

# Factors Affecting Financial Performance of Savings and Credit Co-Operative Societies: Case Study Kiambu County

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**Abstract:** The purpose of this project was to establish the factors affecting the financial performance of Sacco's in Kiambu County. The objectives of the study that were used were loan default, dividend policy and membership size of the Sacco's. This research involved the use of a descriptive design. The research focused on all the 12 Sacco's in Kiambu County licensed by SASRA the regulatory body by the end of 2014. The study was based on data published from the audited annual reports of the Sacco's and covered a period of 5 years from 2010-2014. Quantitative data collected was analyzed by use of descriptive statistics and inferential statistics using SPSS version 17 and presented through percentages, mean, standard deviation with the key independent variables being Return on Assets and Return on Equity. The study found out that dividend policy and membership affected positively the financial performance of Sacco's whereas loan default negatively affected the financial performance. The linear regression analysis shows a relationship,  $R = 0.713$  and  $R^2 = 0.509$  which means that 50.9% of the corresponding change in Return on Assets can be explained by Membership, loan default and dividend policy. The beta coefficients indicated the relative importance of each independent variable (Membership, loan default and dividend policy) in influencing the dependent variable (ROA). Dividend policy was the most important in influencing Return on Assets since it has the highest beta value (beta= -0.458). The second most influential is the Loan default with a beta value (beta= -0.385). Membership had the weakest influence on ROA with a beta value (beta=0.201). The findings of the study recommended that the Sacco should work towards joining the credit reference bureau and to educate their members in prompt payment. It also recommended that the Sacco should take insurance covers for the loans to reduce the loan losses. The Sacco should aim on onboarding more members to their Sacco thus will increase the members saving and also expand on the investment avenue so as to establish a consistent way of paying the dividend.

**Keywords:** Loan default, Dividend Policy, Membership Size and financial performance.

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## 1. INTRODUCTION

Cooperative societies as formal organizations enable their membership make efforts to achieve any common objectives on voluntary and democratic basis. According to (John, 2002), the first ever Co-operative movement was started by Robert Owen in the year 1844 and in recent years the SACCO sector has faced tough challenges globally as noted by (WOCCU, 2012) to include mission drifts, income generation, compliance, competition, insufficient capital among many others. The sectors financial stability will impact broadly on the nation's economic growth and employment creation.

The Sacco industry is part of the cooperative sector in Kenya, which has impacted on lives of many Kenyans over the years. The sector may be categorized into financial and non-financial cooperatives. Non-financial cooperatives deal with the marketing of members' produce and services such as dairy, livestock coffee, tea, handicrafts and many more similar cooperatives. On the other hand financial cooperatives comprise Sacco's, housing and investment cooperatives.

The Deposit-taking Sacco Societies (DTSS) is part of the larger Sacco sub-sector in Kenya which comprises the deposit-taking and the non-deposit taking Sacco Societies. The non-deposit taking segment is composed of those Sacco Societies whose business is limited to mobilization of deposits (non-withdrawable) for purposes of lending to members. The deposits are non-withdrawable in that they may be used as collaterals for loans only and can only be refunded upon the member's withdrawal. (Sacco supervision annual report-2014).

The Deposit Taking Sacco's (DTS) besides the basic savings and credit products, also provide basic 'banking' services (demand deposits, payments services and channels such as quasi banking services commonly known as ATMs), FOSA and are licensed and supervised under the Sacco Societies Act of, 2008. The general trend is that Sacco's start as non-deposit taking Sacco business and grow to deposit taking Sacco business to expand the range of financial services to members. (Kenya Financial Stability Report 2010).

The Sacco Societies Act (2008) was enacted to provide for the licensing, regulation, supervision and promotion of savings and credit co-operatives by the Sacco Societies Regulatory Authority (SASRA). Thus, this Act provides for the establishment of the Sacco Regulatory Authority whose functions include licensing Saccos to carry out Deposit taking business as well as regulating and supervising Saccos (Wanyama, 2009). The enactment of the Sacco Societies Act (2008) was part of the developments within the wider scope of on-going reforms in the financial sector and meant to initiate reforms in the Sacco Industry. There were two main objectives for this reform; first being to protect the interest of Sacco members and ensuring there is confidence by public towards the Sacco sub-sector; and secondly to spur Kenya's economic growth through mobilization of domestic savings. The ultimate aim of the reforms is to modernize the subsector making it more relevant to the needs of Kenyans and expand its reach while integrating it into the formal financial sector. The Sacco Societies Act (2008) and its attendant Regulations (2010) are risk oriented providing minimum operational regulations and prudential standards required of deposit-taking Sacco Societies to ensure financial stability of the Sacco subsector. The prudential standards target all areas that entail significant risk of the Sacco business from a going-concern perspective. This includes; the availability of capital funds to face any potential unexpected losses that may arise and poorly performing loans or investment, the quality of the loan portfolio as the main income-generating asset in Sacco Societies as well as ensuring that loan granting and lending conforms to the approved credit policy, the reasonability of expenses relative to effective income received, the continuous availability of liquid funds to finance portfolio growth continuous availability of liquid funds to finance portfolio growth and respond to depositors and creditors needs, the overall asset structure in terms of non-earning assets, fixed assets and investments in private sector securities, as per regulatory requirements.

