

Capital Adequacy and Financial Performance of Deposit Taking Savings and Credit Cooperative Societies in Western Region, Kenya

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ABSTRACT:- Capital adequacy has been alarming in most deposit taking savings and credit deposits globally affecting financial performance. Capital adequacy provides adequate amount of capital to guard or cushion member deposits and creditors against losses brought on by business. The auditor general report highlighted some problems like low profit margin faced by western Region SACCOs. The study objective was to establish the effect of capital adequacy on financial performance of deposit taking savings and credit cooperative societies in western Region, Kenya. The study was guided by Capital buffer theory. A cross section research design was used. The study targeted a population of 7 deposit taking savings and credit cooperative societies in western Kenya. The study employed census sampling. Secondary data was collected from audited financial statements. Panel data was analyzed using descriptive and inferential statistics. Descriptive statistics comprised of minimum values, maximum values, mean and standard deviation and inferential statistics consisted of correlational analysis and random effects models. Data was presented using tables. Regression model showed that there is a negative and significant effect of capital adequacy and financial performance with a coefficient of -0.3671. The study showed that changes in capital adequacy causes 54.77% variation in financial performance. The study concluded that capital adequacy had a negative and significant effect financial performance. It is therefore recommended that SACCOs should minimize losses by embracing on proper mechanisms that can enable them improve financial performance. Further, the study recommended that SACCOs ought to keep capital reserves at the recommend levels all the time.

I. BACKGROUND OF THE STUDY

Financial institutions are required to have adequate capital to operate successfully and responsibly. This capital should be raised and a well plan of maintaining it should be put in place. Therefore, Sacco's are required to have capital adequacy which is the amount that will help in discharging its primary functions in an effective and efficient manner (Gallati, 2022).

In Kenya the main mandate of deposit taking savings and credit cooperatives is to mobilize savings and deposits, maximize shareholders saving returns, and participate in investment and wealth creation for the benefit of the shareholders (Chepkorir, Kemboi, & Bett, 2022). Due to its functions, Sacco's are expected to have adequate capital that will enable it to run its functions but this is not the case as Sacco's are struggling with problems of inadequate capital. The question that remains with no answer is that do Sacco's receive enough deposit from their shareholder? Do they really maximize and create their own wealth? Are the loanable funds repaid?

Currently profitability of Sacco's has been one of the major issue of great concern to the shareholders. Sacco's are facing challenges like low profit margins, high overhead expenses, poor risk management, a huge number of non-performing loans, and poor corporate governance. These problems have put the Sacco industry at large in grave danger (Katula & Kiriinya, 2018). Loans are one of the major earnings of the Sacco's where the loan is refunded with interest. The return on asset of Wevarity SACCO Society Limited- Kakamega County reduced from 10% in 2019 to 9% in 2020. The deposit taking SACCOS still owe a loan lent amounting to 4.31 billion (The Kenya Financial Stability Report, 2020). Mudete tea growers SACCOs profit reduced from 2.1 million in 2019 to 1.8 million in 2020 (The Auditor General Report, 2020).

Capital sufficiency acts as a safety net in case of any unforeseen circumstances. Its high ratio suggests less external financing, which results in higher profitability. It gives SACCOs the capacity to maintain capital, take on loan losses, promote the future growth of assets, and pay investors a return. When the ratio is high, it is anticipated that the need for outside financing will decrease, increasing SACCO profitability. SACCOs with high capital ratios are proven to be more profitable than those with low capital ratios since they experience less bankruptcy costs and have fewer needs for external financing, especially in emerging nations.

The basic criterion for monitoring, assessing, and measuring the financial soundness and stability of SACCOs continues to be capital adequacy. The assets, deposits, loans, member share capital, reserves, and membership remain the major metrics for assessing trends in SACCOs' growing performance. Because the companies were not considered to pose any significant risk to the nation's financial system, there were no

conscious attempts taken to manage the SACCO subsector responsibly before to 2008 regulatory revisions, which became operative in 2011. However, the organizations' financial growth and even the introduction of FOSA (Front Office Services Activity), or banking-like services, in an effort to boost service delivery efficiency instead resulted in illiquidity, inadequate capital, subpar credit management, and low member confidence (Mili, Sahut, & Trimeche, 2017).

