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CAPITAL ADEQUACY AND FINANCIAL INTERMEDIATION EFFICIENCY OF DEPOSIT TAKING SACCOS'S IN KENYA

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ABSTRACT

The regulation of Deposit Taking Saving and Credit Co-operative societies was expected to enhance transparency and accountability in the management of DT SACCO's and thus protecting the interests of members. This was expected to lead to better service to members through provision of timely loans and advances with minimal risk exposures. SACCO's have been identified as major financial player away from the Commercial Banks thus important in financial intermediation. This study sought to establish the influence of Capital Adequacy on intermediation efficiency of DT SACCO's in Kenya. The study targeted 174 DT SACCO's operating in Kenya as at 31st December 2019. Data analysis was done using both descriptive and inferential statistics. Descriptive statistics used in the study included measures of central tendency; mean; dispersion and standard deviation. Inferential statistics used included correlation and regression analysis. The study findings showed that there was an increase in financial intermediation efficiency within the period under study and thus can be concluded that as DT SACCOs complied with Capital Adequacy requirements their financial intermediation efficiency improved.

It was also established that pure efficiency was lower than scale efficiency throughout the period under study, thus there is need for management to examine their performance inefficiencies so as to minimize wastages and spillage of performance opportunities.

Key words: *Financial intermediation efficiency, Capital Adequacy, Deposit taking SACCO*

BACKGROUND OF THE STUDY

Capital adequacy ratios are a measure of the amount of a financial institution's capital expressed as a percentage of its risk weighted credit exposures. Applying minimum capital adequacy ratios serves to protect depositors and promote the stability and efficiency of the financial system. Two types of capital are measured - tier one capital which can absorb losses without a SACCO being required to cease trading, e.g., members share capital, and tier two capital which can absorb losses in the event of a winding-up of SACCO and so provides a lesser degree of protection to depositors. Measuring credit exposures requires adjustments to be made to the amount of assets shown on a SACCO's balance sheet.

Deposit Taking SACCO's in Kenya are required to remit quarterly disclosure returns which include a range of financial and prudential information. A key part of these Returns is the disclosure of the Sacco's' "capital adequacy ratios". These ratios are a measure of the amount of a Sacco's capital in relation to the amount of its credit exposures. They are usually expressed as a percentage. The minimum core capital of a Sacco Society shall at all times be Ksh. 10 million (ten million shillings), or 10% (10 per cent) of its total assets whichever is higher; a core capital of not less than eight per cent of its total deposit's liabilities; and an Institutional capital of not less than eight per cent of its total assets (Wanjohi, 2016).

Many financial institutions definitions of available capital are tangible equity, tier one capital or capital definitions used by rating agencies. Among the various items that can be included in the definition of actual capital (some of them included in the regulatory definition of capital) are common equity, preferred shares, adjusted common equity, perpetual non-cumulative preference shares, retained earnings, intangible assets, surplus provisions, reserves, contributed surplus, current net profit, planned earning, unrealized profits and mortgage servicing rights. In determining the actual capital amount to be maintained, management of an entity can consider regulatory capital requirement and economic capital (where exists), capital or solvency level perceived to be required to maintain a specific external rating assigned by credit rating agencies, levels set by peers and comparable competitors, shareholders' influence (Hydman et al., 2004).

OBJECTIVES OF THE STUDY

The objective of the study was to examine the influence of capital adequacy on financial intermediation efficiency of deposit taking savings and credit cooperative society in Kenya.

THEORETICAL LITERATURE REVIEW

The study as anchored on the Buffer Capital Theory proposed by Calem and Rob (1996) and it argues that bank that is close to regulatory minimum capital ratio have higher odds of altering its capital requirements ratios to alleviate odds of incurring compliance costs.

However, there are higher chances of poorly capitalized banks to take more risks in anticipation that they may generate superior returns as compared to raising required returns. Despite of this approach to capital requirements formulated through these approaches are exposed to complexity associated with formulation of respective weights. Hence, some banks perceived it as block on achievement of its mandate. SASRA prudential guidelines prescribes minimum amount of capital that must be held by DT SACCOs. The theory is appropriate for the study in support for the need to have capital in excess of minimum requirements. This will aid in examination of the effect capital adequacy in financial intermediation efficiency of DT SACCOs. Moreover, if all DT SACCOs holds the minimum capital requirements, then it may not have been fit to examine its contribution on financial intermediation efficiency.

EMPIRICAL LITERATURE REVIEW

Kariuki (2014) in a study on credit unions and capital adequacy observed that credit union needs to continuously monitor and asses its risk exposure in the context of capital requirements and available growth opportunities. Kariuki further observed that judicious management of the interaction between these three elements is crucial to the long-term survival and growth of credit unions. Kariuki further found out that over the years the Credit Union industry had undergone a significant change, both in terms of the number of Credit Unions as well as the asset mix of their portfolios. This was found to be brought about by their ability to generate sufficient income to support growth while maintaining adequate capital in the context of increasingly tightening reserve requirements. Basel standards are seen to have greatly influenced on development of Credit union Capital Adequacy requirements and thus the DTS's in Kenya.

