methods for business decisions. *Journal of Business and Management Sciences*, 2(6) 123-147.
- Dang, U. (2011). The CAMEL Rating System in Banking Supervision: a Case Study of Arcada University of Applied Sciences. *International Business Journal*, 1(2), 60–72.
- Derban, W. B. (2005). Loan restitution performance in community development finance institution in UK. *Small Business Economic Journal*, 25, 319-321.
- Dhakal, N. H. (2011). Micro-finance for achieving Millennium Development Goals in Nepal. *Agriculture Credit*, 37, 76 - 88.
- Dufera, A. (2010). Financial Achievements Evaluation: A Case Study of Awash International Bank (AIB). *International Research Journal of Finance and Economics.*, 3, 89-121.
- Eric, K. (2015, 05 18). *Kenya Credit union expectations*. Retrieved from Growth this year on bank beating loan rates: <http://www.bloomberg.com/news/articles/2011-03-21/kenya-credit-unions-expect-20->

- Feldman, R. (1997). Small Business Loans, Small Banks and a Big Change in Technology Called Credit Scoring. *Federal Reserve Bank of Minneapolis' The Region*, 3(1), 19-25.
- Financial sector Deepening. (2016). *2015 Annual Report*. Nairobi: FSD Kenya.
- Frank, B. S. (2014). Risk management practices adopted by financial firms in Malta. *Managerial Finance Journal*, 40, 578-612.
- Fujo, K. G., & Ali, I. A. (2016). Factors Affecting Financial Performance of Savings and Credit Societies in Kilifi County: A Case Study of Imarika SACCO. *International Journal of Business and Management*, 4(2), 448-464.
- Gaitho, M. (2010). *Credit Risk control practices by SACCOs in Nairobi*. (Unpublished Master's Thesis). University of Nairobi, Nairobi, Kenya.
- Gakure, R. N. (2012). Effect Of Credit Risk Management Techniques On The Performance Of Unsecured Bank Loans Employed Commercial Banks In Kenya. *International Journal of Business and Social Research*, 2(4), 23-36.
- Gamba , P., & Komo, I. (2012, 12 3). *ir-library.ku.ac.ke*. Retrieved from Evolution, Growth And Decline of the Co-operative: <http://www.cgd.or.ke/documents/Co-operatives>
- Garson, D. (2012). *Statistics Associate Publishing*. North Carolina: Blue Book Series.
- Gathigia, J. M., Waweru, K. M., & Muturi, W. M. (2016). Effect of Credit Risk on Financial Performance of Commercial Banks Kenya. *Journal of Economics and Finance*, 7(4) 2321-5925.
- Gatuhu, N. R. (2013). *The effect of credit management on the financial performance of microfinance institutions in Kenya*. Nairobi Kenya: unpublished MBA Desertation, University of Nairobi.
- George, A. A. (1970). The Market for Lemons", Qualitative Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*, 84(3), 488-500.
- George, O. (2016, April 8). *Manakin*. Retrieved from Credit Appraisal Process and Repayment of Loan at GN Bank. A Case Study of Upper and Lower Denkiya.: <http://hdl.handle.net/123456789/8615>
- Ghasemi, A., & Zahediasl, S. (2012). Normality Tests for Statistical Analysis: A Guide for Non-Statisticians. *International Journal of Endocrinology and Metabolism*, 10(2), 486-489.
- Gisemba, P. N. (2010). *The Relationship linking Credit Risk Management Practices and Financial Performance of SACCOs in Kenya*. (Unpublished Master's Thesis). University of Nairobi, Nairobi, Kenya.
- Hannan , T., & Prager, R. A. (2009). The profitability of small single-market banks in an era of multi-market banking. *Journal of Banking & Finance*, 33(2) 263-271.
- Haneef, S., & Riaz, T. (2012). Impact of Risk Management of Non-performing loans and Profitability in Banking Sector of Pakistan. *International Journal of Business and Social Science*, 3(7), 61-78.

