Influence of Cross-Borrowing on Financial Performance of Savings and Credit Cooperative Societies in Eldama Ravine Sub-County, Kenya

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Abstract: *The purpose of the study was to assess the influence of cross borrowing on financial performance of Savings and Credit Co-operatives (SACCOs) in Eldama Ravine Sub-County. The specific objectives of the study were to assess the effect of adverse selection and credit policies on financial performance of SACCOs. Data was collected using a structured questionnaire and analyzed using descriptive and inferential statistics. The target population of the study comprised 150 Board members, SACCO unionizable staff and SACCO management staff. Stratified random sampling was used to obtain a sample size of 107 respondents. Data analysis was done using SPSS version 20. From the analysis, adverse selection was found to strongly influence financial performance than credit policy. Since adverse selection was a significant factor, SACCOs should share credit information between themselves and with other lenders. They should also update their credit policies and develop enhanced strategies to mitigate risk associated with credit policy.*
Key Words: *Cross Borrowing, Information Asymmetry, Credit Policy, Inflation, Adverse selection, Financial Performance*

I.   Introduction

The history of cooperatives started with the Rockdale Society of Equitable Pioneers, founded in 1844(MI&ED, 2014). However, Africa has a membership of 16 million making it third in membership size after North America and Asia which have 102 million and 36 million respectively. Compared to other continents Africa mobilizes only 0.4% of the global savings which is USD 1.1 trillion and 0.4% of global loans provided to the membership standing at USD 912 billion. North America, generally consisting of Canada and United States are the major players with savings and loans up to 83% and 84% of the statistics respectively (WOCCU, 2009).

In Kenya, the history of cooperatives dates back to 1908 when the first Co-operative Society was established in Lumbwa area in the current Kipkelion District (MI&ED, 2014). According to International Co-operative Alliance, Kenya Co-operative movement is currently ranked 1st in Africa and 7th internationally. In July 2013 WOCCU recognized Kenya SACCOs as the fastest growing subsector in the World having generated employment opportunities for over 500,000 people and indirectly for 2 million. Kenyan SACCOs had mobilized savings to the tune of Ksh.380 billion and an asset base of 493 billion as at 31st December 2012. Savings mobilization in the SACCO subsector has been growing at the average rate of 30% per annum (SASRA Reports 2012).
Cooperatives are active across financial sector- from micro finance to mainstream banking.

The establishment of SACCO Societies Act 2008 places the licensing, supervision and regulation of deposit taking under the armpit of the SACCO Societies Regulatory Authority (SASRA). Through this new legal framework, prudential regulations have been introduced to guide SACCO's growth and development. The Financial SACCOs constitutes over 45% of the total number of co-operatives in Kenya and have become a major player in the financial sector (MI&ED, 2014).The Kenya SACCO sub-sector comprises both deposit taking and non-deposit taking SACCOs. There were 6,007 registered SACCOs in Kenya as at December 2010 of which 2,959 were active .Of the active SACCOs 218 were deposit taking while 2,011 SACCOs were non-deposit taking (MI&ED, 2014). From estimation by Kenya Credit Providers Association in 2011, SACCOs control 1,875,000 loan accounts which are 39% of total loan accounts.

1.1.1 Overview of Cross Borrowing

According to Consultative Group to Assist the Poor (2012), the phenomenon of cross borrowing has been seen in countries including India, Morocco, Nicaragua, Bangladesh and Philippines. Cross borrowing has brought conflicting propositions across the financial industry with some advocating for cross borrowing while others viewing it as a cycle of debt hence inability to service leading to rising levels of delinquency and default.

Due to the nature of their business, financial institutions expose themselves to the risks of default from borrowers. Prudent credit risk assessment and creation of adequate provisions for bad and doubtful debts can cushion them against risk. However, when the level of non- performing loans (NPLs) is very high, the provisions are not adequate protection. According to the CBK (July, 1999) the level of NPLs in 1998 was estimated at Shs. 80 billion or 30% of advances, up from 27% in1997 as compared to 81.3 billion or 33.4% of total loans in November 2001.