Kariuki (2014) observed Basel standards are not directly applicable to Credit Union industry, but it was necessary to understand them as the capital standards creation process for the Credit Union industry is influenced by the Basel standards. Kariuki may have considered customizing SACCOs requirements instead of relying on regulatory requirements for banks whose regulator and customer base differs. Matumo Maina and Njoroge, (2013) emphasized that FOSA enhances Sacco performance. They studied the impact of FOSA on Sacco performance in Kenya; a case study of Meru South and Maara district in Tharaka Nithi County in Kenya. They argued that while Sacco's are organized to meet economic and social needs, their performance was being hampered by low capital base. This limits loanable funds to members.

In order to address this challenge, many Sacco's have introduced FOSA, in order to strengthen their capital base and liquidity level. FOSA's offer simple banking services to members/customers, thus improving their working capital. The study adopted a descriptive research design. The population of the study was the three Sacco's with FOSA in the two districts. The researchers used secondary data in this study for a period of six years from 1998 to 2003. This included three years before and after operating FOSAs. Correlation analysis was used to analyse the data. The findings of the study revealed that FOSA can improve the performance for Sacco's hence member's welfare. This study found out that SACCO's operating FOSA had a stronger capital base enhancing their capability in meeting member's welfare. This owing to the fact that FOSA attract non- member deposits through savings accounts thus improving customer deposits. The membership of the Sacco grows both in FOSA and BOSA. This improves the volume of transactions, thus improving the revenue income of the Sacco.

Wanjohi, (2016) study examined how capital adequacy affects the credit risk profile of DTS in Kenya. The study adopted Causal research design by using panel data of all DTS in the period 2011-2014. The dependent variable was represented by a change in credit risk, while Capital Adequacy was represented by the level of capital to risk weighted Assets. Descriptive and regression analysis were used to establish the relationship between the variables. The study found out that capital adequacy as measured in terms of capital base to risk weighted assets, has a negative and statistically significant effect on the level of credit risk of DTS in Kenya. The study may have considered data over long period of time so as to eradicate shortcomings associated with small panel data.

CONCEPTUAL FRAMEWORK

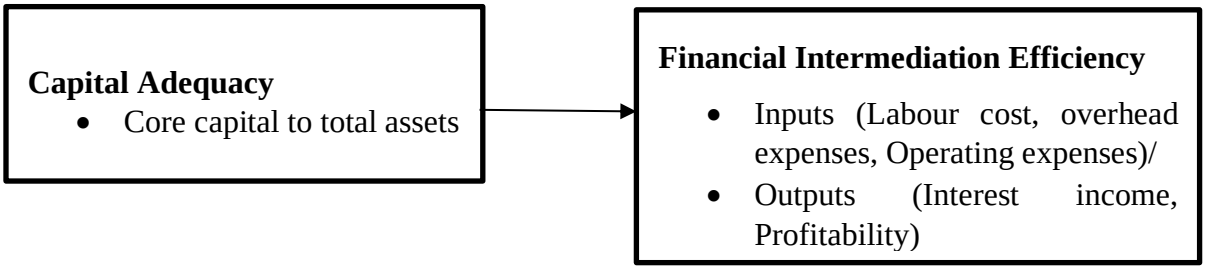

Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

Research design is a conceptual structure within which to conduct research. It constitutes an outline for data collection, measurement and analysis (Kothari, 2011). This study adopted a descriptive survey research design to analyse the influence of capital adequacy requirements on financial intermediation efficiency of DTSs in Kenya. Target population of the study was 174 DT SACCOs which were in operation as at December 2020. Census approach was used to select 174 DT SACCOs. The study relied on secondary data that was collected from annual financial statement of DT SACCOs. Data was analyzed using descriptive statistics (Mean, Standard Deviation) and inferential statistics; regression analysis to examine the nature of the influence of capital adequacy on financial intermediation efficiency. Regression model of the study was of the form:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \varepsilon_{it}$$

Where:

Y_{it} = Financial Intermediation Efficiency; X_{1it} = Capital Adequacy

FINDINGS AND DISCUSSIONS

Descriptive Statistics

Measures of central tendency and dispersion were used as descriptive statistics whose findings are in Table 1. The average financial intermediation efficiency of DT SACCOs in Kenya was 0.87, with a minimum of 0.09 and maximum of 1. The standard deviation was 0.09, which indicates minimal deviation on financial intermediation efficiency of DT SACCOs.

Normality test indicates that financial intermediation efficiency was not normally distributed since its P value was less than 0.05. Hence, there was enough evidence to warrant rejection of the null hypotheses that the data was normally distributed against an alternative of non-normality of data. Non-normality of financial data was in conformity with Githira, Muturi and Nasieku (2020) who reported that data from listed companies in East Africa was not normally distributed. Moreover, they agreed with Wairimu, Muturi and Olouch (2019) who found that data from listed non-financial companies in Nairobi securities exchanges was not normally distributed.