There were a total of 135 licensed deposit-taking Sacco Societies (DTSS) at the commencement of the year 2014, out of a total of 215 DTSS which had submitted their applications for deposit-taking business. The remaining 80 DTSS were required by law to have attained the minimum licensing requirements and be licensed on or before 18th June 2014 upon the lapse of the four (4) years transition period which was provided in Section 68 of the Sacco Societies Act (Cap 490B) as read with Regulation 84 of the Sacco Societies (Deposit-Taking Sacco Business) Regulations, 2010

However, by the close of the transition period on 18th June 2014, only forty-nine (49) DTSS had met the minimum licensing requirements, and were accordingly issued with licenses to undertake deposit-taking business in Kenya. The remaining thirty-one (31) DTSS which were previously undertaking deposit-taking business before the commencement of the Regulations failed to attain the minimum core capital and other licensing requirements. These thirty-one (31) DTSS were therefore not granted deposit-taking license and were directed to cease deposit-taking Sacco business within the meaning of the Sacco Societies Act, wind-down their then existing deposit-taking businesses, and revert to non-deposit taking business (Back Office Service Activities (BOSA) only under the Co-operative Societies Act.

The Authority therefore had a total of 184 licensed DTSS during the year under review, but at the close of the year 2014, three (3) of the licensed DTSS, had their deposit-taking licenses revoked and not renewed for the year 2015 due to persistent failure to address non-compliance issues which put to risk the interest of member deposits and financial sustainability of the deposit-taking business. These DTSS were equally directed to revert to BOSA only businesses under the Co-operative Societies Act.

Lastly, the Authority did put one DTSS under statutory management during the year 2014, that is Jijenge Sacco in Kiambu County for purposes of protecting the deposits of the members therein which resulted from an acute liquidity challenges, rendering the DTSS incapable of meeting its short term obligations, particularly the depositors therein. The statutory

management shall last for a period of six (6) months, which lapses in 2015 upon which the financial condition the DTS, shall be assessed to determine the next cause of action.

Financial performance measures how well a firm utilizes its primary mode of business to generate revenue. It entails measuring of the results of a firm's policy and operations in monetary terms based on the allocated resources to most viable projects that generate returns which maximize shareholder's wealth. Financial performance can be measured using different methods but all measures should be taken in aggregation for example financial ratio analysis has been a useful way of gaining a "snapshot" picture of SACCOs. Ratios have no financial theory behind them to tell us what should be the case (or value) thus no way to identify a "theoretically best" value for any of the ratios.

The World Council of Cooperative Unions developed the PEARLS monitoring system. According to (David, 2002), many different financial ratios and rules of the thumb have been promoted for financial institutions worldwide; few have been consolidated into an evaluation program that is capable of measuring both individual components and the system as a whole. The World Council of Credit Unions, Inc. set of financial ratios "PEARLS" measures key areas of SACCOs operations: Protection, Effective financial structure, Asset quality, Rates of return and cost, Liquidity and Signs of growth. The use of the PEARLS evaluation system is as an Executive Management Tool and monitoring the performance of the credit union remain the most important. The PEARLS system is designed as a management tool that goes beyond the simple identification of problems and help managers find meaningful solutions to serious institutional deficiencies.

Sacco's play an important part in the financial sector in Kenya by providing savings and credit services to a large portion of the population. One sector of the service industry is the financial sector whereby many commercial banks and other financial institutions continue to grow day by day. Some banks have even crossed border to offer services in the neighboring East African states. SACCOs are financial institutions which offers similar products like banks and most of them were formed long time ago but their performance is not something to be proud of compared to commercial banks and other financial institutions (Gathurithu, 2011).

Mvula (2013) presented a report on common issues affecting performance of SACCOs and pointed out that the issues affecting performance of SACCOs are inadequate capital, poor asset quality, poor governance, poor profitability, poor liquidity and non-compliance.