A recent study by Financial Sector Deepening (FSD) (2009) however, revealed that SACCOs are facing severe liquidity problems and majorities are unable to meet the demands of their clients for loans and withdrawal of savings. Given this situation, clients are getting anxious about the future of the SACCOs. According to Olaka and Ochieng (2014), Kenyans are known to take loans from several financiers without disclosing this information to lenders. Borrowers owe money in formal and informal settings like shylocks. Out of desire to grow loan books due to stiff competition and the prevailing information asymmetry, lenders have allowed cross borrowing. Cross borrowing is also a phenomenon in SACCOs which are yet to be incorporated in the Credit Reference Bureau data base. Most SACCOs have had their profits diluted by non performing loans whose cause is attributed to cross-borrowing among others. In spite of this background, cross borrowing and its influence on financial performance of SACCOs have not been well studied and documented in the Kenyan SACCO context. The study attempted to bridge this knowledge gap and proposed ways of managing loans for sustainability of the SACCO sector.

1.2 Statement of the Problem
Lending is the main business of financial institutions and loans is generally the main source of revenue for SACCOs (Kwambai &Wandera, 2013). With savings of Ksh 380 billion and asset base of Ksh 493 billion, SACCOs control 39% of total loan accounts in Kenya (SASRA, 2012). However, many SACCOs have collapsed in Kenya since 1986 due to non performing loans. Non performing loans have resulted from national economic downturn, failure by loan applicants to disclose vital information during loan processing and lack of an aggressive debt collection policy (Waweru & Kalani, 2009). For example, members of Kihiihi SACCO in Uganda borrowed in various institutions resulting into the collapse of the SACCO. In Kenya, Tena and Ulinzi SACCOS are under liquidation due to bad governance (SASRA 2012). Recently, SASRA revoked business licenses and directed the immediate winding up and closure of the deposit taking business of Isiolo Teachers SACCO and Ogembo Tea SACCO due to non compliance with regulatory requirements and a further 5 SACCOS were issued with restricted licenses for the period ending June 2015 (The Kenya Gazette, 2015). KUSCCO (2009) indicates that many SACCOs are unable to meet the demands of their clients for loans and withdrawal of savings and some have gone for external funding at exorbitant interest rates so as to bridge the gap. This brings forth the issue of cross borrowing and to what extent it affects SACCOs' financial performance. Most SACCOs have increased provisions made towards non performing loans. The issue of bad loans can fuel credit crisis and result in the collapse of some of these institutions hence the economy as a whole. This forms the basis of the study because cross-borrowing results in nonperforming loans which leads to huge funds diverted to loan loss provisioning.

1.2 Objectives of the Study
i. To assess the influence of adverse selection on financial performance of SACCOs in Eldama Ravine Sub county, Kenya.
ii. To ascertain the role of credit policy on financial performance of SACCOs in Eldama Ravine Sub county, Kenya.

II. Literature Review
2.1 Theoretical Review
This section discusses agency theory, credit risk theory and interest rate theory. These theories are related to the independent variables of the study.

2.1.1 Agency Theory
The agency theory was first developed by Stephen Ross and Barry Mitnick. The principal–agent problem occurs when the agent is able to make decisions that impact or on behalf of another person or entity the principal. To some extent it exists for all contracts that are written in a world of information asymmetry, uncertainty and risk. Most commonly, information asymmetries are studied in the context of principal–agent problems (Charles, 2008). The dilemma exists because sometimes the agent is motivated to act in his own best interests rather than those of the principal. Common example of this relationship includes corporate management (agent) and shareholders (principal). The problem arises where the two parties have different interests and asymmetric information (the agent having more information), such that the principal cannot

directly ensure that the agent is always acting in its (the principal's) best interests particularly when activities that are useful to the principal are costly to the agent, and where elements of what the agent does are costly for the principal to observe. Moral hazard and conflict of interest may arise. Indeed, the principal may be sufficiently concerned at the possibility of being exploited by the agent that he chooses not to enter into a transaction at all, when that deal would have actually been in both parties' best interests. The deviation from the principal's interest by the agent is called 'agency costs.'