The goal of the capital adequacy criterion is to guarantee that each SACCO society that accepts deposits maintains an adequate amount of capital to guard or cushion member deposits and creditors against losses brought on by business risks that the SACCO, as a financial institution, encounters. The risks listed here include those related to credit, investments, legislation, liquidity, interest rates, and competition. Therefore, sufficient capital serves as a gauge of a financial institution's safety and soundness and fosters public confidence in the institution. Every institution must always maintain minimum capital ratios, unless a higher minimum capital adequacy ratio has been established by the SASRA for a specific SACCO Society based on standards established under regulation 10 (Mendoza & Rivera, 2017).

In the USA, Credit deposit SACCOs provide an intermediation service using client funds. SACCO failure would have a significant impact on institutional and retail consumers, which might have a variety of effects on both domestic and foreign markets. Because of the importance of the banking industry, it needs to be properly regulated in order to keep clients' trust. Ban capital, which serves as a protection against losses, is a crucial component of the regulatory framework. An undercapitalized financial institutions are likely to experience substantial excess costs during periods of difficult economic conditions (Naceur, Marton, & Roulet, 2018).

In Nigeria, one of the achievements in the financial industry has been the upward audit of the capital base of financial institutions. This supports banking operations by offering a buffer to absorb unforeseen misfortunes from its activities thus empowering the financial institutions to keep on working in a sound and practical manner while the issues are being settled or attended to. An ideal measurement of the capital strength of any financial institution the capital adequacy ratio, which is the amount of financial institution legally required capital expressed as a percentage of the risk-weighted assets. Prudential rubrics on capital adequacy sets out three significant components that determine a SACCOs capital adequacy; these are; exposure adjusted credit risks, banking activities market risks, and the structure and nature of capital held in supporting these exposures (Nestor, Leonard, & Okoye, 2017).

Due to technical innovation and globalization, Kenya's financial sector has seen considerable improvements during the past two decades. The structure and collusive power of the Kenyan banking industry contribute to performance. Financial institutions' ability to meet their capital requirements has lessened the likelihood that they may fail if something unforeseen occurs. According to the Central Bank of Kenya's (CBK) annual supervisory report, the banking industry performed satisfactorily in 2015 compared to the year before. Following the Basel Accord, the CBK has implemented a CAR of 20%, which is significantly higher than the global standard of 8% (Central Bank of Kenya, 2020).

II. STATEMENT OF THE PROBLEM

Capital adequacy is one of the critical aspect that is regulated in many financial institutions all over the world. Capital adequacy criterion is to guarantee each SACCO society to maintain an adequate amount of capital to guard or cushion member deposits and creditors against losses brought on by business risks that the SACCO, as a financial institution, encounters. Therefore, sufficient capital serves as a gauge of a financial institution's safety and soundness and fosters public confidence in the institution (Katula & Kiriinya, 2018). Despite this aim of capital adequacy SACCOs are facing challenges like low profit margins, high overhead expenses, poor risk management, a huge number of non-performing loans, and poor corporate governance. The return on asset of Wevarsity SACCO Society Limited- Kakamega County reduced from 10% in 2019 to 9% in 2020. The deposit taking SACCOS still owe a loan lent amounting to 4.31 billion (The Kenya Financial Stability Report, 2020). Mudete tea growers SACCOs profit has been reduced from 2.1 million in 2019 to 1.8 million in 2020 (The Auditor General Report, 2020). Due to this situation the dividends received by the shareholders have reduce and many shareholders have exited the SACCOs. Most of the researchers have been done on capital adequacy and financial performance on commercial banks but very limited have been conducted on deposit taking SACCOs which are still experiencing capital inadequacy. Therefore, there was a need to conduct a study on capital adequacy and financial performance of deposit taking savings and credit cooperative societies in western, Region, Kenya.

III. OBJECTIVE OF THE STUDY

To establish the effect of capital adequacy on financial performance of deposit taking savings and credit cooperative societies in western Region, Kenya.

Hypothesis of the Study

There is no significant effect of capital adequacy on financial performance of deposit taking savings and credit cooperative societies in western Region, Kenya.

