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## EFFECT OF CAPITAL ADEQUACY ON THE FINANCIAL PERFORMANCE OF SAVINGS AND CREDIT SOCIETIES IN KENYA

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# EFFECT OF CAPITAL ADEQUACY ON THE FINANCIAL PERFORMANCE OF SAVINGS AND CREDIT SOCIETIES IN KENYA

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## Abstract

**Purpose:** The purpose of this study to establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya.

**Methodology:** The study employed an explanatory research design. The target population was 83 registered deposit taking SACCO's in Kenya that have been in operation for the last five years. The sample size for the study was all 83 SACCOs that have remained in existence since 2011-2015. Census methodology was used in the study. Both primary and secondary sources of data were employed. Multiple linear regression models were used to analyze the data using statistical package for the social sciences (SPSS) and STATA. A pilot study was conducted to measure the research instruments reliability and validity. Descriptive and inferential analysis was conducted to analyze the data. The data was presented using tables and graphs.

**Results:** Based on the findings the study concluded that capital adequacy influenced the financial performance of savings and credit societies in Kenya. This can be explained by the regression results which showed that the influence was positive and also showed the magnitude by which capital adequacy influenced the financial performance of savings and credit societies.

**Unique contribution to theory, practice and policy:** Based on the findings the study recommended for improvement of the capital requirement regulations by SASRA. The study also recommended that SACCO should improve their liquidity, profitability, operating efficiency and total assets turnover if they must remain in business and meet the capitalization threshold SASRA. Further, the study recommended that SACCO's should shift

their concentration from increasing capital levels to credit risk management. Credit risk management would result to improvement in the financial performance of SACCO's.

**Keywords:** *capital adequacy, financial performance, savings and credit societies*

## 1.0 INTRODUCTION

### 1.1 Background of the Study

The SACCO industry in Kenya plays a very important role as the financial intermediary between savers and investors. The first ever SACCO was established in 1844 by Robert Owen (John, 2002). SACCO's belong to a group of cooperatives that are commonly called Raiffeisen cooperatives due to the German originator of this movement in the 1800s (Tache, 2006). SACCO's are guided by seven principles as stipulated by the International Cooperative Alliance (ICA); Open and voluntary membership, member economic participation, independence and autonomy, democratic member control, education, training and information, Concern for Community and Cooperation among Cooperatives. SACCO's are expected to give better and cheaper services to its members as compared to the main stream banks because SACCO's understands the needs of the members given that they are the owners (Wanyama, Develtere & Pollet, 2008). Services offered by SACCO's include normal loans, emergency loans, school fees loans and front office services for example; payment of salaries, salary advances, bank cheques, safe keeping of documents, and ATMs (Ngaira, 2011).

According to (ICA, 2009) Rochdale Pioneers was the founder of the contemporary Co-operative Movement in Lancashire, England, to deliver cheap alternative to poor-quality and adulterated food and provisions food, by the use of surplus so as to benefit the community. Subsequently, the co-operative movement has succeeded spreading throughout the world and incorporating all parts of the economy. The principles that supported cooperatives ways of doing trade is still recognized today as the basis upon which all co-operatives operate. However, the principles has been looked over and updated.

Globally, the sector has 1 billion memberships. It is estimated that co-operatives have employed 250 million people all over the world, co-operatives has an estimated global turnover of 2.2 trillion US Dollars, Co-operative generate 2.2 trillion US\$ in turnover while providing infrastructure and services that the society needs to flourish. Global statistical report for 2014, recorded a total of 57,000 Credit Unions (SACCO's), spread across 105 countries and 6 continents. The world Credit Union system has a combined savings of 1.5 trillion US\$, and an asset base of 1.8 trillion US\$ out of which 1.2 trillion US\$ constitutes the loan portfolio. The average worldwide penetration rate of the Credit Union system stood at 8.2 percent World Co-operative Monitor (2014).

Globally, efficiency of community banks was analyzed in the United States (US) using data from year-end 2006-2008. Multivariate discriminant model was used based on the CAMEL(S) model, to differentiate between low efficiency and high efficiency community banks by using the efficiency ratio as the independent variable. The results on the significance of the individual CAMEL components provide mixed results for different periods apart from the sensitivity to market risk, which is found to be statistically insignificant (Hays, Stephen & Arthur, 2009).

In India, the soundness of Indian Banking through its effect on the asset value was analyzed. The study recognized the key players such as the risk management, Non Performing Assets

(NPA) levels, effective cost management and financial inclusion. Moreover, In India performance of different Indian private and public sectors banks over the period 2000-2011 were analyzed using the CAMEL approach and established out that the private sector banks were at the top, with their performance being the best in terms of soundness (Chaudhry & Singh, 2012).

