EFFECT OF LEVERAGE ON FINANCIAL PERFORMANCE OF DEPOSIT TAKING SACCOS IN KENYA

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ABSTRACT

The deposit taking SACCOs (DTS) play a vital role in the socioeconomic advancement of countries as they largely use authority they have over the movement of cash from surplus sources to those who need the funds through financial intermediation. However, it has been observed that the daily activities of Deposit taking SACCOs are faced with challenges. The financial performance of Deposit taking SACCOs in terms of return on asset in Kenya has been declining from the year 2016 to 2020. The main objective of the study was to determine the effect of leverage on financial performance of Deposit taking SACCOs in Kenya. The study was guided by Pecking Order Theory. This study adopted cross sectional research design. The target population was 164 Deposit Taking SACCOs that operated from 2016 to 2020. The sample size was 61 Deposit Taking SACCOs in Kenya which are registered under SASRA. The study adopted stratified random sampling technique. The study employed the use of secondary data which was collected from the published annual financial statements of the Deposit taking SACCOs. Data was analyzed using descriptive statistics and inferential statistics. Descriptive statistics involved mean, standard deviation, minimum and maximum. Inferential statistics included correlation analysis, panel regression data.

The study concluded that, leverage had a weak, positive and highly significant relationship with financial performance of deposit taking savings and credit cooperative societies (SACCOS).

Key words: Leverage, Financial Performance, Deposit Taking Saccos, Return on Assets

INTRODUCTION

The deposit taking Saccos (DTS) assume vital role in the socioeconomic advancement of countries as they largely use authority they have over the movement of cash from surplus sources to those who need the funds through financial intermediation. DTS are also very important in stimulating profitability by making investment a possibility. The degree to which a deposit taking savings and credit cooperative society (DTS) is able to accomplish its policies, financial goals, and non-financial goals is known as its financial performance (Gweyi & Karanja, 2014).

Leverage is important among the financial institutions in the United States. This is because the interest expense for debt is tax deductible in the United States has led to high leverage level aimed at creating a larger tax benefit for corporate income. However, this higher leverage is also counterproductive to firm because debt comes with a heavier burden to repay its debt since it would have to be repaid with some interest. This may eventually bring on board default risk on the part of the firm Kang, (2011).

Leverage has been adopted by many SACCOs in Nigeria. However, SACCOs should be careful when using debt because it comes with a cost in form of interest which must be paid periodically. Moreover, -too much use of debt also makes the SACCOs to be vulnerable to financial distress costs and this might negatively affect the SACCOs' financial performance (Idada, Atu,Atu and Kingsley,

2018).

The leverage has a significant impact on the SACCOs operating in Kenya. This has been explained by the fact that SACCOs that rely more heavily on debt produce lower profits than those that rely more heavily on equity. As financial performance declines, dividend payments and liquidity management do as well. This means that if organizations need to rely on less expensive sources of funding to prevent running out of money to pay back loans, they should raise the value of SACCOs so that shareholders can invest their profits instead of requesting dividends (Aziidah, 2017).

Financial performance

A SACCO's financial success is a subjective indicator of how effectively it can employ resources from its main line of business to create income in USA. Financial performance is a crucial component of managing financial risk and refers to the extent to which financial objectives are being or have been achieved. It is the process of evaluating the financial impact of a SACCO's activities and policies. It may be used to aggregate comparable SACCOs in the same industries and assess the overall financial health of SACCOs over a specific time period (Brealey, Myers, and Allen 2016).

The most popular metrics for assessing financial performance in China, according to Haung and Song (2016), are the profitability ratio, liquidity ratio, leverage, and efficiency ratio. Direct computation of the ratios using financial statement data is possible. To construct ratios for financial statement analysis, components from the income and balance sheets are used. These ratios are used to evaluate a company's capacity to create profits in relation to all of its expenses and other pertinent charges during a given time period.

One indicator of financial performance, according to SASRA (2017), shouldn't be consumed by itself. Instead, as there are several variables that affect how well an organization performs, a complete evaluation of its performance should take a variety of metrics into account. Based on financial data and information taken from audited financial statements and reports, SACCO subsector performance is evaluated. Before being presented to members at the annual general meeting, a SACCO's audited finances must be registered with the commissioner of cooperative development.