- Hill, K. B., Lam, J., & Knight, L. M. (2011). Best practice in credit guarantee schemes. *Defining risk.*, Financial Analysts Journal.
- Horne, J. C. (2005). *Fundamentals of Financial Management* (7th ed.). Englewood cCliffs, New Jersey: Prentice-Hall Inc.
- Hossain, M. A. (2011). Credit risk management strategies of private commercial banks in Bangladesh: research on Prime Bank Limited,. *Journal of banking and financial services*, 5(2), 35-43.
- Hyman, L. (2016). Investment Analysis and Portfolio Management. *Focal point*, 2(1), 4-6.
- Irawan, F. R. (2011). Analisis Perubahan Rasio Keuangan Untuk memprediksi pertumbuhan laba persaha sahan manufaktur yang tercatat di bursa efek Indonesia Tahun 2011-2013. *Jurnal Ilmiah Mahasiswa FEB*, 2(2), 122-124.
- Isanzu, J. S. (2017). The impact of credit risk of the financial performance of Chinese banks. *Jornal of international Business Research and marketing*, 2(3), 14-17.
- Joetta, C. (2007). *Credit Risk Management. How to avoid lending disasters and.* New york: McGraw-Hill.
- Johnson , G., Scholes, K., & Whittington, R. (2007). *Exploring Corporate Strategy.* Edinburgh: Pearson Education, Limited.
- Kaggwa, H. (2013). Credit risk management system of a commercial bank. *The International journal of emerging markets*, 20(1), 9-31.
- Kagoyire, A., & Shukla, J. (2016). Effect of credit control on performance of commercial banks in Rwanda (A case study of Equity Bank Rwanda Ltd). *International Journal of Business and Management Review*, 4(4), 1-12.
- Kahuthu, D. G. (2015). Impact of Credit Management and Liquidity on the financial performance of Deposit Taking Savings and Credit Cooperatives In Kenya. *Analysis Journal of Finance and Accounting*, 6(14), 15-20.
- Kalimba, E., Shukla, J., & Mbabazize, M. (2016). Effect of Credit Management System on Financial Performance of Development Bank in Rwanda: Case Study of Development Bank of Rwanda. *The International Journal Of Business & Management*, 4(4), 521-531.
- Kargi, H. (2011). Credit Risk and the Achievement of Nigerian Banks, Ahmadu Bello University, Zaria. *IOSR. Journal of economic and finance*, 6(2), 21-28.
- Kariuki, J. N. (2010). *Effective Collection Policy.* Nairobi: KASNEB Publisher.
- Kenya Union of Savings & Credit Co-operatives Ltd. (2017). *Annual Report.* Nairobi: Buruj Solutions.
- Khorasgani, V. (2009). A Multivariate Statistical Analysis of the Characteristics of Problem Commercial banks. *Journal of Finance*, 20(1), 9-31.

- Kibor, A. M., Ngahu, S. T., & Kwasira, J. (2015). Influence of credit risk management on loan performance in Commercial Banks. *International Journal of Economics, Commerce and Management*, 3(10), 851-902.
- Kimondo, M., & Muthemba, K. (2015). *SACCO CIS Capacity review report*. Nairobi: FSD Kenya.
- Kipkirui, E., & Job, O. (2018). Credit Management practices and financial performance of microfinance institutions in Nairobi Central Business District, Kenya. *International Journal of Scientific and Education Research*, 2(4), 64-80.
- Kipkoech, R. S. (2015). Impact of Credit Management on Firm Profitability: Evidence Savings and Credit Co-operatives in Kenya. *Research Journal of Finance and Accounting*, 192-199.
- Kiplimo, L. (2014). Analysis of credit risk management efficiency. *Journal of Finance*, 6(2), 62-78.
- Kipng'etich, S., & Muturi, W. (2015). Impact of Credit risk control on the financial performance of savings and Credit Co-operative society in Kenya. *The Strategic Journal of Business Change and Management*, 2(44), 900-915.
- Kirui, S. K. (2015). Effect of credit risk management on financial performance of savings and credit cooperative society of Kenya. *The Strategic Business and Change Journal of Management*, 2(44), 900-915.
- Korankye, A. A. (2014). Starting and Control of Loan Default/Delinquency in Microfinance Institutions in Ghana. *American International Journal of Contemporary Research*, 4(12), 414-421.
- Kothari, C. R. (2010). *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.
- Kothari, C. R. (2012). *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.
- Krestlow, R. (2013). Information asymmetries and the provision of finance to small Firms. *Journal International Small Business*, 11(1), 35-46.
- Kupiec, P., & Yan, L. (2012). *What Factors Explain Differences in Return on Assets Among Community Banks?* Washington, D.C: Federal Deposit Insurance Corporation.
- Lahsasna, A., Ainon, R., & Wah, T. (2010). Credit scoring Model Using Soft Computing Methods: A Survey. *International Arab Journal of Information and Technology*, 7(2), 115-123.
- Leventis, S., Dimitropoulos, P., & Anandiran, A. (2012). Signalling by banks using loan loss provisions: The case of the European Union. *Journal of Economic Studies*, 39(5), 604-618.
- Loona, Y. C., & Zhong, Z. K. (2014). The impact of central clearing on counterparty risk, liquidity, and trading: Evidence from the credit default swap market. *Journal of Financial Economics*, 12(1), 91-115.
- MacDonald, J. C. (2006). Enterprise-wide risk management: staying ahead of the convergence curve. *The Journal of Lending and Credit Risk Management*, 81(10), 16-19.