In Africa growth of SACCO's has been experienced to the extent that in 1965, Africa Federation of Cooperative Societies Savings and Credit Association (ACCOSSCA) was formed with the principle objective of offering SACCO insurance, education to members and promoting SACCO principles (Ng'ombe & Mikwamba, 2004). There are 28 countries in the continent of Africa with established SACCO's (saving plus, 2010). Africa has membership of 16 million which is 8 percent of the whole world membership, with savings of 62% and loans of 65% being 3<sup>rd</sup> after Asia and North America which has 36 million and 102 million respectively. Africa mobilize 0.4 percent of the worldwide savings of US\$ 1.1 trillion and 0.4 percent of international loans given to members standing at US\$ 912 billion (WOCCU, 2009). In Africa, performance of the South African Banking Sector was analyzed from 1994 and found out that all bank-specific variables were statistically significant at conventional level for both Return on Assets (ROA) and Return on Equity (ROE) equations. The study had shown that Asset Quality (measured by assets to capital employed ratio), Management Efficiency (measured by operating profits per employee ratio), and Liquidity Management (measured by quick ratio) has positive relationship with both measures of bank performance, which is consistent with a priori theoretical expectations. However, the Leverage Ratio, which is a measure of Capital Adequacy, shows a surprising significant negative relationship with ROA, whereas its relationship with ROE is significant and positive as expected, (Ifeacho & Ngalawa, 2014). In Ghana CAMEL Rating System was used to assess the Performance of Local and Foreign Banks results from the study indicated that not all the CAMEL variables affect Banks performance in Ghana in terms of ROA and ROE (Ansah, 2015).

In East Africa the East African Legislative Assembly (EALA) passed the East African Community (EAC) Cooperative Societies Bill, 2014. The Bill is currently awaiting assent by the East African Community Heads of States in line with Article 63 of the EAC Treaty. The objective of the EAC Cooperative Societies Bill, 2014 is to provide a legal framework for the operations of Co-operative Societies within the Community, which is in line with Article 128 of the EAC Treaty on the strengthening of the role of private sector as an effective force for developing economies, by virtue of EAC Treaty and Article 2(6) of Kenyan Constitution 2010 which recognizes that treaties ratified by Kenya are part of the laws of Kenya, the Kenyan National Legislations on Co-operatives will be required to be aligned to EAC Cooperative Societies Bill, 2014 once it becomes law. The Bill is based on the understanding that each Partner State shall undertake to encourage the efficient use of resources and to promote the development of private sector organizations which are engaged in all types of economic activities, such as the chambers of commerce and industry, confederations and associations of industry, agriculture among others. It also recognized the responsibility of state parties to enact national legislations to govern the operations of co-operative societies within the party states. In Ethiopia Zerfeshewa, 2010 investigated the determinants of SACCO performance; the study established that the educational level of members and officials as well as the regulations posed the greatest impediment to the performance of SACCO's.

## 1.2 Problem Statement

The SACCO's subsector remains a significant player in the provision of financial services to the Kenya household and small business segment. Its membership as per 2013 increased to 3.3million from 2.97 million in 2012. SACCO's plays a vital role of pooling resources for investment and wealth creation (Kinyua, 2013). They spur economic growth through the mobilization of domestic savings. According to SASRA report (2010), SACCO activities contribute 43% of the gross domestic product (GDP).

The significance of SACCO's to the Kenyan economy is further evidenced by inclusion in the Vision 2030 economic blue print (Kioko, 2014). Given their significance in the financial sector and poverty alleviation, it is important to investigate the moderating effect of sensitivity to market risk on determinants of performance in order to provide accurate and consistent assessment of savings and credit financial conditions and operations in the area of performance. Zerfeshewa (2010) investigated the determinants of SACCO performance in Ethiopia; Sonja (2010) analyzed SACCO's in Uganda to determine effect of automation on the growth of SACCO's.

Based on these studies and the varying gaps in literature, there is need to conduct similar studies in Africa and more so in Kenya. Therefore, the research attempted to establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya.