Statement of the Problem

Deposit taking SACCOs play a vital role in the re-distribution of economic resource from who have it. Application of leverage, capital adequacy to manage credit risks leads to enhanced Deposit taking SACCOs' financial performance deposit taking SACCOs in Kenya. When credit risk is managed appropriately then it leads increased financial performance for the SACCOs.

The financial performance of some Deposit Taking SACCOs in Kenya has been declining in Return on asset from the year 2016 to the 2020. The profit after tax in 2016 was 14.32%, 2017 was 13.68%,

2018 was 13.07%, 2019 was 12.98% and 2020 was 11.19%. Such a declining trend is a worrying issue since the primarily aim of any business is to increase profit (SASRA 2020).

Although some studies have been done in Kenya, there is little that has been documented todisclose the link between solvency, liquidity, leverage and capital adequacy onone hand and financial performance on the other. For instance, Kamoyo (2016)determinants the effect of solvency on financial performance of deposit taking SACCOs in Kenya,with bias on multiple regression analysis as the study variables. This study did not involve any of the study statistics analysis (Correlation and panel regression model analysis) that the current study seeks toaddress. Mishra and Pradhan (2015)Impact of liquidity management on profitability among theprivate sector SACCOs of India.Althoughthestudyalsousedinferential statistics analysis, itfailedtolookatdescriptive statistics analysis.Besides,itsfindingscannotbeused togeneralize aboutDeposit taking SACCOssince itwasdone inmicro finance institutionswhosemode of regulation and operation is distinct from those of commercial banks. Khalifa Tailab (2012)evaluate the effect of capital adequacy on financial performance of SACCOs in America. Quasi experimental research design. The study did not focus onthe cross sectional used in the current study. It is therefore evident that not much has beendocumented in this area, hence the reason why this study is being undertaken so as to fill thegap. Inflation raises interest rates. Higher interest rates provide more opportunity for Deposit taking SACCOs to generate profits. The important aspect is to keep both in balance. Hence it was important to study the effects of inflation of ROA, ROE and Net profit to know the financial performance of the Deposit taking SACCOs.

Objectives of the study

The objective of the study was to determine the effectof leverage on financial performance of Deposit taking SACCOs in Kenya.

Research Hypotheses

Thestudywasguidedbythe followinghypotheses:

H01: Leverage has no statistically significant effect on financial performance of Deposit Taking SACCOs in Kenya.

Theoretical Literature

Pecking Order Theory

This theory was coined by Stewart C. Myers in 1984. The theory opines that when a firm is in need of additional capital, it prioritizes its sources of financing by utilizing the internal sources before resulting into external sources of financing. That is, the firm utilizes internal sources to finance itself but if the sources are exhausted before it quenches its financial need, it seeks the additional funding from debts and lastly from external equity if need be (Nyanamba, 2018). This theory maintains that business adhere to a hierarchy of financing when available, and debt is preferred over equity if external financing is required (Kiragu,2010).

This theory is pegged on the assumptions that the cost of internal financing is less than the cost of external financing at all times. Internal financing is the use of retained profits while external financing is the use of borrowed funds. Retained profits are profit the control of management but external funds is not the control of management. The theory assumes that internal and external financing are available at any time. The theory assumes that internal financing is subject to firm's control and that the availability of external financing is not guaranteed at all times (Eldomiaty, et al., 2017).

The Pecking Order Theory has two limitations: That the theory does not consider the influence of taxes, agency cost, the cost of issuing new securities, financial distress of the investment opportunities. The theory ignores the fact that there are problems associated with the decisions of financial managers to accumulate so much financial slack that they become protected to market discipline (Butt, Khan and Nafees, 2013).

This theory has been criticized for clinging on a very simple setting where the firm's only financing choice is debt versus equity, ignoring more complicating settings, for example when the firm also chooses between straight and convertible debt (Caselli and Negri, 2018).