On the other hand Mudibo, (2005) discussed some of the factors affecting performance of SACCOs as weak regulation, limited product and services, low marketing and poor image. With such challenges, the dividend policy of major Sacco's may be put into question, especially with low and middle income earners in developing countries where the average citizen live on less than a dollar a day. Equally, the rate of getting dividends are generally lower than those in developed countries, therefore, better dividends policy should usually be a priority for Sacco's in developing countries (Mwangi, 2008). Also default on loan repayments poses the greatest risk to stability of the multi-billion shilling savings and credit co-operative (Sacco) movement, financial sector regulators have said. With the savings and credit co-operatives increasingly becoming an important tool in economic development, the instability and inadequacy of services provided by them may compromise the quality of life and life span of average income groups in Kenya. This in the long run will affect the country's income generation potential and the overall economic growth. This growth can only be realized when there is sufficient number of well-trained co-operative officers, technical staff, professional and management manpower. Few studies have been done to establish whether the issue of membership size, dividend policy and loan defaulting affect the financial performance of Sacco's. The main aim of the study is to investigate the factors that mostly affect the financial performance of Savings and credit societies.

The specific objectives of the study are:

- i. To establish whether loan defaulting affect the financial performance of Sacco's.
- ii. To determine whether membership size affect financial performance of Sacco's.
- iii. To investigate whether dividend policy affect financial performance of Sacco's.

## **2. THEORETICAL REVIEW**

### **Theory of Credit Default:**

In accordance to the study of Kenan (1999) a credit default represents the financial failure of an entity (a person or a company). A theory of credit default should therefore represent a systematic understanding of the causes which directly

lead to the effects which are associated with credit defaults. Such a theory is required to provide direct causal connections between macroeconomic causes of changing financial environment and their microeconomic effects on changing personal or corporate financial conditions, leading to possible credit defaults. Most existing theories of credit default do not meet this causal requirement.

#### **Theory of micro-loan borrowing rates & default:**

A model of micro loans is used to determine the equilibrium borrowing rates, and default Probabilities. Monitoring by lenders is critical for equilibrium to exist in our model if the maturity of the loan is long. With short maturity loans, monitoring is shown to be counter-productive. The manner in which the loan rates depend on the market structure, monitoring costs, joint-liability provisions and punishment technology is characterized when the borrowing group optimally chooses the timing of default. Designing the loan contract so that borrowers make higher payments in good states and lower payments in bad states are shown to be pareto improving, Hoofman (2006). There are very large groups of society, especially in poor and developing parts of the world who do not have access to rudimentary financial services such as bank savings accounts, credit facilities, or insurances. Households in these sections of the society are typically poor and access credit in informal credit markets. Such informal credit markets include: local money-lenders, cal shop-keepers, who provide trade credit, pawn-brokers, payday lenders, Rotating Savings and Credit Associations (ROSCAS). A number of economists have examined these informal credit markets, and their potential linkages to more formal credit markets. A partial list of such research includes Besley, Coate, and Loury (1993), Braverman and Guasch (1986), Varghese (2000, 2002), and Caskey (2005). It is well understood that the interest rates in such informal markets tend to be much higher than the borrowing rates that prevail in formal credit markets.

### **Loan Evaluation Models:**

#### **Credit Scoring Model:**

The most widely used credit measure to predict future loan performance is credit scoring model. Feldman (1997) explained credit scoring as “the process of assigning a single quantitative measure, or score, to potential borrower representing an estimate of the borrower’s future loan performance”. The models are statistical in nature such as logistical regression analysis or discriminant analysis and more recently neural networks and Support Vector Machine (SVM). Credit scoring methods are used to estimate the likelihood of default based on historical data on loan performance and characteristics of the borrower. In the small business environment, if the customer statistics produce a score above the cut-off score, the application is considered for further assessment by specialized small business units and then later progresses to the small business credit department for approval or otherwise. The basic assumption is that there exists a metric which can distinguish between good and bad credits and segregate them into two separate distributions. Credit scoring has its limitations. Feldman (1997) considered the credit scoring models used in Sacco’s and MFI lending to be more intricate than those used in consumer lending and have a propensity of placing substantial weight on factors related to the financial history of the business owner. Some studies (Frame, Srinivasan and Woosley, 2001; Berger & Frame, 2005) have found that credit scoring is associated with an increase in overall lending because of the inclusion of more marginal classes of borrowers.

#### **Accounting-based Model:**

Accounting ratios are also widely used by banks in a bid to limit adverse selection and moral hazard problems in loan advancements. The methodology of the accounting-based approach is based on Multiple Discriminant Analysis (MDA) and logistic models that are the most useful in accounting based variables for classifying company default. Khorasgani (2009) argued that although there are numerous drawbacks to using accounting ratio based models in predicting defaults, SACCOs’ financial ratios derived from balance sheets and profit and- loss accounts are regarded as good predictors of default. In addition, liquidity and activity are the most crucial factors in predicting an SME’s and individual default, as well as the positive effect of age and size variables on Sacco’s default prediction.