Further, the data confirmed Mwai, Memba and Njeru (2019) who reported that financial deepening of commercial banks in Kenya is not normally distributed. The average financial intermediation efficiency mimicked Kariuki (2018) who reported an average 0.87, with an oscillating average from 2011 to 2014 among DT SACCOs in Kenya. The mean capital adequacy was 6.34, with a minimum 2 and maximum of 8.69. The standard deviation of capital adequacy was 4.33, an indication that there were wider variations in capital adequacy among DT SACCOs. Capital adequacy among DT SACCOs was not normally distributed. The findings were in agreement with Wanyoike (2013) who reported that capital adequacy has contribution on financial performance of commercial banks in Kenya. The study also concurred with Yolanda (2017) who reported that capital adequacy has significant contribution on Islamic banking in Indonesia. This manifests that capital adequacy has a role in promotion of financial intermediation.

Table 1: Descriptive Statistics

	Capital Adequacy	**CRSTE**	**VRSTE**	**FIE**
Mean	6.34	0.53	0.61	0.87
Median	5.03	0.50	0.58	0.92
Maximum	8.69	1.00	1.08	1.00
Minimum	2.00	0.00	0.01	0.09
Std. Dev.	4.33	0.26	0.27	0.14
Skewness	2.36	0.33	0.07	-1.53
Kurtosis	10.60	2.21	1.81	5.43
Jarque-Bera	2998.35	40.11	53.77	571.3
Probability	0.00	0.00	0.00	0.00
Sum	5709.48	476.1	549.7	781.9
Sum Sq. Dev.	16839.8	61.59	66.63	18.77
Observations	900	900	900	900

Regression Analysis

The study examined the influence of capital adequacy on financial intermediation efficiency of DT SACCOs in Kenya. Simple linear regression model was fitted as shown in Table 2. An R squared value of 0.673, indicates that 67.3% of changes in financial intermediation efficiency of DT SACCOs in Kenya can be explained by capital adequacy while the remaining percentage can be accounted for by other factors excluded in the model. Further, there was a positive and significant influence of capital adequacy on financial intermediation of DT SACCOs in Kenya ($\beta = 0.042$, p value < 0.05). This indicates that an increase in capital adequacy is associated with an increase in financial intermediation efficiency.

The findings contradicted Kariuki et al., (2018) who found that capital adequacy did affect financial intermediation efficiency of DT SACCOs in Kenya. They alluded those financial institutions only holds minimum capital adequacy thus it has varying influence on financial intermediation. This was in contrast to Gudmundsson et al., (2013) who argued that financial institutions that hold higher proportion of capital ratios are more prepared to support their business operations in turbulent moments. Conclusiveness of the role of capital adequacy on financial intermediation can be authoritatively reported since the findings concurs with buffer capital theory that asserts financial institutions attain minimum capital as an insurance against penalties associated with breach of capital regulations (Ochei, 2013). Moreover, DT SACCOs may have no capacity to build up their buffer capital and those that may have achieved may have diversified their operational activities thus mitigating against their levels of risk exposure.

Table 2: Capital Adequacy and Financial Intermediation Efficiency

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Capital adequacy	0.042	0.001	42.04	0.000
C	0.870	0.010	88.107	0.000
R-squared	0.673	Mean dependent variable		0.869
Adjusted R-squared	0.657	S.D. dependent variable		0.145
S.E. of regression	0.125	Akaike info criterion		-1.162
Sum squared residuals	11.764	Schwarz criterion		-0.351
Log likelihood	674.762	Hannan-Quinn criterion.		-0.852
F-statistic	2.951	Durbin-Watson stat		2.012
Prob(F-statistic)	0.000			

Regression Equation:

*Financial Intermediation Efficiency = 0.87 + 0.042*Capital Adequacy.*

CONCLUSION AND RECOMMENDATIONS

The study found that capital adequacy has positive and significant influence on financial intermediation efficiency of DT SACCOs in Kenya. It can be concluded that compliance with core capital to total deposits enhance efficiency of financial institutions. Hence, the management of respective DT SACCOs should develop models on core capital to total deposits to adopt the most optimal ratio that would enhance their level of financial intermediation. From the findings that capital adequacy has positive and significant contribution on financial intermediation efficiency of DT SACCOs calls for monitoring of compliance with prudential guidelines on capital adequacy ratios. This would ensure that management develops cautionary measures that would minimize odds of failure to meet financial intermediation needs.

AUTHOR CONTRIBUTIONS

Perminus Kariuki Muriithi wrote the study concept, collected data and analyzed for the entire project under the guidance of Dr. Tabitha Nasieku and Prof. Florence Memba as the university supervisor.

CONFLICT OF INTEREST

No potential conflict of interest was recorded by the authors.

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