2.1.2 Credit Risk Theory

Despite the existence of credit risk since time immemorial, credit risk has not been widely studied until about 30 years ago. Before 1974, literature on credit risk used traditional actuarial methods of measuring credit risk, whose major difficulty was on their dependence on historical data. Today, credit risk can be analyzed using three quantitative methods: reduced form approach, structural approach and incomplete information approach. Reduced form approach was introduced by Artzner and Delbaen (1995). In this approach, the default event is modeled as either a stopped position process or a stopped Cox process with intensity ht. The intensity ht is then called hazard rate in reduced form approach since the product of ht and an infinitesimal time period dt is the default probability of the firm at that infinitesimal time period dt given the firm has not default yet before time t. According to Lando (1998) that defaultable loan can be calculated as if they were default-free using an interest rate that is the risk-free rate adjusted by the intensity. Merton (1974) builds a model basing on the capital structure of the firm which becomes the basis of the structural approach. In this approach, the company defaults at the loan repayment time T if its value falls below some fixed barrier at time T. Thus the default time is a discrete random variable which picks T if the company defaults and infinity if the company does not default. As a result, the equity of the firm becomes a contingent claim of the assets of the firm's assets value. Incomplete information approach was developed by Dufie and Lando (2001), which combines intensity-based approach and structural approach. In this approach, the default event is directly modeled as a point process nt with one jump of size of one at default. This point process Nt is a positive sub martingale and could be decomposed into a martingale plus its compensator. Incomplete information approach generalizes the forms of the compensator which may not be represented as an integration of the hazard rate.

2.2 Client Cross Borrowing

Estimates of the incidence of cross- borrowing vary. Krishnaswamy (2007) has estimated that in one state in India, the incidence of cross- borrowing is about 7%. In Bolivia in the late 1990s, close to a 33% of SACCO clients had cross- borrowed. In Andhra Pradesh, a study conducted just before the 2010 crisis suggests that 3% of households' cross- borrow. Of those households with SACCO loans, the great majority, 82%, have other formal loans. The findings of Krishnaswamy suggest that cross-borrowing is caused by clients' opportunistic and collective behavior and the desire to invest. A study entitled Multiple Memberships by Khalily and Faridi (2011) shows that individual overlapping rate was 31% in 2009, while the household overlapping rate was approximately 43%. The research shows that cross borrowing had occurred because of up scaling of enterprises, client's lumpy expenditures, incidence of shocks, repayment of previous loans, and leasing-in of land. The main cause of cross-borrowing was demand for enterprise financing.

A study entitled Multiple Borrowing and Loan Repayment of Microfinance clients in Tanzania by Mpangole (2012) shows that over 70% of 250 microfinance clients sampled have at least 2 loans from different MFI at the same time and about 16% had loans from individual lenders. The reasons for cross- borrowing were found o be insufficient loans from SACCOs, loan recycling and family obligations. Over 70% of respondents strained in repaying and associated it to multiple pending loans. Education level and number of dependants affected the number of loan contracts. However, Matzanke (2014) found no correlation between cross-borrowing and repayment problems especially with existence of effective CRBs but reported that cross-borrowing is caused by supply and demand imbalance, combination of formal loans to obtain large loans and overcoming short-term money shortages.

A recent study by Boiwa and Bwisa (2014) in Kenya found out that the reasons for cross-borrowing were insufficient loans from SACCOs, loan recycling and family obligations. More than 70% of respondents pegged their loan repayments problems to multiple pending loans. Education level and number of dependants was noted in the study to influence the number of loan contracts. Moreover, a study on the effect of competition on loan performance of deposit taking microfinance institutions in Kenya by Mwangi (2013) shows that there is a relationship between cross loan taking, selection standards and customer relationship, cost efficiency and loan performance of MFIs. Moreover, the study established that cross loan taking negatively affects loan performance in deposit taking MFIs.

Venkata and Veena (2010) identified the reasons for cross borrowing as specific consumption and investment needs, low-interest loans to repay high-interest loans, changes in credit policy and processing time. A study by Burki (2010) in Pakistan shows that many borrowers take multiple loans to meet their rising business

and consumption expenditures. 23 % of the clients in the study admitted to cross borrowing because the current loan size was insufficient. Moreover, borrowers patched loans due to the declining purchasing power of the currency and the rising cost of living hence the need for multiple loans.