#### **Survival-based Credit Scoring Model:**

Some banks take the process to another level by making use of the survival analysis method to measure response or time of an occurrence of an event. Luoma and Laitinen (1991) pointed out that the aim of the survival analysis method is to measure the link between illustrative variables and survival. Investigating the timing when customers are likely to go “bad” is important for effective credit management policies. The bank can manage and monitor profitability of clients to

the bank over a customer's lifetime. It has been shown previously by Narain (1992:109) and Banasik et al. (1999) that survival analysis can be useful to estimate default and repayment.

#### Default Risk Models:

According to the study of Moody (2003) evidence from many countries in recent years suggests that collateral values and recovery rates on corporate defaults can be volatile and, moreover, that they tend to go down just when the number of defaults goes up in economic downturns. This link between recovery rates and default rates has traditionally been neglected by credit risk models, as most of them focused on default risk and adopted static loss assumptions, treating the recovery rate either as a constant parameter or as a stochastic variable independent from the probability of default. This traditional focus on default analysis has been partly reversed by the recent significant increase in the number of studies dedicated to the subject of recovery rate estimation and the relationship between default and recovery rates.

#### Conceptual Framework:

The study sought to study the factors affecting the financial performance of Sacco's. The dependent variable which was used in this study was the financial performance of Sacco's in Kenya. The financial performance was measured by using Return on Assets (%) and Return on Equity. In this study we use loan default, dividend policy and membership size as independent variables.