## 1.3 Research Objective

To establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya

## 2.0 LITERATURE REVIEW

### 2.1 Theoretical Framework

#### 2.1.1 Market Power Theory

Modigliani and Miller (1950) approach to capital theory advocates capital structure irrelevancy theory, he further states that the market value of a firm is affected by its future growth prospect apart from the risk involved in the investment. Its prepositions were: financial leverage is in direct proportion to the cost of equity and no taxes based on the following assumptions: there is no taxes, transaction cost for buying and selling securities as well as bankruptcy cost is nil, There is symmetry of information, the cost of borrowing is the same for investors as well as companies and debt financing does not affect companies EBIT. The market power theory postulates that the existence of entry barriers is the major determinant of firm profits. According to the theory, high costs of entry makes it easier for existing firms to maintain monopoly profits. Entry barriers can be in the form of strict regulations. In the SACCO industry in Kenya, this is portrayed by capital adequacy requirements that prevent easy entry into the industry. New entrants will diminish the level of those profits. Capital requirements often lock out new entrants resulting in monopoly tendencies. The rate of entry is relatively low in the SACCO industry in Kenya. However, this is not to say that capital requirements are main barriers of entry to the SACCO industry. Entry barriers can also be designed to increase efficiency. Such barriers are referred to as structural barriers (OECD, 2007). They reflect the basic industry conditions. With regard to capital adequacy requirement, SASRA seeks to protect investors and member's interests. The

market power theory is relevant to this study since the SACCO with a strong position in the market (market share) are likely to achieve higher performance or efficiency.

### **2.1.2 Expense-Preference Behavior theory**

Expense-Preference behavior theory is one of the most employed in the research. This theory was developed by Williamson (1963) and later refined by (Rees, 1974), this theory posits individual preferences of managers of a firm as utility maximizing, as opposed to profit maximizing. It predicts that under certain conducive circumstances such as the separation of ownership and control, costly monitoring of managerial behavior, a lack of effective competition in input and output markets, or effective regulation in those same markets, managers spend more on other prerequisites than is consistent with profit maximization behavior, Gropper & Oswald (1996). The first empirical work for the Expense Preference Theoretical Framework on financial institutions was carried out by Edwards (1977). Using aggregated bank data for 44 banks in 1962, 1964, 1986 and total wages and salaries; total employees as the dependent variables, he finds the coefficient on the three bank concentration ratios to be positive and significantly correlated with both the bank's total labor force and the bank's total wage bill. Thus, he concludes that expense preference behavior is a significant force that detracts from profit maximization in many banks. Other works consistent with this view include the empirical works of (Hannan, 1979 and Arnould, 1985) who found evidence of the expense preference theory in the banking firms. The theory is relevant to this study as it guides on how the profitability of the bank is taken in measuring performance though there are other alternative theories, in which factors other than profitability are taken as a measure of performance.

### **2.2 Empirical Review**

Naceur & Kandil (2006) examined the impact of capital requirement on the profitability of commercial banks in Egypt. The study focused on capital requirement regulations set by the Central Bank of Egypt and the Basle committee. The study found that high capital requirement increased the cost of intermediation. On the other hand, the capital requirements increased the banks' size leading to increased bank activity and therefore improved performance. The study concluded that capital requirement regulation improved performance.

Saona (2010) investigated the relationship between the capital structure of commercial banks in the United States and performance. The study revealed that a negative relationship existed between the capital ratio and the profitability for the banking industry. Another study by Berger and Bowman (2012) indicated that capital helps small banks to increase their probability of survival and market share at all times (during banking crises, market crises, and normal times). They study further argued that capital enhances the performance of medium and large banks primarily during banking crises.

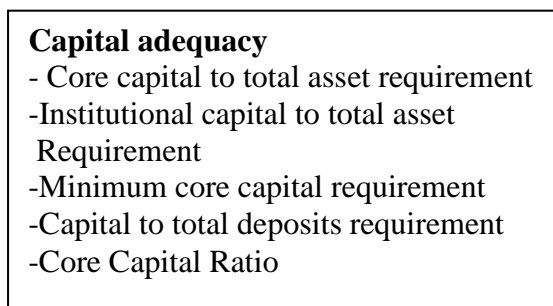
Odunga *et al.* (2013) studied the effect of credit risk and capital adequacy on the performance of commercial banks in Kenya. The study was guided by the operational efficiency theory. They found that credit risk ratios had a significant impact on operating efficiency of the banks. In an interesting twist, the study found that capital adequacy had no significant impact on bank performance. The study recommended that banks shift their concentration from increasing capital levels to credit risk management.

Kivuvo & Olweny, (2014) examined the performance of SACCO's in Kenya using the Altman Z Score Model of Corporate Bankruptcy. The study focused on predictor variables of bankruptcy and the financial stability of SACCO's. The study found that liquidity and

leverage had significant impact of SACCO performance. According to the study, financial stability enhances economic performance. The study concluded that SASRA was right in advocating for additional capital base for SACCO's. They recommended that SACCO's improve their liquidity, profitability, operating efficiency and total assets turnover if they must remain in business and meet the capitalization threshold SASRA.