In terms of repayment record, Krishnaswamy (2007) finds that cross-borrowers perform better than single borrowers based on average repayment rates and that cross- borrowing has a positive effect on loan repayment and sustainability of SACCOs. Aghion and Morduch (2005) stated that defaulting of loan is due to cross- borrowing. Vogelgesang (2003) also found that Bolivia had suffered from overlapping problems between years 1996-2000 where loan portfolio quality deteriorated. The study shows that over-indebtedness of the borrowers was neither created by high competition nor high supply of loan but cross borrowing.

2.3 Influence of Adverse Selection on Financial Performance

Information asymmetry deals with the study of decisions in transactions where one party has more or better information than the other. This creates an imbalance of power in transactions which can sometimes cause the transactions to go awry. Examples of this problem are adverse selection, moral hazard, and information monopoly. The primary reason why people give their money to financial intermediaries instead of lending or investing the money directly is because of the risk that is present from the information asymmetry between the provider of funds and the receiver of those funds. A seller knows more about the sale item than the buyer. So the buyer would be taking a risk buying the item. Likewise, a borrower knows more about his financial condition and his future prospects than the lender. How can the lender be sure that the borrower will not simply disappear with the funds or take enormous risks. When there is information asymmetry, Andreu (1995) poised that there are two types of risk namely adverse selection and moral hazard.

Adverse Selection is selecting whom to give your money as part of controlling risk. If you give it to someone who is not good at handling money, you can lose it. In fact, without information about those seeking funds, theory goes that you would have to charge an average price for your money or sale item. But an average price would cause those who are better risks or have better products to shun your offer, while those with higher risks will seek your offer, resulting in adverse selection.

A good illustration of this principle was presented by George A. Akerlof in his article "The Market for Lemons" for which he shared the Nobel Prize in economics in 2001. Suppose you have two people who want to sell their car. The first person is a little old lady who rarely drove her car and kept it in good condition. The second person drove his car during his wild teenage years-speeding and drag racing, and to save on money, he changed the oil only once in a while. They both come to a used car lot to sell their car, but if the car dealer or his customers couldn't distinguish between the cars, then he would offer an average price for both cars, since a customer isn't going to pay more than an average price without some guarantee that a higher priced car is better than a lower-priced one. Well, the little old lady isn't suffering from mental disorder, so she won't accept less than what her car is worth, while the young man, knowing a good price for his car considering its history, gladly takes it. So what happens is that the car dealer stocks up on lemons because the lemon sellers gladly accept his average price while the owners of sound cars don't (Akerlof, 1970).

The above scenario is not reality because there are ways of distinguishing the quality of cars, such as the mileage and the year it was manufactured and the car can be inspected for damage. But fund seekers will be harder to distinguish for if you offer an average interest rate for your loans, the people who are better risks will go elsewhere for the money, while the risky people will gladly take your money. Moral hazard is the risk that the receiver of funds will not use the money as was intended or they may take unnecessary risks or not be vigilant in reducing risk. When you give money to someone, you want to be sure that you are going to get it back with interest. However, this is less likely if the money is misused or lost through excessive risk-taking (Andreu, 1995).

2.4 Credit Policy and Financial Performance

The demand for trade credit requires a sound operating procedure to cope with continuous sales volumes, capital to fund the waiting time with a worthwhile return on the investment and regulation and enforcement informally or by law of credit agreements. This means having a Credit Policy. A credit policy is necessary to show the company's intended way of doing business and avoids confusion and potential misunderstanding. Successful companies have long set down their preferred operational approaches to the credit function (Glen, 2010).The contents of a Credit Policy is based on the scope of the function which includes credit assessment and the granting of credit limits, collection processes, authority levels payment collection, allocation and application. Weak credit risk management practice is the primary cause of many business failures. Parrenas (2005) carried out a study of micro finance institutions that failed in the mid 1980s in the U.S.A and found out that the consistent element in the failures was the inadequacy of the financial institutions management system for controlling loan quality. Institutions are expected to manage their credit risk to avoid exposing their organizations to unnecessarily high level of risk and subsequently a decline in returns.