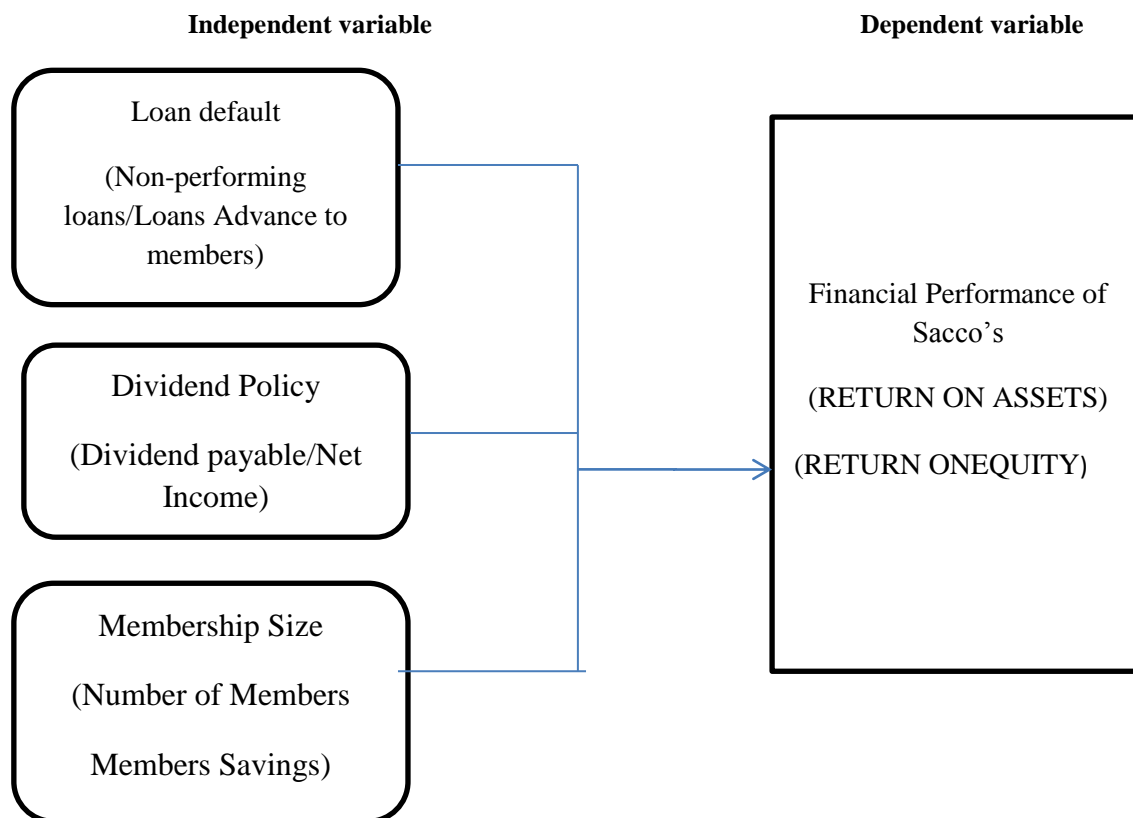


Fig 2.1 Conceptual Framework

#### Critique of Existing Literature Relevant to the Study:

From the studies it shows that the dividend irrelevance theory founded by Miller and Modigliani (1961) when they published a theoretical paper showing the irrelevance of dividend policy in a world without taxes, transaction costs or market imperfections. The payout decision is irrelevant because it neither creates nor destroys value for shareholders. If the investment decision is held constant, higher dividends result in lower capital gains, leaving the total wealth of shareholders unchanged. They stated that because investors do not need dividends to convert their shares into cash they will not pay higher prices for firms with high dividend payout. In other words payout policy will have no impact on the value of the firm. However in real world situations where there are market imperfections such as taxation effects, transaction costs, asymmetric information and agency cost. Though, most researchers tend to believe that there is a



positive relationship, there are a few others like Michaely (1995) and Gwilym et al., (2004) who believe that there is no such relationship, and hence prior period dividends do not affect the financial performance of the firm.

Bisher (2012) carried out study to determine the relationship between size and financial performance of commercial banks in Kenya. The study was carried out on 43 banks for the period of 2000 to 2001 using multiple regression and correlation analysis. The findings of the study showed a weak relationship between size and financial performance.

### Research Gap:

A lot of research has been done on problems experienced by Sacco's in Kenya and the research has reviewed governance, level of education and market risk as factors affecting Sacco performance. Little research has been carried out about the membership size, loan default and dividend policy on performance of Saccos in Kiambu County.

### 3. RESEARCH METHODOLOGY

The research design employed in this study was descriptive research design. The population of study was 12 SASRA regulated SACCOs in Kiambu County. This group was sampled from SASRA regulated SACCO's for the past five years.

The secondary data collected involved the previous works from related articles including published Financial Reports from the SACCOs and data related to those SACCOs available with the Sacco Societies Regulatory Authority (SASRA) annual reports on their performance.

The inferential statistics was applied to establish a casual effect relating independent variables to the dependent variable. A linear regression of financial performance versus factors affecting financial performance is applied to establish the effect between variables. The model treats financial performance of SACCOs as the dependent variable while the independent variable are membership size, loan default and dividend policy.

The analytical model equation is represented in the linear equation below:

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

Where;

Y = Financial Performance as measured by Return on Assets; ROA and ROE

$\alpha$  = Constant term (Total Assets)

$\beta$  = Beta coefficient

X1 = Number of members

X2 = Loan default

X3 = Dividend payout ratio

e = Error term

The significance of the analytical model was tested by the use of ANOVA statistical model which is the Analysis of Variance. A regression analysis was done to find out the relationship between membership size, loan default, dividend policy and financial performance. Both the SPSS software and Microsoft Excel was used to ensure the accuracy of collected data.

### 4. RESULTS AND DISCUSSION

The study sought to establish the trend in the number of Sacco members over the study period.

Table 1 Sacco membership size

| year | Min | max    | mean  | Std.deviation |
|------|-----|--------|-------|---------------|
| 2014 | 481 | 129903 | 22806 | 37920         |
| 2013 | 457 | 129903 | 20456 | 36965         |
| 2012 | 448 | 124272 | 17808 | 34903         |
| 2011 | 360 | 118926 | 15590 | 33255         |
| 2010 | 250 | 103526 | 12885 | 28931         |

There was a general increase in membership of Sacco's as demonstrated by the increase in the mean values in table 4.1. The high standard deviations implied that the data points were widely dispersed about the mean, implying high variability regarding the number of members in Sacco's. It can be concluded that membership increases over time thus the findings of the study indicate growth of Sacco's.

**Member's deposit:**

The study sought to establish the trend in the member's deposit over the study period.

| year | min      | Max        | mean      | Std.deviation |
|------|----------|------------|-----------|---------------|
| 2014 | 2848333  | 2848333    | 678550225 | 1069946764    |
| 2013 | 2328438  | 3149828022 | 601034696 | 935753622     |
| 2012 | 18365251 | 2296934377 | 443799392 | 673464302     |
| 2011 | 14361068 | 1672476261 | 394157805 | 588869079     |
| 2010 | 12084669 | 1337155258 | 238845029 | 372127242     |

Table 4.2 indicates that the mean value of the member's deposits has indicated a gradual increase from 2010 to 2014. The high standard deviation demonstrates a wide dispersion around the mean of the distribution implying that the member's deposits differed widely. The member's deposit are consistent with membership size that is the more the membership size the more the deposits.