This theory is relevant for this study as it was used to explain the relationship between solvency, liquidity, leverage and capital adequacy on financial performance of deposit taking SACCOS in Kenya. Before SACCOs extend credit facility to its customers, it evaluates it available capital. Available capital determines whether or n the SACCOs can meet customers' requirements. SACCOs raise funds form internal sources fully before going for external sources. Collectively funds from internal sources and external sources determines objective four on capital adequacy in a SACCOs. This theory informs all the four objectives and therefor it is the main theory of this study.

EmpiricalReview

Leverage and Financial performance

Rajkumar in (2014) undertaken a research on the impact of leverage on the financial performance of deposit-taking SACCOs in Sri Lanka. Finding the connections between leverage ratio and financial performance was the study's main goal. The target DTS population for the trial was 60. Regression and correlation analysis were used to gather data from secondary sources across a 7-year period, spanning the years 2006 to 2012. The factors under examination were found to be negatively correlated. The results also demonstrated that leverage ratio has a significant impact on the financial success of the organization under study. Researchers should repeat the study on different businesses or industries because the study's reach is limited because just 60 DTS were used. The study was conducted in Sri Lanka thus presenting a scope gap. The current study was conducted in Kenya.

Bhardwaj (2017)examined of leverage on financial performance of deposit taking SACCOs in India. Out of the 135 SACCOs licensed in India, 40 were chosen conveniently. Three years of data, 2010 to 2012, were used. Both a descriptive and analytic design were used in the investigation. A

negligible insignificant negative relationship between leverage and financial performance analysis, with a test conducted at a 99 percent confidence level. Due to the reduced sample size and constrained range of organizations examined, the results could not be generalized. The study used a smaller sample size of 40 which is not wider enough to give a good result for research. This current study used sample size of 61which was wider enough to give a good result for research.

Haron and Ahmed (2018) undertaken A study on the impact of leverage on the performance of non-financial enterprises in Malaysia. The information was made up of businesses excluded from financial firms that were listed in the Malaysia 20 Share Index as of August 1, 2014. From 2008 to 2013, six years of data were used. The study used a model for regression analysis and a descriptive design. The results of the study revealed a substantial inverse relationship between leverage and firm performance using ROA as the performance parameter. Since the study mainly focused on companies listed in the Malaysia 20 share index, excluding financial businesses, it is important to apply caution when interpreting its conclusions. The study only included 20 participants, thus it is impossible to generalize the findings. The current study included sample size of 61 which is good to generalize the findings.

Zahoor et al. in (2015) conducted studied on the impact of leverage on the financial performance of Pakistani. The purpose of the study was to determine how leverage ratio affected Pakistani business efficiency. Between the years of 2006 and 2011, panel data from 154 textile companies listed on the Karachi Stock Exchange (KSE) were used. Data analysis techniques included descriptive statistics, correlation, and multiple regression analysis. The results indicated a poor correlation between leverage and company performance. Given that it includes all textile companies registered on the Karachi Stock Exchange, the study's scope is sufficiently broad. Similar investigations have to be carried out in other areas and across other sectors. The trial was ineffective in correlation analysis. The study focused on textile companies thus presenting a scope gap. The current study focused on Deposit Taking SACCOs in Kenya to fill the gaps.

Gudeta (2013) did research on the impact of leverage on the financial performance of commercial banks in Ethiopia. Data from all 44 banks over a 5 years term 2008 to 2012 was used. study adopted descriptive and multiple regression analysis using SPSS. The findings portrayed a substantive link amid leverage ratio ad financial performance. Negative relationship exists amid growth in assets and profitability. When ROE and leverage ratio were tested, a negative associated was noticeable.The study failed to use correlation statistics which good measuring association of variables. The current study used correction statistics in the research to the gaps.

Allini, Rakha, McMillan, and Caldarelli (2014) carried out research with an Egyptian goal. The study employed an ex-post factor research approach on six quoted pharmaceutical businesses in Egypt to determine the relationship between leverage ratio and financial success. Data from 12 years of financial reports, from 2001 to 2012, were the subject of a correlation and multiple regression analysis investigation. The research discovered a negligible relationship between the financial success of the sampled enterprises and independent factors. Although the study's time frame is lengthy enough to yield trustworthy results, panel regression analysis was not used. The current study used the panel regression to fill the gaps.