The level of interest rate risk attributed to the SACCOs lending activities depends on the composition of its loan portfolio and the degree to which the terms of its loans, this expose the SACCOs revenue stream to changes in rates. Pricing and portfolio maturity decisions should be made with an eye to funding costs and maturities. Significant individual credits or portfolio segments are especially sensitive to interest rate risk this should be periodically stress-tested. If the asset/liability management committee responsible for managing the SACCOs interest rate risk is to manage all of the SACCOs positions, it must have sufficient reports on loan portfolio and pipeline composition and trends. These reports might include a maturing loans report, pipeline report, and rate and reprising report (Glasserman, 2009).

SACCOs frequently shift interest rate risk to their borrowers by structuring loans with variable interest rates. Borrowers with marginal repayment capacity may experience financial difficulty if the interest rates on these loans increase. As part of the risk management process, SACCOs should identify borrowers whose loans have heightened sensitivity to interest rate changes and develop strategies to mitigate the risk. One method is to require vulnerable borrowers to purchase interest rate protection or otherwise hedge the risk (Glasserman, 2009).

2.5 Financial Performance Indicators in SACCOs
The concept of financial performance and research into its measurement is well advanced within finance and management fields. Nimalathasan (2008) poses a well-judged technique named CAMELS rating which is widely used for evaluating performance of financial institutions, especially banks. According to the Kenya's Financial Sector Stability Report (2011), SACCOs have not been subjected to prudential regulation and supervision like commercial banks and deposit taking microfinance institutions. This makes it difficult to objectively analyze their financial statements using CAMEL rating, the key indicators of financial soundness and stability. In Kenya, the development of Risk Evaluation Parameters also called CAMELS is at an advanced stage (SASRA 2012). The SACCO Societies Financial Soundness Indicators covers Capital adequacy, Asset Quality, Earnings and Profitability and Liquidity. In this study financial performance was measured in terms of earnings and profitability.

III. Methodology
The study adopted a descriptive survey design to assess the influence of cross borrowing on financial performance of Savings and Credit Co-operative Societies. This design was deemed appropriate because it guaranteed a breadth of information and accurate descriptive analyses of characteristics of a sample which was used made about the population. The study population consisted of board members, SACCO unionizable staff and management staff across the SACCOs movement in Eldama Ravine Sub-County. Due to the large size of the population and the scattering over a wide geographical area, samples were drawn from an accessible population of approximately 150 respondents which comprised of SACCO management staff, SACCO unionizable Staff and board members of various SACCOs in Eldama Ravine Sub- County. Stratified random sampling was then employed in sample size selection. The study used questionnaires to collect primary data from respondents. Questionnaires consisted of matrix questions designed to collect data on adverse selection and credit policy. The data was organized as per the research question and a coding scheme adopted to facilitate development of the appropriate data structure to enable its entry into the computer. The instruments were pre-tested in Keiyo Teachers SACCO. Cronbach's Alpha coefficient was used to measure reliability of the variables for either even and uneven items based on the order of number arrangement of the questionnaire items and a reliability coefficient of 0.865 was accepted. Data cleaning was done where the questionnaires were examined to ensure that they were dully filled. Data was coded and entered into a Statistical Package for Social Sciences (SPSS version 20) section dealing with descriptive statistics and regression analysis. Quantitative data was analyzed using descriptive statistics such as mean, standard deviation, percentages and frequencies. Multiple linear regression model was used to establish the influence of cross borrowing on financial performance of Savings and Credit Cooperative Societies.

IV. Results And Discussion
4.1 Adverse Selection and SACCO Financial Performance
The findings on the effect of adverse selection on SACCOs' financial performance are presented in Table 1. Majority of the respondents agreed that lack of universal credit information by lenders led to several loan contracts as shown by a mean of 4.486, information asymmetry led to adverse selection of clients' creditworthiness as shown by a mean of 4.3178, adverse selection resulted in a series of nonperforming loans as shown by a mean of 4.514, legal and operational expenses while recovering loans increased as shown by a mean of 4.215. The findings also show that external funds at exorbitant interest rate affected unfavorably financial position as shown by mean of 4.0467 while CRB membership and reduction in systematic credit risk was almost neutrally responded as shown by a mean of 3.6542. High concentration of responses around the mean was found

on adverse selection, non performing loans and universal credit information as depicted by standard deviations .6044 and .5886 respectively. Information asymmetry and creditworthiness, legal and operational expenses on loan recoveries, interest rate on external funds and CRB membership had standard deviations distributed far from their means implying that there was no universal agreement on these factors.