**Loans default:**

The study sought to establish the returns on assets of the Sacco's over the study period which was measured by loans advanced to members per non -performing loans.

| year | min    | Max    | mean    | std.deviation | skewness |
|------|--------|--------|---------|---------------|----------|
| 2014 | 0.0000 | .4418  | .102166 | .1259717      | 1.942    |
| 2013 | 0.0000 | .4764  | .094920 | .1390447      | 2.155    |
| 2012 | 0.0000 | .3254  | .059717 | .1024739      | 1.949    |
| 2011 | 0.0000 | .0744  | .020101 | .0290089      | 1.327    |
| 2010 | 0.0000 | 1.0000 | .166320 | .3485521      | 2.071    |

Loans default was highest in 2010 with a mean of 0.166320. Then it declined in 2011 (mean=0.20101), table 4 indicates that there has been an upward trend in loans default from 2012 (mean=0.59717) to 2014 (mean=0.102166).

**Dividend Policy:**

The study sought to establish the dividend policy by use of the dividend payout ratio from year 2010-2014.

| year | min    | Max    | mean    | std.deviation | skewness |
|------|--------|--------|---------|---------------|----------|
| 2014 | 0.0000 | 1.2733 | .264014 | .3776865      | 1.996    |
| 2013 | 0.0000 | .9275  | .252926 | .3109667      | 1.594    |
| 2012 | 0.0000 | .5995  | .177762 | .2240873      | .932     |
| 2011 | 0.0000 | 1.0472 | .285042 | .3638430      | 1.281    |
| 2010 | 0.0000 | .8232  | .229018 | .3014516      | 1.073    |

The highest Sacco's dividends pay out was in the year 2011 (mean=0.285042) then followed by 2014 (mean=0.264014).

**Return on Assets (ROA):**

The study sought to establish the returns on assets of the Sacco's over the study period which was measured by net income per total assets.

| year | min    | Max   | mean     | std.deviation | skewness |
|------|--------|-------|----------|---------------|----------|
| 2014 | .0003  | .0370 | .019190  | .0130532      | .157     |
| 2013 | -.0191 | .0284 | .010986  | .0145475      | -.552    |
| 2012 | -.1024 | .0342 | -.004444 | .0455234      | -1.888   |
| 2011 | .0014  | .0348 | .013143  | .0088934      | 1.340    |
| 2010 | -.0122 | .0297 | .009288  | .0131223      | .197     |

The mean value for return on Assets (ROA) was highest in 2014 indicating a value of 0.019190. It was followed by 2011 with a value of 0.13143.

**Return on Equity (ROE):**

The study sought to establish the returns on Equity of the Sacco’s over the study period which was measured by net income per shareholder’s fund.

| year | min    | Max   | mean    | std.deviation | skewness |
|------|--------|-------|---------|---------------|----------|
| 2014 | .0015  | .3455 | .121161 | .0872841      | 1.502    |
| 2013 | -.4305 | .2067 | .051110 | .1670115      | -2.429   |
| 2012 | -.5534 | .6363 | .050450 | .2788232      | -.288    |
| 2011 | .0260  | .4466 | .157224 | .1380316      | 1.213    |
| 2010 | -.0470 | .2651 | .079151 | .0957434      | .639     |

The mean value for return on equity (ROE) was highest in 2011 with a value of 0.15722; it was followed by the value of 0.121161 in the year 2014. Generally Sacco’s in the study had higher values of Return on Equity than Return on Assets.

**Inferential Statistics:**

**Correlation Analysis:**

|  | ROE           | ROA           |
|--|---------------|---------------|
| Membership   | .222* (.047)  | .258* (.034)  |
| Loan default   | -.363* (.027) | -.375* (.017) |
| Dividend policy  | .682** (.000) | .601** (.000) |
| **. Correlation is significant at the 0.01 level (2-tailed). |               |               |
| *. Correlation is significant at the 0.05 level (2-tailed).  |               |               |

Membership was found to be positive and significantly related to ROE (r = 0.222, p-value = 0.047) and also significantly and positively related to ROA (r = 0.258, p-value = 0.034) at 0.05 levels of significance.

Loan default was found to be negatively related to ROE since the correlation coefficient between the two was significantly different from zero (r = -0.363, p-value = 0.027) at 0.05 levels of significance. Loan default was also negatively and significantly related to ROA (r = -0.375, p-value = 0.017).

Dividend policy had the highest correlation coefficient with ROE that was positive and significant (r = 0.682, p-value = 0.000) and also with ROA (r = 0.601, p-value = 0.000).