Abubakar (2015) conducted a study on the link between leverage and financial performance of banks in Nigeria. The study a selective sample of 11 out of the 23 deposit taking banks in Nigeria and covered 9 year period from the year 2005 to 2013. Regression analysis was used and results showed that there exists a considerable relationship amid debt to equity and return on equity. Similar studies should be conducted and tested using other ratio measures other than the ones studied above.The study failed to use correlation statistics and descriptive statistics. The current study employed both statistics in research to fill the gaps.

Baoko, Acheampong and Abrahim (2016) conducted a research on the association between leverage and financial performance of listed chemical companies of Ghana. Data from 20 quoted organizations from chemical sector of KSE over 8-year period from 2006 to 2013 was used. descriptive statistics, correlation and regression analysis were adopted to reach the study's objectives. The findings portrayed positive connection between ROA, Net Profit margin and ROE with debt-to-equity ratio. The debt-to-equity ratio was the only metric of leverage used other ratios such debt ratio and long-term debt ratio should be tested on similar studies.The study focused only on smaller sample size of 20 which not good to give full information. The current study focused on a larger sample size of 61 which is good to give full information.

Amenya (2020) conducted study on the relationship between the leverage and the financial results of companies listed on the NSE. Over the course of six years, from 2008 to 2013, information was gathered on 26 randomly chosen companies out of the 61 companies listed at the NSE. Regression, correlation, and a descriptive design were used in the study. According to the study, leverage ratio has a detrimental effect on a company's financial success as evaluated by ROE. Secondary data were used in the study. Different conclusions may be drawn from an examination of the same case utilizing primary data sources that involved stock market specialists. The study focused on cross-sectional research design thus presenting a gap. The current study focused on cross sectional research design to fill the gap.

Financial performance

Norseen, Alamdar, and Tariq (2018) evaluate the study on the impact of finance/ial performance on leverage of deposit-taking SACCOs in Pakistan from 2010 to 2012. Forty SACCOs registered with SASRA were sampled for the study. The analysis made use of secondary information gathered from the organizations' financial statements. The study used an analytical and descriptive research approach. The study found a link between leverage (as determined by the debt-to-equity ratio), return on equity, and profit after taxes. Leverage, return on assets, and income growth all have a strong and positive correlation. The study's 40-person sample size was too small to provide accurate data.

Bandari (2013) investigated the effects of financial performance on deposit-taking SACCOs' solvency ratios in US. Panel study design was used as an explanatory strategy. The financial statements of 120 SACCOs in the US were collected from the CBK and commercial bank survey for 2009 since the study was interested in the years 2002 to 2008. To examine the data and

demonstrate the link between the research variables, multiple linear regression was utilized. The study discovered that the financial performance of commercial banks in the United States is significantly negatively impacted by asset quality. However, before performing the inferential analysis, the study did not perform diagnostic tests. Additionally, the moderating effects of inflation in the sought-after relationships between the variables were not considered in the aforementioned study. Correlation analysis was not used in the research. The current study applied correctional analysis to fill the gaps.

Almazari and Alamri (2014) conducted research the factors that determine the Saudi Arabian commercial banks' solvency in terms of financial performance. The study covered the years 1999 to 2006, and it employed a panel of 16 commercial banks that was imbalanced and included of participants from 42 different nations, including Saudi Arabia. The study's analysis was conducted using random effect panel techniques. The study's factors included GDP, bank size, operational effectiveness, liquidity ratio, and capital sufficiency. The study's findings suggest that solvency has a negative, considerable impact on the financial performance of commercial banks. This research used panel regressions analysis which highlights the relationship between variables and failed to use correction analysis which is bring out the addressed by the current study.