- Maingi, S. M. (2014). Factors Affecting the Financial Performance of Saccos in Kenya: A Case of Selected Sacco's. *The International Journal Of Business & Management*, 2(8), 180-184.
- Maiti, S. N. (2015). *The effect of credit policy on financial performance of Deposit Taking Savings and Credit Cooperative Societies in Nairobi County*. (Unpublished Master's Thesis). University of Nairobi, Nairobi, Kenya,
- Mbucho, C. W. (2015). Influence of Credit Management on the Loan Performance among Microfinance Institutions in Kenya. *Strategic Journal of Business & Change Management*, 2(2), 50-62.
- Mbui, L. C. (2010). *Measuring Financial Performance: A Critical Key to Managing Risk*. Nairobi: National Crop Insurance Services, Inc.
- Mckillop, D., & Wilson, J. (2011). Credit Unions, A Theoretical and Empirical Overview. *Periodical, Inc New York University Salomon Centre and wiley.*, 6(3), 27-32.
- McManus, V. B. (2010). Risk management in banking. *Financial Analysts Journal*, 60(6), 19–25.
- Ministry of Co-operative Development and Marketing. (2012). *National strategic plan 2012/2013-2016/2017 for savings and credit societies*. Nairobi: Ministry of Co-operative Development and Marketing, Inc.
- Miriti, J. M. (2014). *Factors affecting financial performance of Savings and Credit Cooperative Societies: A case of Capital SACCO, Meru County*. (Unpublished Master's Thesis). University of Nairobi, Nairobi, Kenya,
- Mohammad, N., & Onni, N. A. (2015). Credit Risk Grading Model and Loan Performance of Commercial Banks in Bangladesh. *European Journal of Business and Management*, 7, 13-63.
- Monroe, M., & Berge, P. A. (2005). *Loan Documentation: An introduction for samll Businesses*. Minnessota: St. Paul publishing.
- Mosharrafa, R. A. (2013). Credit Assessment Practice of a Commercial Bank in Bangladesh. *International Journal of Economics, Finance and Management*, 1(6) 382-3870.
- Mosongo, E., Gichana, I., Ithai, J., & Nguta, M. (2013). Financial Innovation and Financial Performance: A Case of SACCOS in Nairobi County. *International Journal of Research in Management*, 5(3), 62-70.
- Moti H., M. J. (2014). Effectiveness of credit control policy on the performance of loan: empirical evidence from micro finance sector in Kenya. *International Journal of Business, Humanities, and Technology*, 6(5), 99-108.
- Moti, H. O. (2012). Effectiveness of credit management system on loan performance: empirical evidence from micro finance sector in kenya. . *International Journal of Bussiness, Humanities and Technology* 3(2), 2-6.
- Mugenda A.G. (2003). *Research methods Quantitative and qualitative approaches*. Nairobi: Acts Press.
- Mugenda A.G. (2008). *Social Science Research: Theory and Principles*. Nairobi: Acts Press.

- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods. Quantitative and qualitative*. Nairobi: Acts press.
- Mugenda, O. M., & Mugenda, A. G. (2012). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts press.
- Mumanyi, E. (2014). Opportunities and Challenges faced by Sacco's in the current devolved system of government of Kenya: a case of Mombasa County. *Social Sciences and Entrepreneurship International Journal*, 1(9) 2-3.
- Mureithi, A. (2010). *Relationship between credit appraisal process and the level of non-performing loans of the women enterprise fund loans offered through financial intermediaries in Kenya*. (Unpublished Master's Thesis). University of Nairobi, Nairobi, Kenya.
- Musyoki, J. N. (2011). *Factors Determining the Strategic Adoption of Digital Banking*. (Unpublished Master's Thesis) University of Nairobi, Nairobi, Kenya.
- Muthee, P. (2010, August 5). *Evaluation of factors influencing value addition by butchery agribusiness in Igembe north district, Kenya*. (Unpublished Master's Thesis) Egerton University, Nakuru, Kenya.
- Mutua, K. (2016). *Impact of credit risk management on the financial performance of savings and credit co-operative societies in Kitui County*. (Unpublished Master's Thesis) University of Nairobi, Nairobi, Kenya.
- Mutua, S. W., & Gekara, M. (2014). Credit Risk Management Strategies and. *Imperial Journal of Interdisciplinary Research*, 3(4), 1896-1907.
- Muzicek, C. (2010). Impact of credit Risk Management on Financial Performance of Commercial. *The Accountants*, 13(3), 16-19.
- Mwangi, G. N. (2012). The Effect of Credit Risk Management on the Financial Performance of Banks in Kenya. *Journal of Economics*, 1-69.
- Mwaura, D. W., & Jagongo, A. (2017). Credit policy and financial performance of commercial banks in Kenya. *International Journal of Current Research*, 9(1), 45912-45918.
- Nalzar, L. (2012, September 3). *Theoretical and conceptual framework*. Retrieved from <http://www.slideshare.net/ludymae/chapte-6theoretical-conceptual-framework>
- Ngui, A. N. (2010). *A survey of the Use of Financial Performance Indicators by SACCOs in Kenya*, (Unpublished Master's Thesis) University of Nairobi, Nairobi, Kenya.
- Nikolaidou, E., & Vogiazas, S. (2014). Credit Risk Determinants for the Bulgarian Banking System. *International Advance Economics Research Journal*, 20, 87-102.
- Njeru, M. N. (2015). Effect of Loan Repayment on Financial Performance of Deposit Taking SACCOs in Mount Kenya Region. *International Journal of Innovation and Applied Studies*, 10(4), 38-50.

- Noman, A. (2015). Credit risk management in Microfinance Institutions in Kenya. *Business strategy*, 23(4), 33-42.
- Norman, A., Pervin, S., Chowdhury, M. M., & Banna, H. (2015). The effect of credit risk on the banking profitability: A case on Bangladesh. *Global Journal of Management and Business Research*, 15(3), 2249-4588.
- Nyawera, K. N. (2013). *The effect of credit policy on the Financial performance of Deposit Taking Microfinance Institutions in Kenya*. (Unpublished Master's Thesis) University of Nairobi, Nairobi, Kenya.
- Okoth, R. A. (2016). Determinants of Profit for Saccos in Kenya: A Case Study of Wanandegge Sacco Ltd. *The International Journal Of Business & Management*, 110-139.
- Olando, C. A., Jagongo, A., & Mbewa, M. O. (2013). The Contribution of Sacco Financial Stewardship to Growth of Saccos in Kenya. *International Journal of Humanities and Social Science*, 112-137.
- Ondieki, A. N., Okioga, C., Okwena, D. K., & Onsase, A. (2017). Assessment of effect of external financing on financial performance of Savings and Credit Cooperative Societies in Kisii Central District, Kenya. *JKUAT Annual Scientific Conference* (pp. 2079-6226). Nairobi: JKUAT.
- Orute, J. (2016). Effects of credit risk management practices on non-performing loans: a case study of commercial bank of Kenya. *Journal of Small Business and Enterprise Development*, 24(10), 1027-1041.
- Pandey, I. (2008). *Financial Management*. New Delhi: Vikas Publishing House (PVT).
- Park, W. G. (2008). International patent protection: 1960–2005. *Science Direct*, 37, 761-766.
- Popli, G. (2013). Trade Liberalization and the Self-Employed in Mexico. *UNU WIDER Research Paper*. Monterrey, Mexico: Unpublished Master's Thesis Fondo de Cultura Económica.
- Psillaki, M. T. (2010). Evaluation of Credit Risk Based on Firm Performance. *European Journal of Operational Research*, 6(2), 873-888.
- Quinlan, S. (2011). Credit management policies. *Journal of Finance*, 85(5), 1–19.
- Richard, E. C. (2008). The credit risk management system of a commercial bank in Tanzania. *International Journal of Emerging Markets*, 3(8), 323-332.
- Ross, S. A., Westerfield, R. W., & Jaffe, J. (2005). *Cooperate Finance* (7th Ed.). McGraw: Hill Inc.
- Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2008). *Essentials of Corporate Finance*. Hill International Edition. McGraw: Hill Companies Inc.
- Samad, A. & Hassan, M. K. (2000). The performance of Malaysian Islamic Bank During 1984 -1997: An Explanatory Study. *Thoughts on Economics*, 10(1&2), 7-26.