**Regression outputs for return on Equity (dependent variable) as performance measure:**

| Model Summary  |                   |          |                   |                            |
|--|-------------------|----------|-------------------|----------------------------|
| Model  | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1  | .694 <sup>a</sup> | .481     | .431              | .0347653                   |
| a. Predictors: (Constant), DIVIDEND POLICY, MEMBERSHIP, LOAN DEFAULT |                   |          |                   |                            |
| b. Dependent Variable: ROE   |                   |          |                   |                            |

**Analysis of Variance and Coefficient on Return on Equity:**

| ANOVA <sup>a</sup>   |            |                |    |             |       |                   |
|--|------------|----------------|----|-------------|-------|-------------------|
| Model  |            | Sum of Squares | df | Mean Square | F     | Sig.              |
| 1  | Regression | .035           | 3  | .012        | 9.587 | .000 <sup>b</sup> |
|  | Residual   | .037           | 31 | .001        |       |                   |
|  | Total      | .072           | 34 |             |       |                   |
| a. Dependent Variable: ROE   |            |                |    |             |       |                   |
| b. Predictors: (Constant), DIVIDEND POLICY, MEMBERSHIP, LOAN DEFAULT |            |                |    |             |       |                   |



| Coefficients <sup>a</sup> |                             |            |                           |        |       |
|---------------------------|-----------------------------|------------|---------------------------|--------|-------|
| Model                     | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|                           | B                           | Std. Error | Beta                      |        |       |
| 1 (Constant)              | 0.145                       | 0.010      |                           | 14.326 | 0.000 |
| MEMBERSHIP                | 0.081                       | 0.039      | 0.219                     | 2.072  | 0.046 |
| LOAN DEFAULT              | -0.051                      | 0.024      | -0.386                    | -2.125 | 0.041 |
| DIVIDEND POLICY           | 0.092                       | 0.019      | 0.666                     | 4.957  | 0.000 |

a. Dependent Variable: ROE

The linear regression analysis shows a relationship,  $R = 0.694$  and  $R^2 = 0.481$  which means that 48.1% of the corresponding change in Return on Equity can be explained by Membership, loan default and dividend policy.

The Anova table indicates that the overall model was a good fit since (F-value=9.587 and p-value=0.000<0.05).

The model becomes

$$ROE = 0.145 + 0.081X_1 - 0.051X_2 + 0.092X_3 + e$$

Membership was found to have a positive linearly significant influence on ROE ( $\beta = 0.081, p = 0.046 < 0.05$ ). Here an increase in Sacco's membership by 1% results to an increase in ROE by 8%.

Defaulting loans negatively and significantly affected ROE ( $\beta = -0.051, p = 0.041 < 0.05$ ). This means that 1% increase in loans default results in 5% reduction in ROE.

Dividend policy positively and significantly affected ROE ( $\beta = 0.092, p = 0.000 < 0.05$ ). This means that 1% increase in dividend policy results in 9.2% increase in ROE.

The beta coefficients indicated the relative importance of each independent variable (Membership, loan default and dividend policy) in influencing the dependent variable (ROE). Dividend policy was the most important in influencing Return on Equity since it had the highest beta value (beta= 0.666). The second most influential was the Loan default with a beta value (beta= -0.386). Membership had the weakest influence on ROE with a beta value (beta=0.219).

**Regression outputs for return on assets (dependent variable) as performance measure:**

| Model Summary: |                   |          |                   |                            |
|----------------|-------------------|----------|-------------------|----------------------------|
| Model          | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1              | .713 <sup>a</sup> | .509     | .467              | .0053858                   |

a. Predictors: (Constant), DIVIDEND POLICY, MEMBERSHIP, LOAN DEFAULT  
b. Dependent Variable: ROA

| ANOVA <sup>a</sup> |            |                |    |             |       |                   |
|--------------------|------------|----------------|----|-------------|-------|-------------------|
| Model              |            | Sum of Squares | df | Mean Square | F     | Sig.              |
| 1                  | Regression | .022           | 3  | .007        | 4.075 | .014 <sup>b</sup> |
|                    | Residual   | .063           | 35 | .002        |       |                   |
|                    | Total      | .085           | 38 |             |       |                   |

a. Dependent Variable: ROA  
b. Predictors: (Constant), DIVIDEND POLICY, MEMBERSHIP, LOAN DEFAULT

| Co-efficient |                 |                             |            |                           |        |       |
|--------------|-----------------|-----------------------------|------------|---------------------------|--------|-------|
| Model        |                 | Unstandardized Coefficients |            | Standardized Coefficients | T      | Sig.  |
|              |                 | B                           | Std. Error | Beta                      |        |       |
| 1            | (Constant)      | 0.121                       | 0.031      |                           | 3.903  | 0.000 |
|              | MEMBERSHIP      | 0.038                       | 0.017      | 0.201                     | 2.235  | 0.031 |
|              | LOAN DEFAULT    | -0.047                      | 0.018      | -0.385                    | -2.611 | 0.013 |
|              | DIVIDEND POLICY | 0.085                       | 0.029      | 0.458                     | 2.931  | 0.006 |

a. Dependent Variable: ROA

The linear regression analysis shows a relationship,  $R = 0.713$  and  $R^2 = 0.509$  which means that 50.9% of the corresponding change in Return on Assets can be explained by Membership, loan default and dividend policy.