Table 1: Influence of Adverse Selection on SACCO Financial Performance

FACTOR	n	Mean	Std. dev
Universal credit information by lenders and several loan contracts	107	4.486	.5886
Information asymmetry leads to adverse selection of clients creditworthiness	107	4.317	.7345
Adverse selection leads to non performing loans and increased loan provision	107	4.514	.6044
Adverse selection increased legal and operational expenses in recovering bad loans	107	4.215	.8470
External funding at exorbitant interest rates affect unfavorably financial position	107	4.046	1.006
CRB membership reduces systematic credit risk caused by adverse selection	107	3.654	1.381

4.2 Credit Policy and SACCO Financial Performance

As shown in Table 2, majority of the respondents strongly agreed that credit policy guided credit administration as shown by a mean of 4.588 and variation in credit policy gave one opportunity to cross borrow thus increasing risk of bad debts as shown by a mean 4.392. An almost neutral response was obtained on credit policy failure to guide loan administration affecting loan quality as shown by a mean of 3.757. Response on whether reduction in the general availability of loans reduced loan portfolio growth was neutral as shown by a mean 3.392. Reduction of credit supply due to sustained period of careless and inappropriate lending nearly got an agree response as shown by a mean 3.822. Respondents agreed that credit policy has assisted in minimizing cost of granting credit as shown by a mean 4.224 and that credit policy has assisted in the maintenance of cash flow as shown by a mean 4.392. Based on standard deviations, the use of credit policy as a guide varied by .494, variation in credit policy .578, credit policy failure to guide .959, reduction in general availability of loans and portfolio growth 1.155, careless and inappropriate lending 1.139, credit policy and minimization of cost of granting credit 0.816 while credit policy as a tool to assist in cash flow maintenance 0.786.

Table 2: Roles of Credit Policy on Financial Performance of SACCOs

FACTORS	n	Mean	Std. dev
Financiers use credit policy to guide credit administration	107	4.588	.494
Variation in the credit policy gives one a chance to cross borrow increasing the risk of bad debts	107	4.392	.578
Credit policy fails to guide loan administration affecting loan portfolio quality resulting	107	3.757	.959
Reduction in the general availability of loan has reduced the growth of your loan portfolio	107	3.392	1.155
Sustained period of careless and inappropriate lending reduces credit supply hence losses for lending institutions.	107	3.822	1.139
Credit policy minimizes cost of granting credit hence improving the financial performance	107	4.224	.816
Credit policy assist maintain cash flow hence smooth run of activities	107	4.392	.786

4.3 Adverse Selection, Credit Policy and Financial Performance

As shown in Table 3, majority of the respondents agreed that adverse selection and credit policy affected capital adequacy, asset quality, earnings and profitability, liquidity and investment returns as shown by means of 4.018, 4.084, 4.383, 4.579 and 3.990 respectively. However, standard deviations reveal that agreements on liquidity, earnings and profitability were concentrated around respective means implying unison in agreeing to their effects. Standard deviations for capital adequacy, asset quality, and investment returns are dispersed far from respective means implying lack of universal agreements on their effects.

Table: 3 Adverse Selection and Credit Policy on SACCO Financial Performance

Factor	n	mean	Std.dv
Capital adequacy	107	4.018	1.018
Asset quality	107	4.084	.982
Earning & profitability	107	4.383	.593
Liquidity	107	4.579	.599
Investment returns	107	3.990	.806

4.4 Inferential Results

The results of the inferential statistics are presented in Table 4.