### 2.3 Conceptual Framework

#### Independent variable



#### Dependent variable

**Financial Performance of Deposit Taking SACCO's**

- ROA

**Figure 1: Conceptual Framework**

### 3.0 RESEARCH METHODOLOGY

The study employed an explanatory research design. The target population was all the 83 registered deposits taking SACCO's licensed by SASRA as at 31<sup>st</sup> December 2011 to 2015 and has been in operation for the last five years. Therefore, the study used the inclusion criteria to select a total of 83 SACCO's registered by SASRA as at 31<sup>st</sup> December 2011. The sampling frame for the study consisted of all licensed deposit taking SACCO's in operation in Kenya as at 31<sup>st</sup> December, 2011 and still in operation as at 31<sup>st</sup> December 2015 as they appear in the SASRA database. Census methodology was used in the study in order to enable researcher gather sufficient information. The study also used purposive sampling procedure to identify the sample units. The sample size for the study was all 83 SACCO's that have remained in existence since 2011-2015. The questionnaire in this study was divided into three parts. The data collected was keyed into Statistical Package for Social Sciences (SPSS) computer software for analysis. SPSS and STATA software was used to produce frequencies, descriptive and inferential statistics which was used to derive a conclusions and generalizations regarding the population.

### 4.0 RESULTS AND DISCUSSIONS

#### 4.1 Response Rate

The number of questionnaires that were administered was 83. A total of 71 questionnaires were properly filled and returned. This represented an overall successful response rate of 86% as shown on Table 1. This agrees with Babbie (2004) who asserted that return rates of 50% are acceptable to analyze and publish, 60% is good and 70% is very good. Based on this assertion 86% response rate is adequate for the study.

**Table 1: Response Rate**

| <b>Response</b> | <b>Frequency</b> | <b>Percent</b> |
|-----------------|------------------|----------------|
| Returned        | 71               | 86             |
| Unreturned      | 12               | 14             |
| <b>Total</b>    | <b>83</b>        | <b>100</b>     |

#### 4.2 Demographic Characteristics

This section analyzes the demographic characteristics of the respondents. This section presents the descriptions of the respondents in terms of type of shareholders and period of existence.

##### 4.2.1 Type of Shareholder

The respondents were asked to indicate their shareholders. Results in table 2 reveal that 47% of the respondents indicated business men and women, 42% of the respondents indicated the general public while 11% of the respondents indicated government employees. This implies that majority of the SACCOs members and customers are business people and the general public. This implies that most business people rely on SACCOs for finances. This is likely to have a positive influence on Sacco's financial performance.

**Table 2: Type of Shareholder**

| <b>Response</b>        | <b>Frequency</b> | <b>Percent</b> |
|------------------------|------------------|----------------|
| Government employees   | 8                | 11.3           |
| General public         | 30               | 42.3           |
| Business Men and Women | 33               | 46.5           |
| <b>Total</b>           | <b>71</b>        | <b>100</b>     |

The respondents were asked to indicate the number of years their organizations have been in existence. Results in table 3 reveal that majority (68%) of the respondents indicated more than 20 years, 16% indicated 5-10 years, 10% indicated 16-20 years while 7% of the respondents indicated 11-15 years. This implies that majority of the SACCOs have been in the market long enough to gain the prerequisite experience and relevance. This implies that the SACCO's have the potential to be competitive and thus performance well.

**Table 3: Period of Existence**

| <b>Response</b>    | <b>Frequency</b> | <b>Percent</b> |
|--------------------|------------------|----------------|
| 5-10 years         | 11               | 15.5           |
| 11-15 years        | 5                | 7              |
| 16-20 years        | 7                | 9.9            |
| More than 20 years | 48               | 67.6           |
| <b>Total</b>       | <b>71</b>        | <b>100</b>     |

#### 4.3 Descriptive Statistics

The objective of the study was to establish the influence of capital adequacy on the financial performance of savings and credit societies in Kenya. The respondents were asked to respond to statements on capital adequacy. The responses were rated on a five likert scale as presented in Table 4. Majority of 97% (73.2%+23.9%) of the respondents agreed with the statement



that observing the core capital to total asset requirement has improved the financial performance of the Sacco, 98% agreed with the statement that observing the institutional capital to total asset requirement has improved the financial performance of the Sacco, 93% of the respondents agreed that observing the minimum core capital requirement of Kshs. 10 million has improved the financial performance of the Sacco while 91% of the respondents agreed that observing the core capital to total deposits requirement has improved the financial performance of the Sacco.