Conceptual Framework

The conceptual framework of this study spells out the relationship between the Financial Performance which is the dependent variable and Leverage as the independent variable is assumed to have effect on Deposit taking SACCOs

Independent variables   **Dependent variables**

Leverage

☐   Debt to asset ratio
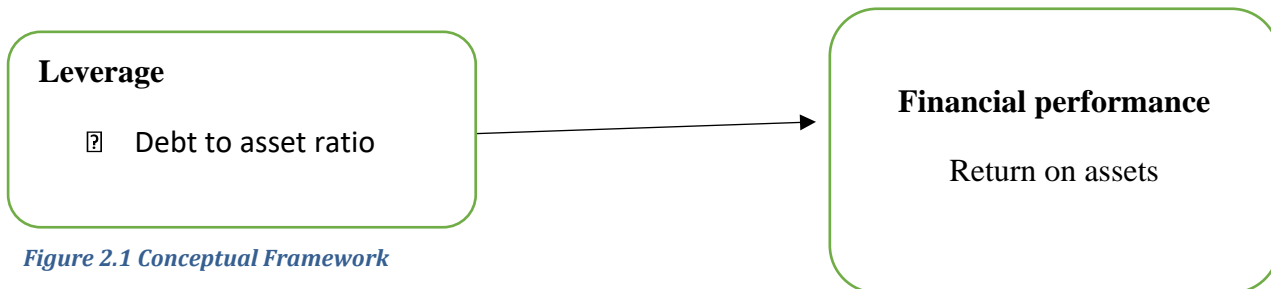
Financial performance

Return on assets

Figure 2.1 Conceptual Framework

A leverage is any of a number of financial metrics that examine the amount of capital that originates from debt (loans) or evaluates a company's capacity to satisfy its financial commitments. Because businesses often employ a combination of debt and equity to fund their operations, the leverage category is crucial. Knowing how much debt a company has may help determine if it was able to pay off its loans when they are due. As soon as the leverage decreases, financial performance followed suit. Conversely, when the leverage rises, financial performance is anticipated to follow suit. SACCOs perform worse financially when their leverage is higher, but it also allows them to accumulate bigger capital reserves and weather financial crises more readily. A lower leverage can improve SACCOs' financial performance, but it can also leave them with fewer capital reserves and make it impossible for them to weather a financial catastrophe.

Research design can be defined as the method used to carry out the entire research or the way the

research is designed (Ezeoha, 2011). This study adopted cross sectional research designs. The study was crosssectional because it used data from various Deposit Taking SACCOs under study over a fiveyearperiod, that is, from2016-2020 (Kothari 2004). The study by Barasa (2017), adopted cross sectional research design in his research entitled effect of credit risk on financial performance of SACCOs in Kenya.

Study Area

The study was carried out in Deposit Taking SACCOs registered under SASRA in Kenya for period of five years from 2016 to 2020. According SASRA, there are 164 Deposit Taking SACCOsregistered in Kenya. Kenya is located in East Africa, it borders South of Ethiopia, Somalia to west, Tanzania to the south and Uganda to the east. The 164 Deposit Taking SACCOs were on actively operation in Kenya as at 31 Dec 2020.

Target Population

A population is a set of events, services, things or households or a set of people that is well defined and being investigated (Ngechu, 2004). The target population for this study was all the Deposit Taking SACCOs which were in operation from 2016 to 2020. The latestlisting as at December 2020 had 164 Deposit Taking SACCOs. The target population of 164 SACCOs has been shown on Appendix III. These 164 SACCOs operated continuously from 2016 to 2020.

Table 3.1: Target Population

Deposit Taking SACCOs	Number of SACCOs
Teacher based SACCOs	36
Government based SACCOs	38
Farmers based SACCOs	55
Private Institutions based SACCOs	14
Community based SACCOs	21
Total	164

Source: SASRA 2020

Sampling design

Sample Size

The sample size of 61 Deposit Taking SACCOs participated in the study. The study used scientific formula by (Kothari, 2004) to determine the sample size as follows: According to Rose Loru (2020) who applied Kothari formula in her study indicated that, the formula is useful in determining a sample size form a target population that is fairly large. It gives equal representation and eliminates biasness.

n= $\dfrac{Z^2pqN}{e^2(N-1) + Z^2pq}$

Where;