- Sangmi, M.-u.-D. D., & Nazir, T. (2010). Analysis Financial performance of comercial banks in India: Application of camel model. *Pak. J. Commer*, 4(1), 40-55.
- Santos. (1999). *Santos 1999 Full Year Report*. USA, Chicago: Media Centre.
- Saunders, A., & Cornett, M. M. (2009). Financial Institution Management: A Risk Management Approach . In A. Saunders, & M. M. Cornett, *Financial Institution Management: A Risk Management Approach* (304-309, 6th ed.). New York: McGraw-Hill.
- Schmid, K. (2012). Bank loan loss accounting: A review of theoretical. *Strategic Management Journal*, 30(1), 21-36.
- Sekaran, U., & Bougie, R. (2003). *Research methods for business: A skill building approach* (6th ed.). New York: Wiley.
- Shannon, C. (2001). *The Bandwagon. IRE Transactions on Information Theory*. Illinois: University of Illinois Press.
- Sharma, S., & Kalra, D. (2015). An overview of credit appraisal system with specific reference to micro, small and medium enterprses. *Pacific Business Review International*, 7(11), 95-106.
- Tabachnik, B. G., & Fidell, L. S. (2001). *Using Multivariate Statistics*. (4th Ed.). Boston: Allyn and Bacon.
- Tadesse, Y. (2014). *The determinants of financial distress: Empirical evidence from banks in Ethiopia*. (Unpublished Master's Thesis) Addis Ababa University, Addis Ababa, Ethiopia.
- Thachappilly, G. (2011). Liquidity ratios help good financial management: Liuididty analysis revealse lightly short term financial problems. *Jornal of liuidity ratio analysis*, 123-128.
- Turyahebwa, A. (2013). *A Financial Performance in the Selected Microfinance Institutions in Uganda*. (Unpublished Master"s Thesis). Kampala International University, Kampala, Uganda.
- Walsh, L. (2010). *Monetary theory and policy*. Massachusetts: The MIT Press, Cambridge.
- Wanjiru, N. A., & Muturi, W. (2015). Factors Affecting Financial Performance of Savings and Credit Co-Operative Societies: Case Study Kiambu County. *International Journal of Management and Commerce Innovations*, 3(2), 13-27.
- Waweru, K. M. (2011). An investigation into the cash balance management challenges in. *Journal of Research in International Business and Management*, 1(5), 119-123.
- Woodward, W. A. (2007). *Statistical analysis quick refrence guidebook with SPSS examples*. London: SAGE Publications.
- World Council of Credit Unions. (Data as of December 2015). *2015 STATISTICAL REPORT*. Washington, DC: World Council of Credit Unions, Inc.

Wu, J. W., & Tsai, C. F. (2010). Using neural network ensembles for bankruptcy prediction and credit scoring. *Expert Systems With Applications*, 34(4), 2639-2649.

Zikmund, W. G. (2009). *Business Research Methods*, (8th ed.). Ohio: South Western/CENGAGE Learning.