Table 4: Correlation Matrix

		Adverse selection	Credit policy
Capital adequacy	Pearson Correlation	.490**	.053
	Sig. (2-tailed)	.000	.589
Asset quality	Pearson Correlation	.371**	.091
	Sig. (2-tailed)	.000	.349

Earnings and profitability	Pearson Correlation	.366**	.542**
	Sig. (2-tailed)	.000	.000
Liquidity	Pearson Correlation Sig. (2-tailed)	.498**	.111
		.000	.254
	Pearson Correlation	.010	-.270**
	Sig. (2-tailed)	.919	.005
Investment returns	N	107	107

The relationship between adverse selection and capital adequacy, asset quality, earnings and profitability and liquidity was significant as shown by r-values of 0.490, 0.371, 0.366, and 0.498 respectively. This is satisfactory for objective one on the influence of adverse selection on financial performance since the relationship is positive and the p-values were below 0.05 indicating that there is a relationship between adverse selection and financial performance at 5% level of significance. The relationship between credit policy, earnings and profitability was also positively significant as shown by r-value 0.542 and p- value .000 which is less than 0.05. Credit policy and investment returns were negatively related but significant as shown by r- values 0.270 and p-value of .000 which is less than 0.05. The relationship between adverse selection, capital adequacy, asset quality, and liquidity was positive but insignificant as shown by r-values of 0.053, 0.091, and 0.111, respectively. The p-values for capital adequacy, asset quality and liquidity was 0.589, 0.349 and 0.254 respectively which was far above 0.05 thus qualifying the insignificance of capital adequacy, asset quality and liquidity.

4.4 Regression Equation

From the data in table 5 the established regression equation was $Y = 2.511 + 0.325X_1$ since credit policy is insignificant. From the above regression equation it was revealed that holding adverse selection and credit policy to a constant zero, financial performance of SACCOs would be 2.511, a unit increase in adverse selection would lead to increase in performance of SACCOs in Eldama Ravine Sub County, Kenya by a factor of 0.325 and a unit increase in credit policy would lead to increase in financial performance of SACCOs in Eldama Ravine Sub County, Kenya by a factor of 0.083. The study also found that the p-values for adverse selection was less that 0.05 an indication that the variable was statistically significant in influencing financial performance of SACCOs in Eldama Ravine Sub county, Kenya. The p- values for credit policy and cost push inflation was more than 0.05 thus the two variables were statistically insignificant in influencing financial performance of SACCOs in Eldama Ravine Sub county, Kenya.

Table: 5 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.511	.632		3.974	.000
	Credit policy	.083	.088	.103	.949	.345
	Adverse selection	.325	.095	.331	3.425	.001

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable due to changes in the independent variable. From the findings the value of adjusted R squared was 0.120, an indication that there was variation of 12% on financial performance of SACCOs due to changes in adverse selection and credit policy at 95% confidence level. This shows that 12% of changes in financial performance of SACCOs in Eldama Ravine Sub County was jointly accounted for by the dependent variables. R shows the relationship between the study variables in the sample, from the findings shown in the table below there was a moderate positive relationship between the study variables in the sample as shown by 0.380.

Table: 5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig.
1	.380	.144	.120	.55654	.000

V. Conclusions And Recommendations

5.1 Conclusions

From the findings, the study found that adverse selection and credit policy had influence on the financial performance of SACCOs. Since this were the study variables representing cross borrowing, financial performance of SACCOs was influenced by cross borrowing at a slighter percentage of 12%. The study

established that there was strong relationship between financial performance of SACCOs and adverse selection while for credit policy the relationship was weak. The study revealed that a unit increase in adverse selection would lead to an increase in financial performance of SACCOs in Eldama Ravine Sub County, Kenya; this is an indication that there was positive association between adverse selection and financial performance of SACCOs. Also a unit increase in credit policy lead to slightly an increase in financial performance of SACCOs in Eldama Ravine, Kenya, which showed that there was positive weak relationship between financial performance of SACCOs. Thus adverse selection significantly influenced financial performance of SACCOs while credit policy slightly influenced the financial performance of SACCOs in Eldama Ravine Sub County, Kenya.

5.2 Recommendations
The study recommends that SACCOs should adopt credit information sharing between themselves and also with other financiers so as to eliminate the adverse selection of clients' creditworthiness. The study also recommends that there is need for SACCOs to update and enhance their credit policies in order to improve their financial performance since credit policy enhances loan quality and helps streamline liquidity problems in SACCOs hence reducing non-performing loans. The researcher also recommends further studies on factors affecting financial performance since adverse selection and credit policy account for only 12%.