N is the size for a population which is the number of deposit taking SACCOs

n is sample size

p+q is population reliability (or frequency estimated for a sample size n), where is 0.5

p+q = 1

e is margin of error considered is 10% for this (1/10)

Z = is level of significance (1.96)

n= $\dfrac{Z^2pqN}{e^2(N-1) + Z^2pq}$

$= \dfrac{(1.96)^2 \times 0.5 \times 0.5 \times 164}{(0.1)^2 (164 - 1) + (1.96^2 \times 0.5 \times 0.5)}$

$= \dfrac{3.8416 \times 0.25 \times 164}{(0.01 \times 163) + (3.8416 \times 0.25)}$

$= \dfrac{157.5056}{1.63 + 0.9604}$

$= \dfrac{157.5056}{2.5904}$

= 61

The sample size was 61 Deposit taking SACCOs in Kenya operating from 2016 to 2020 as shown on appendix IV

Table 3.2 sample size

Deposit Taking SACCOs	Number of SACCOs
Teacher based SACCOs	13
Government based SACCOs	14
Farmers based SACCOs	21
Private Institutions based SACCOs	5
Community based SACCOs	8
Total	61

Source: Researcher 2020

Sampling frame

Caselli and Negri (2018), defined a sampling frame as a schedule or list of events, people, things that are relate to the entire population from where a sample is selected. The sample frame for the study was all the Deposit Taking SACCOs which are operating in Kenya over the period 2016-2020.

Sampling Procedure

A sampling procedure is a method or technique for selecting a subset of a population to take part in a research; it is the process of picking a number of people in such a manner that they fairly and transparently reflect the broader group that was chosen (Ogula, 2005). The study obtained a complete list of Deposit Taking SACCOs that were operating in Kenya as at December 2020. From this list, the researcher identified those Deposit Taking SACCOs which continuously SACCOs from 2016 up to the year 2020. The study adopted stratified random sampling technique to select 61 SACCOs from 164 SACCOs which continuously operated from 2016 up to the year 2020.

Data collection

The study employed the use of secondary data. These data was collected from the publishedannual financial statements of the SACCOs. Specifically, the balance sheet and income statementsover the years under study (2016-2020) was extracted so as to provide the necessary data.From these quantitative data, Return on Assets (ROA), was calculated and used to make conclusions. The data was collected using document analysis guide.

Data Analysis and Presentation

The study used descriptive and inferential statistics to analyze data. In descriptive statistics, the study applied minimum, maximum, mean and standard deviation. Further, the study applied simple regression, multiple regressions and Pearson product moment correlation analysis was used to assess the effect of the independent variable on the outcome in the study. Correlations analysis was used to measure the association between the variable and quantitate the strength of their relationship. Regression analysis was adopted to determine the effects of independent variables on financial performance of DT SACCOs.

Analytical Model

The empirical model was used in the study to test the relationship between credit risk management practice and financial performance of deposit taking SACCOs in Kenya. Panel data.

The Panel regression model used was as follow;

To establish objective and test out its hypothesis which sought to establish the relationship between leverage and financial performance deposit taking SACCOs in Kenya, the following simple regression model used was.

$Y_{it} = \alpha + \beta_1 X_{1it} + \acute{\varepsilon}_{it}$……………………………………………………….Equation (3.3)

Where:

Yit = Financial performance of deposit taking SACCOsI for t year,

α = Constant (coefficient of intercept)

B_3 = change in deposit taking SACCOs financial performance for I unit increment change in

X_{3it} = score on the leverage which predicts the value of deposit taking SACCOsI for years t., years

$\acute{\varepsilon}_{it}$ = the error term reflecting other factors outside the model that affects deposit taking SACCOs I for years t., years