On a five point scale, the average mean of the responses was 4.13 which means that majority of the respondents were agreeing with most of the statements; however the answers were varied as shown by a standard deviation of 0.57.

The findings agree with that of Naceur and Kandil (2006) who examined the impact of capital requirement on the profitability of commercial banks in Egypt. The study found that high capital requirement increased the cost of intermediation. On the other hand, the capital requirements increased the banks' size leading to increased bank activity and therefore improved performance.

**Table 4: Capital Adequacy**

| Statement  | Strongly disagree | Disagree | Neutral | Agree  | Strongly agree | Mean        | Std. Dev    |
|--|-------------------|----------|---------|--------|----------------|-------------|-------------|
| Observing the core capital to total asset requirement has improved the financial performance of the Sacco              | 0.00%             | 2.80%    | 0.00%   | 73.20% | 23.90%         | 4.18        | 0.57        |
| Observing the institutional capital to total asset requirement has improved the financial performance of the Sacco     | 0.00%             | 2.80%    | 0.00%   | 84.50% | 12.70%         | 4.07        | 0.49        |
| Observing the minimum core capital requirement of Kshs. 10 million has improved the financial performance of the Sacco | 0.00%             | 2.80%    | 4.20%   | 80.30% | 12.70%         | 4.03        | 0.53        |
| Observing the core capital to total deposits requirement has improved the financial performance of the Sacco           | 0.00%             | 2.80%    | 5.60%   | 56.30% | 35.20%         | 4.24        | 0.69        |
| <b>Average</b>   |                   |          |         |        |                | <b>4.13</b> | <b>0.57</b> |

#### 4.4 Inferential Statistics

The results presented in table 5 present the regression model used in explaining the study phenomena. Capital adequacy explained 86% of the financial performance of SACCOs in Kenya. This is supported by coefficient of determination also known as the R square of 86%. This means that capital adequacy explain 86% of the financial performance SACCOs in Kenya. Further, results indicate that the overall model was statistically significant as supported by a p value of 0.000. This implies that capital adequacy is a good predictor of financial performance. This was supported by an F statistic of 565.18 and the reported p value (0.000) which was less than the conventional probability of 0.05 significance level.

These findings agree with those of Berger and Bowman (2012) who indicated that capital helps small banks to increase their probability of survival and market share at all times. The study further argued that capital enhances the performance of medium and large banks primarily during banking crises.

**Table 5: Regression model**

| ROA              | Coef.   | Std.Err | z       | P> z  |
|------------------|---------|---------|---------|-------|
| Capital Adequacy | 0.54032 | 0.02273 | 23.77   | 0.000 |
| Cons             | -0.0121 | 0.10918 | -0.1109 | 0.912 |
| R <sup>2</sup>   | 0.8551  |         |         |       |
| F-statistics     | 565.18  |         |         |       |
| P value          | 0.000   |         |         |       |

The specific model was;

$$\text{Firm Financial Performance} = -0.0121 + 0.5403 \text{ Capital Adequacy}$$

## 5.0 DISCUSSION CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Discussion

The objective of the study was to establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya. The regression results showed that there is a positive and significant relationship between capital adequacy and financial performance of savings and credit societies as supported by a p value of 0.000 and a beta coefficient of 0.540. This implies that improvement in capital adequacy would increase the financial performance of savings and credit societies by 0.540units.

### 5.2 Conclusions

Based on the findings the study concluded that capital adequacy influenced the financial performance of savings and credit societies in Kenya. This can be explained by the regression results which showed that the influence was positive and also showed the magnitude by which capital adequacy influenced the financial performance of savings and credit societies. The univariate regression results showed that capital adequacy influenced the financial performance of savings and credit societies by 0.540 units. Further, the overall regression results revealed that capital adequacy influenced the financial performance of savings and credit societies by 0.423units.

### 5.3 Recommendations

The study recommended for improvement of the capital requirement regulations by SASRA. The study also recommended that SACCO should improve their liquidity, profitability, operating efficiency and total assets turnover if they must remain in business and meet the capitalization threshold SASRA. Further, the study recommended that SACCO's should shift their concentration from increasing capital levels to credit risk management. Credit risk management would result to improvement in the financial performance of SACCO's.

#### **5.4 Areas for Further Studies**

The study recommends that a similar study should be conducted in other financial sectors such as banking sector for comparison purposes. The study also recommends that a study seeking to examine the effects of other financial factors on financial performance of savings and credit cooperatives should be conducted. This would help to give insight to the SACCO's and other organizations on what other financial factors to consider in order to enhance their performance.

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