Theoretical Review

Capital Buffer Theory

This theory was proposed first by Jokipii and Milne, (2011). They claimed that financial institutions might place a strong emphasis on capital adequacy as a criterion for lending. Interest earned and interest paid by SACCOs are primarily determined by the minimum capital requirement. SACCOs seek to manage capital more intensively than assets; in accordance with the capital buffer hypothesis, they seek to hold more capital than is advised. Zheng, Xu, and Liang, (2012) stated that banks boost their lending activities during periods of economic boom and decrease lending during economic slowdowns as a result of regulations aimed at the formation of capital, which aim to reduce the procyclical nature of lending. When banks get into problems due to a lack of capital, they either raise more money or reduce their lending. Reduced lending activity may result in more expensive or unavailable funding.

It is assumed that large SACCOs with market power may become more risk averse when they perceive that the accomplishment of the project threatens their charter value. The risk levels in their pool of borrowers can be determined by large banks through credit rationing, suggesting different buffer profiles. According to the hypothesis, rates set by banks with market power can lead to unfavorable selection effects among borrowers, which would raise risk and force institutions to boost buffer. According to theory, when banks don't build up capital reserves during economic booms, there won't be enough money to cover their needs during downturns (Abbas, Butt, & Masood, 2019).

The criticism is that banks often raise capital by charging for their services in addition to loans and deposits, which is against the law. This happens when SACCOs don't have enough capital to prevent problems from occurring. To avoid fines from the financial institutions, SACCOs may maintain their capital buffer by levying high interest rates (Abbas & Younas, 2021).

The theory proved helpful in assessing the capital management and risk management procedures used by financial institutions. The theory is relevant due to quality of being useful to regulatory bodies like the financial institutions. It would send a positive message to different vendors and marketing, enhancing the financial institutions credibility and ensuring the financial system runs smoothly. It is an important tool for preventing losses and, hence, SACCOs default risk. When added, capital buffer allows SACCOs to be more financially stable. By following the notion, SACCOs can avoid penalties by adhering to central bank regulations.

Conceptual Framework

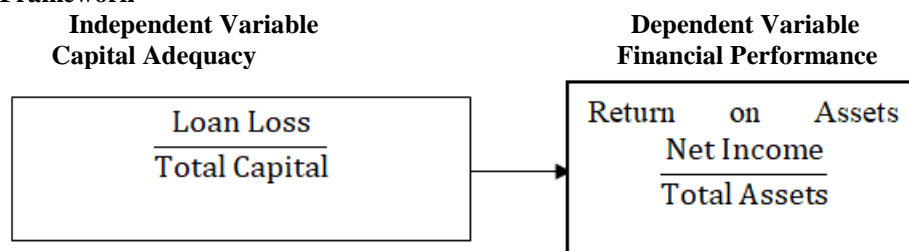


Figure 2. 1: Conceptual Framework (Source: Researcher's own conceptualization, 2023)

IV. LITERATURE REVIEW

Alexander and Ambrose, (2017) conducted a study on capital adequacy and financial performance of deposit taking savings and credit co-operative societies in Kenya. Comparative research design was employed in the study. The target population comprised of 175 fully licensed DT-Sacco's in Kenya. The collected secondary data and analyzed. The data involved time series and cross sectional attributes which gave it a longitudinal element. The study concluded that capital adequacy influenced the financial performance of DT-Sacco's in Kenya as explained by the findings.

Onyango, (2018) reserached on capital adequacy and financial performance of deposit taking savings and credit co-operative societies in Meru County. The study employed non-experimental research design. Secondary data was collected from audited financial statements of 14 deposit taking savings and credit co-operative societies. Panel data regression analysis was used. The study found that capital adequacy had a negative and significant effect on financial performance of deposit taking savings and credit co-operative societies in Meru County.

Mwangi, (2020) conducted a stusy on maintaining capital adequacy on deposit taking Savings and Credit Cooperative Societies (SACCO). A descriptive research design was applied on a population of 174

SACCOs registered by SASRA by close of 2019. Primary data was collected from all the registered SACCOs by use of a questionnaire. Additional data was collected through document review of annual reports generated by SASRA. Quantitative analysis was used to analyze the data. The study found that capital adequacy had a positive and significant influence on financial performance of deposit taking Savings and Credit Cooperative Societies (SACCO).