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3.7.2 Hypothesis Testing

Table 3.3: Summary of Statistical Tests for Hypotheses and Interpretations

Objectives	Hypotheses	Statistical Test	Model	Interpretation
To establish objective three and test out its hypothesis which sought to establish the relationship between leverage and financial performance deposit taking SACCOs in Kenya	$H_{01:}$ leverage has no statistically significant effect on financial performance of Deposit Taking SACCOs in Kenya	Simple Regression Analysis	Simple Regression Analysis $Y_{it} = \alpha + \beta_1 X_{1it} + \acute{\epsilon}_{it}$ **Where:** $Y{it}$ = Financial performance α = Constant (coefficient of intercept) $B_{1=}$ change in deposit taking SACCOs financial performance X_{1it} = score on the leverage $\acute{\epsilon}_{it}$= the error term	Change in (R^2) value. If β for leverage are positive F, β and are significant $(p \leq 0.05)$. Then, leverage positive and significant relationship on financial performance

Source: Researcher 2020

Correlation analysis

The study wanted to find out the nature of relationship that existed between independent variables (solvency, liquidity, leverage and capital adequacy and financial performance. The findings of the study were presented below.

Table 4.6 Correlations analysis

		Leverage	Financial performance
Leverage	Pearson Correlation	1	.117*
	Sig. (2-tailed)		.040
	N	305	305
Financial performance	Pearson Correlation	.117	1
	Sig. (2-tailed)	.040	
	N	305	305

Source: field data 2022

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

similarly, the study found out that,leverage had a weak, positive and significant relationship with financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya r= .117 (*)P=.000<0.05. According to Rajkumar in (2014) leverage ratio has a significant impact on the financial success of the organization under study.

Multi-collinearity Test

The study used a VIF to test for multi-collinearity in a regression model of the predictors. A variance inflation factor (VIF) of more than 10 or a tolerance of less than 0.1 both suggest the presence of multi-collinearity. As shown in table 4.8 below

Table 4.8 Multi-collinearity Test

Model		Sig.	Collinearity Statistics	
			Tolerance	VIF
1	(Constant)	.000		
	Leverage	.000	.129	7.736

Source: Field data 2022

a. Dependent Variable: Financial performance

The study established that, the VIF value, leverage was 7.736. The VIF values for the variables was <10. Thus, Multi-collinearity was not present.

4.3.4 Homoscedasticity Test

Homoscedasticity is the property that all levels of the independent variables have the same error variance. Heteroscedasticity is demonstrated when the variance of errors varies at various values of the independent variables. Homoscedasticity was examined using Levene's test. The alpha value for the study was 0.05. If the P value were more than 0.05 Homogeneity existed. The findings were presented in table 4.9 below.

Table 4.9 Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Leverage	4.137	4	300	.003

Source; Filed data 2022

The study established that, the P value for leverage had its P value .003. Thus, the null hypothesis was rejected and hence, data was not homogenous.

Leverage and financial performance

The study carried out a panel regression between leverage and financial performance deposit taking savings and credit cooperative societies (SACCOS) in Kenya. Findings were as shown in the tables 4.12 below;

Table 4.12 (a) Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.517[a]	.267.	.237	.03510

Source: Field data 2022

a. Predictors: (Constant), Leverage

The results of the study revealed that, R was =.517. This indicated that, leverage had a direct correlation with financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. In addition, the study found out that, the model had an R square of .267. Accordingly, a unit change in leverage led to 26.7% change in financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya.

Table 4.12 (b) ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	.005	1	.005	4.167	.040[b]
1	Residual	.373	303	.0012		
	Total	.379	304			

Source: Field data 2022

a. Predictors: (Constant), Leverage

b. Dependent Variable: Financial performance

The study identified that, F test was 4.240, P=.040<0.05. The overall regression model therefore was suitable for the study. Moreover, the results revealed that, leverage had a significant effect on financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. According to Haron and Ahmed (2018) liquidity had a substantial inverse relationship between leverage and firm performance.