The Anova table indicates that the overall model was a good fit since (F-value=4.075 and p-value=0.000<0.05).

The model becomes

$$ROA=0.121 + 0.038X_1 - 0.047X_2 + 0.085X_3 + e$$

Membership was found to have a positive linearly significant influence on ROA ( $\beta = 0.038, p = 0.031 < 0.05$ ). Here an increase in Sacco's membership by 1% results to an increase in ROA by 3.8%.

Defaulting loans negatively and significantly affected ROA ( $\beta = -0.047, p = 0.013 < 0.05$ ). This means that 1% increase in loans default results in 4.7% reduction in ROA.

Dividend policy positively and significantly affected ROA ( $\beta = 0.085, p = 0.006 < 0.05$ ). This meant that 1% increase in dividend policy results in 8.5 % increment in ROA.

The beta coefficients indicated the relative importance of each independent variable (Membership, loan default and dividend policy) in influencing the dependent variable (ROA). Dividend policy was the most important in influencing Return on Assets since it has the highest beta value (beta= 0.458). The second most influential was the Loan default with a beta value (beta= -0.385). Membership had the weakest influence on ROA with a beta value (beta=0.201).

## 5. CONCLUSION

Based on the results from data analysis and findings the study came up with the following conclusion. The model summary tests whether the overall regression model is a good fit for the data. The table shows that the independent variables statistically significantly predict the dependent variable, i.e. the regression model is a good fit of the data.

The linear regression analysis showed there was a relationship between the dependent variable and independent variables, that is  $R = 0.713$  and  $R^2 = 0.509$  which means that 50.9% of the corresponding change in Return on Assets can be explained by Membership, loan default and dividend policy.

It can be deduced from the findings that the independent variables that is membership size, dividend policy and loan default affects the financial performance of Sacco's. The main objective of formation of Sacco's is to provide savings and credit to its members. Increase in membership would imply an increase in deposits by the members and this would cause the increase availability of borrowing and capital in the society. Therefore the Sacco's should work towards retaining the current membership and also on boarding other members.

Dividend policy is an important policy for managers in all firms. Managers have to decide whether to pay dividend or not depending on the performance of the Sacco in any particular year. Most of the members join cooperative societies with the purpose of receiving efficient savings interest and loan services while still expecting return on their investment in form of dividend payment. Thus there would be demand for dividends from the increasing number of customers therefore there is need for the Sacco's to actively open up new avenues for funding its activities. For instance regular dividend policy is maintained by Sacco's with long standing and stable earnings while as residual dividend policy is used by Sacco's which finance new projects through equity that is internally generated affecting Sacco's performance.

Loans are granted from member's saving and so if they are not paid as per the loan agreement, then members' savings are at risk. Best practices require that loans that are not paid as agreed are considered delinquent the day after the first missed payment. The entire outstanding loan balance is considered past due. Immediate action should be taken to control delinquency and collect the loan that is reported past due. Provisions for loan losses are the first line of defense to protect members' saving against identified risks of losses to the Sacco. Although the loans may be written off in books, the Sacco must look for other measures to enforce repayment of the outstanding loan.

## 6. RECOMMENDATION

From the analysis it showed that loan default causes decrease in return on equity and return on assets. Sacco's should put measures of adding collateral if a member is borrowing on large amount that can't be supported by the member salary, the Sacco should also reduce on external borrowing they should work towards investing more avenues to increase their revenue thereby they have enough funds to lend. The Sacco should also insure the loans especially the large loans.

Members should not be allowed to withdrawal part of their deposits or offset part of them deposits against an outstanding loan unless he/she ceases to be a member. This enhances loan repayment and reduces the loan default.

Sacco's should also join the credit reference bureau and educate their members the need of prompt payment. CRB allows for credit information sharing among the financial institutions, it plays a vital role in reducing the information asymmetry that exists between them and borrowers. The major benefit that the Sacco would receive from CRB is that they would be able to get credit information on prospective borrowers that will facilitate assessment of credit requests to mitigate risks of bad debts. On the side of the borrower, a good credit record acts as an incentive for competitive pricing of loan facilities.

The study recommends the Sacco's to consider all pertinent issues before issuing dividends. Since members always expect a return on investment in the form of dividend however the payment of dividend should not undermine a firm investment policy.

The study also recommends the Sacco towards on boarding more members since increase in membership size also increases the members saving and thus increasing in borrowing funds. Also the Sacco should expand their investment to increase their revenue therefore this will reduce the external borrowing.

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