V. RESEARCH METHODOLOGY

Research design

The study adopted a cross sectional research design. This design was the most appropriate since it helped the researcher to do a study across all deposit taking Savings and Credit Cooperative Societies in Western Kenya. The research design also provided an accurate picture of the financial performance of deposit taking Savings and Credit Cooperative Societies in Western Region, Kenya (Cooper & Schindler, 2017).

Target Population

The study targeted all the 7 SACCOS in western Region, Kenya registered by deposit taking SACCOs in Western Kenya as at 2021. The target population include; Faridi, Invest and Grow (IG), Mudete Tea Growers, Ng'arisha, Stawisha, Vihiga Farmers and Wevarsity SACCO society. Western Region, Kenya SACCOs were chosen since most of them have faced challenges of capital inadequacy.

Table 1: Target Population.

No.	Deposit Taking Savings and Credit Cooperative Societies
1.	Faridi SACCO Society Limited- Busia County
2.	Invest and Grow (IG) SACCO Society Limited -Kakamega County
3.	Mudete Tea Growers SACCO Society Limited –Kakamega County
4.	Ng'arisha SACCO Society Limited -Bungoma County
5.	Stawisha SACCO Society Limited-Bungoma County
6.	Vihiga County Farmers SACCO Society Limited- Vihiga County
7.	Wevarsity SACCO Society Limited- Kakamega County

Sampling Techniques

The study employed census sampling all the seven deposit taking savings and credit societies in western Kenya was used for data collection in order to establish the effects of capital adequacy on financial performance. The sampling technique was suitable since the number is small and collecting data in all SACCOs was convenient. Also accurate and in depth information was collected since all the firms were used (Pandey & Pandey, 2015).

Data collection

Secondary data was obtained from the audited financial statements of deposit taking Savings and Credit Cooperative Societies in Western Kenya. The study employed panel data comprising of both time series and cross sectional. Cross sectional was obtained across the seven SACCOs. Time series was the years between 2017-2021. The study used financial reports from 2017 to 2021. The secondary data collected included; total loan loss, total assets and net profits from all the seven SACCOs.

Data Processing, Analysis, and Presentation

Before exporting the data to STATA, the data was organized and cleaned using Microsoft Excel. Inferential and descriptive statistics were used to analyze panel data. Descriptive statistics included mean, minimum, maximum, and standard deviation, whereas panel linear regression, correlation analysis, and the Hausman test for a fixed and random effect were included in inferential statistics. Panel methodology problems were solved with the use of the statistical program STATA. Regression analysis using panel data was used in the study. The random effect model was determined by the Hausmann specification test to be suitable for the investigation. Tables were used to display the results. The following regression equations were used to show the relationship between capital adequacy and financial performance of deposit taking Savings and Credit Cooperative Societies in Western Region, Kenya.

$$ROA_{it} = \beta_0 + \beta_1 CA_{it} + \varepsilon_{it} \dots \dots \dots (1)$$

ROA – Represents return on assets.

β_0 – Constant

β_1 – Regression coefficients.

CA – Represents Capital Adequacy

i – Denotes the observations (SACCOS)

t – Represents the time dimensions from 2017 to 2021

ε_{it} – The error term

Data Analysis, Results, and Discussions

Descriptive Statistics

Descriptive statistics were conducted to understand distribution of variables used. Table 2 shows descriptive statistics of return on assets and capital adequacy of SACCOS in western Kenya.

Table 2: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	35	.4025132	.1726509	.0240283	.8370292
CA	35	.2119821	.1926167	.0076397	.5763241

Table 2 shows the results of descriptive statistics. There were 35 observations which were obtained from 7 SACCOS in western Kenya for a period of five years. Financial performance was measured using return on assets which had a mean of 0.4025132 with the minimum of 0.0240283 and a maximum of 0.8370292. The values of the minimum and maximum were all positive implying that all the SACCOS made profit during the study period. The mean of return on assets was 0.4025132 and was greater than the standard deviation value of 0.1726509. This indicated that the financial performance of the SACCOS varied during the study period. This implies that some SACCOS were making higher profits or performing more than other SACCOS.

Capital adequacy measured using loan loss over total capital had a mean of 0.2119821 with a minimum value 0.0076397 and a maximum value of 0.5763241. The minimum value implies that some SACCOS were making less loan loss than others while a maximum values implies that some SACCOS were making more loan loss than other. The mean of 0.2119821 was higher than a standard deviation value of 0.1926167 depicting that capital adequacy varied during the study period.