References

[1]. Aghion, A. & Morduch, H. (2005). The Economics of Microfinance . Cambridge: MIT Press.
[2]. Akerlof, G. (1970). The Market for Lemons: Quality Uncertainty and the Market Mechanism. Quartely Journal of Economics, 84 (3), 488-500.
[3]. Andreu, M. Michael, D & Green, R. (1995). Microeconomic Theory. Oxford University Press.
[4]. Artzner, P. & Delbaen, F. (1995). Measuring LGD on Commercial Loans. The RMA Journal, 9, 16-28.
[5]. Boiwa, W. & Bwisa, H. (2014). Effects of Multiple Borrowing on the Living Standards of Microfinance Clients at Kenya Women Finance Trust. International Knowledge Sharing Platform, 4 (9), 2225-0565.
[6]. Burki, H. (2010). Microcredit Utilization: Shifting from Production to Consumption. Pakistan Microfinance Network.
[7]. Chien, T. & Danw, S. (2004). Performance Measurement of Taiwan Commercial Banks. International Journal of Productivity and Performance Management, 53 (5), 425-434.
[8]. Institute of Credit Management (2012). Guide to a Credit Policy. Nairobi: ICM Credit Management Supplement.
[9]. Kenya Union of Savings and Credit Cooperatives. (2009). Challenges Facing SACCOs. Nairobi
[10]. Kenya Financial Regulators. (2011). Kenya's Annual Financial Sector Stability Report. Nairobi:
[11]. Kithinji, A. & Waweru, N. M. (2007). Merger Restructuring and Financial Performance of Commercial Banks in Kenya. Economic Management and Financial Markets Journal, 2 (4), 9-39.
[12]. Khalily, B. & Baqui, F. (2012). Advancing Financial Inclusion to Improve the Lives of the Poor. Consultative Group to Assist the Poor.
[13]. Krishnaswamy, K. (2007). Competition and Multiple Borrowing in the Indian Microfinance Sector.Institute for Financial Management and Research Center for Microfinance.
[14]. Kwambai, K. & Wandera, M. (2013). Effects of Credit Information Sharing on Nonperforming Loans. European Scientific Journal, 9 (13), 1857-7431.
[15]. Lando, D. (1998). Portfolio Credit Risk, Federal Reserve Board of New York. Economic Policy Review Journal, 10, 71-82.
[16]. Matzanke, M. (2014). Cross-borrowing and its Impact on Microentrepreneurs Indebtedness, Repayment Performance and Well-being. Lima.
[17]. Merton, R. C. (1974). Almost Everything You Wanted to Know About Recoveries on Defaulted Bonds. Financial Analyst Journal, 12, 57-64.
[18]. Mpangole, H. (2012). Multiple Borrowing and Loan Repayment: A Study of Microfinance Clients at Iringa Tanzania. Global Journal of Management and Business Research, 12 (4), 2249-4588.
[19]. Mwangi, M. (2013). Effect of Competition on the Loan Performance of Deposit Taking Microfinance Institutions in Kenya. International Journal of Economics and Finance, 1 (2), 702-716.
[20]. Nimalathasan, B. (2008). A Comparative Study of Financial Performance of Banking Sector- A application of CAMELS rating. Economic and Administrative Series, 2(2008), 141- 152.
[21]. Olaka, H. & Ochieng, B. (2014). Multiple Borrowers Threats to Banks. First KBA Conference. Nairobi: Kenya Bankers Association.
[22]. Philip, H. (1999). An Introduction to Modern Economics . New York: Prentice Hall.
[23]. SASRA. (2012). Supervision Reports. Nairobi: SACCO Societies Regulatory Authority.
[24]. Venkata, N. & Veena, Y. (2010). Why do Microfinance take Multiple Loans? Bangladesh: Microsave India.
[25]. Vogelgesang, U. (2003). Microfinance in Times of Crisis: The Effect of Competition, Rising Indebtedness and Economic Crisis on Repayment Behaviour. Bolivia: World Development.
[26]. Waweru, M. N. & Kalani, M. (2009). Commercial Banking Crisis in Kenya: Causes and Remedies. Global Journal of Finance and Banking, 3(3), 2009.
[27]. World Council of Credit Unions (2009). Statistical Report.