Table 4.12 (c) Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.155	.003		48.361	.000
	Leverage	.053	.026	.517	2.059	.040

Source: Field data 2022

i. Dependent Variable: Financial performance

It was revealed that leverage had a positive and significant effect financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. B= .053, t=.2.059, P=.040< 0.05. Taking other factors to be constant at zero, leverage led to 15.5 % change in financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. Hence, a change in leverage led to 51.7 % change in financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. Then, change in leverage led to significant

increase in financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. These findings agreed with Al Nimer, Warrad, and Al Omari (2015) who noted that, profitability and financial leverage did indeed have a favorable link. The results demonstrated a substantial positive connection between ROA and financial leverage.

$$Y = \beta_0 + \beta_3 X_3 + \varepsilon$$

$$Y = .155 + .053 X_3$$

Hypothesis testing

Table 4.14 (c) Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta	B	Std. Error
1	(Constant)	.123	.007		16.548	.000
	Leverage	.528	.053	.280	9.990	.000

Source: field data 2022

☐ Dependent Variable: Financial performance

In addition, the study discovered out that, leverage, had a positive and significant effect financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. B= .528, t=9.990, P=.000< 0.05. Change in leverage led to a change in financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya by 28.0 %. Thus, unit increase in leverage led to a significant increase in financial performance deposit taking savings and credit cooperative societies (SACCOS) in Kenya. Thus, the null hypothesis was rejected .These findings contradicted Gudeta (2013 who found out that, a substantive negative link exists between leverage ratio ad financial performance. When ROE and leverage ratio were tested, a negative associated was noticeable.

H0$_1$: Leverage has no statistically significant effect on financial performance of Deposit Taking SACCOs in Kenya

The study discovered out that, leverage had a positive and significant effect financial performance of deposit taking savings and credit cooperative societies (SACCOS) inKenya. B= .528, t=9.990, P=.000< 0.05. Accordingly, the null hypothesis was rejected.

Summary of findings

Leverage and financial performance

The study found out that, most of the SACCOS complied with the statutory requirements on leverage by SASRA. For instance, the leverage for Acumen SACCO Society Ltd, AfyaSACCO society ltd, Airport SACCO Society Ltd was less than the statutory requirements of 25%. On the other hand, the study established a few Sacco were not complied with the statutory requirement by SASRA on leverage. For instance, the leverage level for Mzima SACCO Society Ltd, Miliki SACCO Society Ltd, Jamii SACCO Society Ltd was above the ideal level of less than 25%.

Additionally, the study found out that,leverage had a weak, positive and highly significant relationship with financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. The study discovered further that, leverage had a positive and significant effect financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. Thus, unit increase in leverage when measured by debt to asset ratio and debt to capital ratio led to a significant increase in financial performance deposit taking savings and credit cooperative societies (SACCOS) in Kenya.

Conclusions

Solvency and financial performance

The study concluded that; solvency for the majority of SACCOs was less than the generally acceptable level of 30%. Additionally, the it was concluded that,solvency had strong positive and highly significant correlation with financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. As result, SACCOs are encouraged to be solvent so that can significantly increase their financial performance.

The study further, concluded that, solvency had a positive and significant effect financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. Thus, unit increase in solvency led to a significant increase in financial performance as measured by return on assets.

Leverage and financial performance

The study concluded that,most of the SACCOS complied with the statutory requirements on leverage by SASRA. Additionally, it was concluded that, leverage had a strong, positive and highly significant relationship with financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. On other, the study concluded that, leverage had a positive and significant effect financial performance of deposit taking savings and credit cooperative societies (SACCOS) in Kenya. Thus, unit increase in leverage led to a significant increase in financial performance deposit taking savings and credit cooperative societies (SACCOS) in Kenya.

Recommendations of the study

Leverage and financial performance

The study recommended that,SACCO whose leverage was above the ideal level of less than 25%, should reduce use of very expensive debt as a source of funding. Additionally, it can increase and new customers, cut some unnecessary cost, reduce staff. This would reduce significantly the overdependence on borrowing for investment and instead use retained earning which is cheaper to financial its operation. To this, end, financial performance would increase.

Additionally, the study recommended that, deposit taking savings and credit cooperative societies (SACCOS) in Kenya should use more retained earnings and long-term debt when its absolutely necessary. Using retained earnings as source of finance would increase their financial performance, as it's cheap. On the other long-term debt allows them time pay debt more conveniently. This would increase their financial performance significantly.

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