Correlation Analysis

Pearson product moment correlation analysis was conducted for the various variables to examine the nature of the statistical association between capital adequacy and financial performance. Table 3. Shows the correlation matrix of capital adequacy and financial performance.

Table 3: Correlation Analysis

Variable	ROA	CA
ROA	1.0000	
CA	-0.6899*	1.0000
	0.0000	

Table 3 shows the results of correlation analysis. From the results it was established that capital adequacy was negatively and significantly related with financial performance. This is supported by an r of -0.6899 and a P-value of 0.0000. This implies that an increase in loan loss to total capital reduces financial performance of SACCOS. These findings were similar to the correlation findings of the study conducted by Onyango, (2018) where it was established that capital adequacy was negatively related to financial performance.

Regression Coefficients Analysis

Random effect model was used in the study to establish the effect of capital adequacy on financial performance of deposit taking savings and credit cooperative societies in western Kenya. The regression results were discussed in line with the study objective. The results were presented in Table 4.

Table 4: Random Effects Model.

ROA	Coef.	Std. Err.	Z	P> z
CA	-.3671	.0896	-4.09	0.000
_cons	.5682	.0556	10.22	0.000
R-sq:				
within = 0.4472			corr (u_i, X) = 0 (assumed)	
between = 0.8003			Wald chi2(3) = 17.59	
overall = 0.5477			Prob > F = 0.0000	

The random effects results in table 4 established that the overall model was statistically significant. This is supported by the reported Prob > chi2 of 0.000 which is less than 0.05 level of significance. From the findings, capital adequacy is established to be the good predictor of financial performance of deposit taking savings and credit societies. This is backed up with the overall r^2 of 0.5477. The r^2 implies that 54.77% of variability in financial performance were caused by capital adequacy while 43.33% variation in financial performance were being caused by other factors not within the model. From the results the estimated model is as shown below;

$$ROA_{it} = 0.5682 - 0.3671 CA_{it} \dots \dots \dots (2)$$

From the regression model 2, the constant value is 0.5682 and a p value of 0.000 which shows that the constant value is statistically significant since the p value was less than 0.05. The constant value shows that when capital adequacy is not taken into consideration by the SACCOs, their financial performance measured by net profit to total assets stands at 0.5682. Capital adequacy had regression coefficient of -0.3671. This implies that capital adequacy had a negative and significant effect on financial performance of deposit taking savings and credit society. This is supported by a p value of 0.00 that was less than 0.05 and Z-statistics -4.09 smaller than the Z-critical of -1.96, implying that capital adequacy have a negative and significant effect on financial performance. Therefore, the null hypothesis that capital adequacy had no significant effect on financial performance of deposit taking savings and credit cooperative societies in western Kenya was rejected.

The above results implies that a unit increase in loan loss to total capital would lead to a decrease in financial performance by 0.3671 units. This implies that unpaid loan reduces the capital of the SACCOs hence they will have less funds to invest and generate more wealth. The results were similar to that of Alexander and Ambrose, (2017) who found that capital adequacy influenced the financial performance of DT-Sacco's in Kenya as explained by the findings. Onyango, (2018) who found that capital adequacy had a negative and significant effect on financial performance of deposit taking savings and credit co-operative societies in Meru County.

VI. CONCLUSIONS

Based on inferential statistics, the study found that capital adequacy a strong negative and significant correlation with financial performance of deposit taking savings and credit cooperative societies in western Kenya. This is supported with an r of 0.6899 and a p value of 0.00. The regression model established that capital adequacy had a negative and significant effect on financial performance of deposit taking savings and credit cooperative societies in western Kenya. This is supported with a regression coefficient of -0.3671 and a p value of 0.00. Therefore, the study concluded capital adequacy negatively and significantly affect the financial performance of deposit taking savings and credit cooperative societies in western Kenya.

Recommendations

The study found that capital adequacy negatively and significantly affect financial performance. Capital adequacy was measured using loan loss to total assets. It is therefore recommended that SACCOs should minimize losses by embracing on proper mechanisms that can enable them improve financial performance. Further, the study recommended that SACCOs ought to keep capital reserves at the recommend levels all the time.

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